

REPRESENTATIONS OF GENDER IN SEVENTEENTH-CENTURY NETHERLANDISH
ALCHEMICAL GENRE PAINTING

ELIZABETH O'MAHONEY

TWO VOLUMES
VOLUME I

PH.D.

THE UNIVERSITY OF YORK

HISTORY OF ART

DECEMBER 2005

ABSTRACT

This thesis explores the depiction of gender in seventeenth-century Netherlandish genre paintings of the alchemist's or, more properly, the chymist's workshop. Derived primarily from the holdings of the Chemical Heritage Foundation, Philadelphia and the Wellcome Library, London, the paintings examined by this project represent a significant component of Netherlandish genre art, neglected almost entirely by critics.

Of profound significance to alchemical philosophy and emblematic art, gender also plays a pivotal role in seventeenth-century genre paintings of the chymist's workshop. Expounding the nuances of complex alchemical discourse, this thesis explores the dynamic and often binaristic relationships between the 'male' and 'female' in these scenes.

Structured around the basic contention that all representations of focal females in such paintings can be placed into one of four categories – Domestic Disquiet, Domestic Quiet, Patient and Chymical Worker – this thesis consists of four chapters. Investigating the four categorizations, these chapters explore the extent and significance of gendered emblematicism in relation to traditional alchemical symbolism and Dutch Emblemata. The first chapter examines female disquiet in pictures of the chrysopoeian workshop and traces emblematic females in early modern emblem books and genre prints. Focusing on depictions of the feminine ideal in paintings by Thomas Wijck, the second chapter reinterprets the notion of the 'chymical marriage' within genre scenes of alchemical scholarship. Exploring symbols of alchemical emblematic art, the third chapter discusses paintings of the iatrochemist and reconsiders the female as a symbol of fertility. The fourth and final chapter examines the depiction of the ostensible female chymist in the work of Thomas Wijck and David Ryckaert III.

This thesis, then, excavates the symbolic nature of gender in chymical painting, and in doing so suggests that alchemical symbolism and philosophy might translate, to a limited degree, to genre art.

TABLE OF CONTENTS

	Page
Volume I	
Abstract	2
Acknowledgements	4
Note	5
Introduction:	6
Part I	7
Part II	26
I Emblemata and Domestic Discord: Female Disquiet and Emblematic Intertextuality.	45
II Pater et materfamilias: Domestic Quiet in Paintings of the ‘Chymical Marriage’.	74
III Piskijken and Pisse-Prophets: Emblematic Women in Paintings of the Chymical-Uroscopist’s Workshop.	107
IV Soror Mystica: Factoring the Female Worker, Maid or Magus.	143
Conclusion	174
Bibliography:	
i. Primary Sources.	187
ii. Secondary Sources.	192
 Volume II	
Illustrations	

ACKNOWLEDGEMENTS

The author gratefully acknowledges the financial and technical assistance offered by the following individuals and organisations:

Mr Paul Thomson, London.

Mr and Mrs David Thomson,
Sunningdale, Berkshire.

The Wellcome Trust, London.

Ms Marjorie Gapp and the
Chemical Heritage Foundation, Philadelphia.

Dr Katherine O'Mahoney, London.

The Alchemy Web Site,
Adam McLean and the Alchemy Academy Members.

Note:

Picture Measurements:

Where picture measurements have been stated, this thesis has reproduced exactly the information offered by the holding institution. It has been noted in the course of research that many collectors, in translating measurements between metric and imperial scales, have been inexact in their calculations. In order not to contribute further to this inaccuracy, this thesis does not subscribe to a single system of scale, but replicates the measurements in the convention adopted by each institution.

Catalogue References:

To enable easy reference for future scholars, this thesis has reproduced the cataloguing information offered by the holding institution or private individual. Where the opinions of the holding institution and the author diverge strongly, an additional explanatory note is included to clarify and justify re-attribution. Every care has been taken to highlight erroneous attribution wherever possible.

Many of the paintings examined by this thesis belong to the Wellcome Library, London. As the Wellcome Library does not ascribe titles to many of its holdings, this thesis uses the short descriptions provided by the Library in place of titles.

Translations:

Unless otherwise stated, all translations contained within the thesis are the author's own.

Author's Declaration:

This thesis is the product of the author's original and non-collaborative work. None of the research or writing contained herein has been presented previously in any context.

INTRODUCTION

Wheresoever we have spoken plainly, there we have spoken nothing, but where we have used riddles and figures, there we have hidden the truth.¹

Through a cryptic and mutable corpus of imagery, alchemists for centuries sought to convey, and yet contain, the secrets of the Great Work. Preserving the alchemical truth from “ungodly, foolish, slouthful and unthankfull hypocrites”, medieval treatises encrypted their esoteric rituals in obscure allusion to green lions, white geese, black ravens, black toads, peacocks and hermaphrodites.² At the heart of this curious symbology lay the sovereign figures of the White Queen and Red King. Exemplars of a dense and largely impenetrable pictorial tradition, these antithetical monarchs embody the essentially binaristic character of alchemical philosophy. For generations, this peculiar alchemical iconography was confined to manuscript form. During the early modern period, however, a new type of alchemical art evolved in the Netherlands. With the emergence of genre painting, chymical activity began to feature with regularity in works by the commercially conscious artists of the early seventeenth century. With a similar attention to emblems, their scenes of the chymical workshop betray a shared interest in philosophies of gender. Exploring the shared emblematics of alchemical philosophy and early modern conduct books, this thesis examines the depiction of gender in seventeenth-century Netherlandish chymical genre painting.

This project demands extensive introduction, due to its interdisciplinary nature and the complexity of alchemical culture. For this reason, the following introduction is in two parts. Part I outlines the fundamental arguments of this thesis and expounds its methodology. In addition, this section delineates current criticism in this area and offers a historical and sociological context for its discussion of alchemical genre painting.³ Furthermore, it presents some technical issues which have arisen during the course of research. Part II is concerned solely with alchemy. This section serves to explicate the intricacies of alchemical culture and philosophy in the early modern period. Outlining difficulties inherent to the field, specifically in relation to terminology and definition, this section also describes the variety and significance of alchemical art, and examines the female principle within.

¹ McLean, 1980: 47.

² Bostocke, 1585: Sig. Cii^r.

³ The phrase ‘alchemical genre painting’ is defined fully in section 1 of Introduction Part II: 31-32.

PART I

1 Basic Premise

Underpinning all derivative arguments in this thesis lies the basic contention that all representations of focal females in seventeenth-century chymical genre painting can be placed into one of four categories: Domestic Disquiet, Domestic Quiet, Patient and Chymical Worker. Investigating these four categorizations, the four chapters explore the extent and significance of gendered emblematicism in relation to traditional chymical art and Dutch Emblemata. This thesis, then, excavates the symbolic nature of gender in chymical painting, and in doing so suggests that alchemical symbolism and philosophy might translate, to a limited degree, to genre art. The numerous subsidiary conclusions that emerge by the close of this thesis are summarized and clarified in the conclusion. The following section outlines in brief the material substance of the four chapters.

The opening chapter of this thesis, 'Emblemata and Domestic Discord', introduces the first of four female categorizations evident in alchemical genre painting. Examining gender dynamics in the alchemical paintings of Hendrick Heerschop, Jan Steen, Richard Brakenburgh, Adriaen van de Venne and Adriaen van Ostade, this chapter explores the development and origin of specific portraits of domestic discord and their relationship to alchemical theory. These paintings, which are united through the satirization of their subject, all employ the female in an unequivocal condemnation of 'chrysopoeia' or transmutational alchemy. The emblem iconography of the period and the prints of Pieter Bruegel the Elder are used to explore the broader cultural resonance of gendered symbols in these works.

By contrast, Chapter II, 'Pater et materfamilias', examines scenes of 'esoteric' or, in this case, scholarly alchemy. These scenes are consistently characterized by themes of domestic harmony and gender equilibrium. Expressing the domestic ideals of the Republic, these paintings, principally by the Dutch painter Thomas Wijck, convey an admiration for measured alchemical scholarship. Here, the thesis considers images of female domesticity and male scholarship in relation to their chymical context. In line with Chapter I, the male and female are located within an emblematic tradition and, specifically, within a wider system of alchemical symbology.

Chapter III encompasses a separate branch of chymistry in its analysis of 'iatrochemical', or medical-alchemical, paintings. 'Piskijken and Pisse-Prophets' evaluates the female as a

symbol of fertility and pregnancy. More specifically, this section addresses the emblematic identity of female patients in paintings of the chymical-uroscopist's workshop. In its survey of paintings by Egbert van Heemskerck the Younger, Mattheus van Helmont, Gerard Thomas and Balthasar van den Bossche, 'Piskijken and Pisse-Prophets' situates female imagery within an iconographical tradition of reiteration and reference. Furthermore, this section charts the decline of chymistry and uroscopy in paintings of the early eighteenth century.

As the closing contribution to this thesis, Chapter IV investigates the remaining categorization of women. 'Soror Mystica' analyses representations of the female chymical worker in paintings by the Southern Netherlandish artist David Ryckaert III and by Thomas Wijck. Siting the worker within an ancient lineage of female chymistry, this study attends to the ambiguous representation of the woman chymist in genre painting. The chapter concludes by uncovering the only incontrovertible representation of a female chymical worker in genre painting.

Collectively, these chapters expound the restricted variation of female symbolism in chymical genre painting, locating gendered emblems within the iconographical traditions of Dutch emblemata and alchemical symbology. In particular, these chapters explore the complex gendered binarism of alchemical philosophy in relation to genre painting. A primary aim of this thesis is to broaden the cultural context through which these paintings may be read. The methodologies developed in recent decades, which will be discussed in the following section, have limited the critical reach of art historians. By contrast, this thesis offers an inclusive interpretative approach which incorporates alchemical symbologies in addition to traditional Netherlandish emblemata.

2 Methodology

2.1 Iconology of Dutch Painting

During the nineteenth century, the study of Netherlandish painting was dominated by the mutable concept of 'Realism'.⁴ Consistently, historians interpreted Netherlandish painting as a mirror of contemporary life and, understandably therefore, considered genre painting a prize

⁴ The term 'Realism' is problematic and has engendered much debate over the last two decades. Eric Jan Sluiter has suggested abandoning the term altogether, while David Smith has reinterpreted it as a narrative, which exposes the relationship between 'characters'. See Sluiter, 1990: 3: 5-39; Smith, 1990.

coffer of documentary truths.⁵ Dominated by French cultural commentators, the Realism debate encompassed both art and literature and prompted a revival in the critical field of Netherlandish painting. On the cusp of the twentieth century, however, a new iconological trend emerged in a pursuit of allegorical meaning. Theorists, such as Aby Warburg, developed an iconological reading of art through the use of contemporary literary materials.⁶ This excavation of meaning through a comprehensive cultural contextualization was far removed from the Realist readings of just a few years previously. But this embryonic iconographical approach was to set the methodological tone for criticism of Netherlandish genre art for the following century. From the earliest years of the twentieth century, the study of Netherlandish art was characterized by a focus on the concept of covert symbolism. Numerous writers, most notably Erwin Panofsky, embarked upon a quest to uncover and decipher the symbols seemingly hidden amongst the innocuous scenes of classical, historical, and religious subjects.⁷ With the publication of *Studies in Iconology*⁸ in 1939 and then *Early Netherlandish Painting* in 1953, Panofsky placed unprecedented emphasis on iconography and “concealed or disguised symbolism” in Netherlandish art.⁹ As a consequence of Panofskian iconography, the latter half of the twentieth century bore witness to a revolution in both the methodologies of Netherlandish genre painting criticism and its associated historiographies. By the 1960s, Panofsky’s prioritization of ‘meaning’ over form or style dominated the critical climate. Significant moderations to this founding theory arrived with the highly influential Eddy de Jongh and Jan Emmens of the Kunsthistorisch Instituut in Utrecht. In 1971, de Jongh outlined a methodology which honed the symbolist dimension of Panofsky iconography. In response to Panofsky’s concept of “disguised symbolism” the pretender advocated the term “schijnrealisme” or “apparent realism”.¹⁰ Whereas Panofsky primarily developed his theories through a study of Renaissance religious art, de Jongh illustrated his new techniques through the portrait and genre painting of the seventeenth century. Crucially, the emblematic content of contemporary cultural forms, specifically the popular emblem books and proverb prints of the period, were central to de Jonghian theory.

Originating in sixteenth-century Italy, the emblem book spread rapidly throughout Europe, achieving particularly strong currency in the Dutch Republic. By the seventeenth century, the emblem book had relatively little geographical variation, consisting of a motto or ‘lemma’, a picture and an epigrammatic, clarifying text. The explanatory text, commonly a short verse,

⁵ See, for example, Fromentin, 1913.

⁶ See Rampley, 1997: 41-55; Iversen, 1993: 541-53; Bredekamp and Diers eds., 1998.

⁷ See, for example, Kauffmann, 1943: 135-57; Rudolf, 1938: 405-33.

⁸ Panofsky, 1939.

⁹ Panofsky, 1971, 1: 141.

¹⁰ De Jongh, 1971: 143-94.

clarified the relationship between the lemma and the usually cryptic picture. The combined didactic ensemble, which often featured diverse allegorical and biblical references, instructed the reader on conducting a virtuous or socially responsible life. Radically, de Jongh argued that these Emblemata could offer an interpretative context for contemporary genre paintings.¹¹ A celebratory exhibition organized by the Utrecht School at the Rijksmuseum in 1976 expressed this emblematic ideology through the succinct, and now famous, title, “Tot lering en vermaak” or “To teach and to entertain”.¹² Correlating the pictorial content of genre painting with Emblemata, de Jongh also aligned their respective didactic intentions. Undoubtedly, the importance of emblem literature to contemporaneous painting had been overlooked for too long. In a recently published history of the emblem, John Manning asserts that:

One cannot understate the variety as well as the persuasiveness of emblematic modes of thought and expression during this period. Without exaggeration, from Catholic Spain to Protestant Netherlands and from England to Russia the emblem impinged on every aspect of European Renaissance and Baroque life – and death. Over 2,000 titles of printed books in who knows how many editions, manuscripts and various printed ephemera are only part of the surviving legacy of a phenomena that decorated every aspect of domestic and civil life, however noble, however menial.¹³

The capacity of the Dutch emblem to articulate meaning is clearly demonstrated by Gerrit Dou’s *Quack* (Fig. 1), which illustrates the explicit correlation between emblem literature and painting.¹⁴ While neatly exemplifying the seventeenth-century emblematic compulsion, *The Quack* is somewhat atypical of the genre. Rather than exploiting the didacticism of emblem literature, Dou manipulates the familiar iconography in a wry comment on the enthusiastically analytical collectors of the period. The painting contains a motley crew of children, peddlers and even monkeys, all taken directly from the pages of Dutch emblem books.¹⁵ This is a confusing, crowded scene, full of unspoken and unrelated proverbs, where even the trees and shrubs have a specific tale to tell. Whereas early modern Dutch paintings commonly use emblematic reference to convey a simple moral message, this chaotic scene cannot be reduced to a single palatable principle. Unusually, while incorporating standard motifs of Emblemata,

¹¹ For clarification of current de Jonghian theory, see de Jongh, 1995 or, for the English version, de Jongh, 2000.

¹² Bedaux and de Jongh, 1976.

¹³ Manning, 2002: 16.

¹⁴ Gerrit Dou, *The Quack*, 1652, Museum Boymans-van Beuningen, Rotterdam. Oil on panel, 112 cm x 83 cm. Signed: *Gdov 1652*. Provenance: presented to Museum Boymans in 1939; W. van der Vorm, Rotterdam; Arthur Goldschmidt; Elector Maximilian IV Joseph (d.1815), Düsseldorf and Munich; Elector Carl Theodor (d.1799), Düsseldorf; Elector Carl Philipp (d.1742), Düsseldorf; Johann Wilhelm, Elector Palatine (d.1716), Düsseldorf.

¹⁵ For further analysis of this painting see Emmens, 1971: 4a-4b.

The Quack gently mocks the meticulously iconological approach of the seventeenth-century buyer and also, perhaps, the late twentieth-century scholar.

Inevitably, the flaws inherent to de Jonghian theory were quickly identified. While numerous opponents of the school emerged during the 1980s, the most significant of these was probably Svetlana Alpers. Reacting against what she reductively, and inaccurately, termed “emblematic interpretation”, Alpers offered a theoretical countermodel in her 1983 publication *The Art of Describing*.¹⁶ Here, Alpers suggested that seventeenth-century Dutch painting was dominated not by emblematic meaning, as Panofsky and de Jongh had suggested, but rather by descriptive intention. Emphasizing the significance of optical and cartographical techniques, Alpers identified painting as a medium through which the Dutch viewer could better ‘know’ the world. The years following the publication of *The Art of Describing* were characterized by a polarized debate, which included the iconographical theorists of the de Jonghian school and the new advocates of descriptive methodology.¹⁷ By the 1990s, efforts were directed towards resolution and clarification; in particular, critics addressed the issue of ‘realism’ and the associated problems of definition.¹⁸ While the nuclear issue of ‘realism’ remained confused, this decade yielded a new and varied body of ‘realist’ criticism. Resuming the scientific, and specifically optical, ideology of Alpers, several historians explored the use of camera obscura in paintings by Vermeer, while numerous others examined the botanical, zoological and medical content of the wider corpus of Netherlandish painting.¹⁹

In the last decade, argument between the two prevailing theoretical schools has certainly calmed; scholars today often refrain from expressing a methodology altogether, content instead to provide neat historiographies of twentieth-century criticism.²⁰ On closer examination, however, recent studies tend to reveal a shared reconciliatory methodology. Acknowledging the limitations of de Jonghian theory, art historians nonetheless recognize an important emblematic dimension to genre painting. Concurrently, most recent studies also admit the necessity of the descriptive theory advocated by Alpers.

¹⁶ Alpers, 1983: 229.

¹⁷ For a summary of the debates during this period see Chapman, 1997: 329-34; Franits, 1995: 11-17.

¹⁸ See, for example, de Vries, 1991: 209-48.

¹⁹ ‘Realist’ literature of the 1990s is diverse in both subject and methodology. It includes Freedberg, 1991: 377-428; Swan, 1998; Swan, 1997; Steadman, 2001: 27-28; Wheelock, 1977; Liedtke, 1982; Kemp, 1990; Ruurs, 1987.

²⁰ Perhaps the most useful historiography produced in recent years is Westermann, 2002: 351-72. Others include Sluijter, 1998: 231-45; Liedtke, 2000: 207-20; Grijzenhout and van Veen eds., 1999; Franits ed., 1997.

In a climate of vocal historiographers and silent theorists, it is perhaps more important than ever to articulate clearly an operational methodology. In line with current research, this thesis assumes a reconciliatory approach in its interpretation of genre painting. In essence, its methodological construction corresponds approximately to the majority of recent studies on Netherlandish art. However, as many of them do not explicate their theoretical foundation, and as this thesis possesses a nuanced interpretative approach, a theoretical synopsis is required. Essentially, then, recognizing Netherlandish genre paintings as independent constructed fictions comprised of fictive elements, this thesis might be termed ‘contra-realist’. This approach, which absolves itself from the various debates of realisms, is derived from the premise that genre art, whether intentionally inventive or not, inevitably contains fictions shaped by its storyteller. Whereas some scholars have explored the socio-historical ‘truths’ suggested by genre painting, this study examines it as a purely cultural product. Essential to this examination is a significantly post-de Jonghian emblematicism; drawing on a wide variety of cultural material, the emblem plays an important role in this exploration of alchemical genre scenes. Significantly, however, this study uses the emblem to inform the reading of paintings rather than to dictate ‘meaning’. Thus, while resisting the strict, prescriptive emblematic method of de Jongh, this thesis extends the cultural conception of alchemical genre painting, embracing a more inclusive emblematic context.

2.2 Theories of Gender in Genre Painting

In 2002, Mariet Westermann noted that gender studies has affected the field of Netherlandish art “in surprisingly limited fashion”.²¹ In the three years since this statement, little has changed. During the 1970s and 1980s, the emerging generation of ‘gender’ theorists focused on the historiography of Dutch art and on the recovery of female artists and their dormant oeuvre.²² In 1976, Linda Nochlin and Ann Sutherland Harris coordinated the renowned radical exhibition “Women Artists 1550-1950” which aimed to reinstate the female painters forgotten by masculine historiography.²³ This showcase invigorated study of the artists featured therein, with Judith Leyster, in particular, drawing special attention.²⁴ In distinct contrast to the feminist theory evolving in other quarters, the newly gender-conscious critics

²¹ Westermann, 2002: 359.

²² This thesis is reluctant to apply the term ‘feminist’ in relation to Netherlandish genre painting. Although numerous art historians apply the term to Netherlandish art, it has been used so broadly that it precludes useful function within the very narrow gender methodology of Netherlandish genre art. As early as 1988, Joan W. Scott noted of “the new knowledge about women” that “the production of this knowledge is marked by remarkable diversity in topic, method, and interpretation, so much so that it is impossible to reduce the field to a single interpretive or theoretical stance.” Wallach Scott, 1988: 16. On the “multiplicity of meaning” in this field see Hawkesworth, 1997: 649-85.

²³ Nochlin and Sutherland Harris, 1976.

²⁴ Fox Hofrichter, 1989; Leyster, 1993; Biesboer and Welu eds., 1993.

of Netherlandish painting adopted a conspicuously New Historicist approach to their subject. While critics excavated and evaluated the lives of the female artists they uncovered, paintings were examined in terms of the socio-historical issues potentially contained within. The disparity between the narrow contextual approach in the field of Netherlandish art and the multi-faceted and exploratory criticism of modern and post-modern visual culture during the 1980s was vast and remains a curiosity.²⁵ By the mid-1990s, gendered readings of Netherlandish genre art emerged primarily through an assessment of domestic imagery and gendered space.²⁶ As the decade continued, gender criticism centred upon the socially didactic role of paintings. To varying degrees, Wayne Franits, Nanette Salomon, Elizabeth Honig, Mariet Westermann and Alison Kettering, among others, examined Netherlandish genre painting as a tool for the fashioning of social attitudes.²⁷ Criticism into the twenty-first century has, for the most part, maintained this socio-historical approach. In a discussion of “Masculine and Feminine Spaces”, Martha Hollander evinces the significance of gender balance in Dutch society,²⁸ while Klaske Muizelaar and Derek Phillips explore how paintings reflected and influenced the domestic and imaginative lives of their contemporary viewers.²⁹

In many ways, this thesis is far removed from this current socio-historical trend. Essentially, it is concerned with the abstraction or symbolic character of gender. In recognizing the constructed fiction of painting, this thesis primarily expounds the ideological significance of gender within the context of Netherlandish visual culture and alchemical symbology. While cognizant of historical context, this present study draws limited sociological conclusions from its findings. However, in accordance with most current criticism of gender in early modern genre painting, this project is ‘gender sensible’, rather than ‘feminist’. While examining a male conception of gender, it does not aim to locate its conclusions within a broader historical or sociological context of feminist argument. For the most part then, this thesis is not concerned with ‘women’, but with the ‘Female’.³⁰

²⁵ As the previous section explicates, the 1980s and 1990s witnessed a protracted and consuming debate about ‘realisms’. Problems of semantics and the absence of a shared operational vocabulary perhaps hindered the advancement of more experimental criticisms.

²⁶ Literature on domestic imagery generally maintained the cultural historicist approach of earlier years, expounding, in particular, the social role of these paintings. These studies include Franits, 1995; Franits, 2000: 295-316; Hollander, 2000: 273-93.

²⁷ Franits, 1995; Franits, 2000: 295-316; Hollander, 2000: 273-93; Salomon, 2004; Kettering, 1993: 93-124; Westermann, 2001: 15-81; Honig, 1997: 187-201.

²⁸ Hollander, 2002.

²⁹ Muizelaar and Phillips, 2003.

³⁰ The conception of the ‘Female’ is explained more fully in relation to alchemical symbology in Introduction Part II: 42-44.

2.3 Gender and Science and Problems of Terminology

When in 1978 Evelyn Fox Keller introduced the term “gender and science”³¹ in a psychoanalytical journal, she semantically launched a new subspeciality in the field of, what she and others called, “feminist theory”.³² Soon after the publication of this inaugural paper, the subject of “gender and science” appropriated a specifically historical perspective. Representing a landmark stage in the evolution of the discipline, Carolyn Merchant, a Marxist, feminist ecologist, published *The Death of Nature: Women, Ecology, and the Scientific Revolution* in 1980.³³ In this broad and controversial critique of the scientific revolution, Merchant explored the metaphor of nature as woman. Describing the usurpation of “organismic theory” by a “mechanist” world view, Merchant suggested that the scientific revolution represented the wide-ranging and ruinous exploitation of the female.³⁴ Interestingly for this thesis, she addressed briefly Gnostic philosophy, and “its assignment of equal importance to male and female principles in generation” in alchemical treatises.³⁵ Writing of the new mechanical philosophy, Merchant asserted that “the Neoplatonic female world soul, the internal source of activity in nature, would disappear, to be replaced by a carefully contrived mechanism of subtle particles in motion”.³⁶ The publication of *Death of Nature* testified to and further encouraged the attraction of feminist scientists and social scientists to the historical. Fox Keller, originally a mathematical biophysicist, responded with the equally ground-breaking *Reflections on Gender and Science* which explored, in part, historical conceptions of gender and the gendering of science.³⁷ By 1990, a vast and complex literature on the historical dimensions of gender and science had evolved.³⁸

While this thesis draws on the disparate literatures of the “gender and science” subspeciality, it possibly benefits most from the qualifying vocabularies offered by critics in this quarter during the late 1990s. Surprisingly, historians of seventeenth-century genre painting are reluctant to define their operational terminology. This unwillingness to explicate is particularly intriguing given the complexities and open debates surrounding the language of gender in academia. Thus, to facilitate accurate comprehension of the arguments contained within, the following section delineates briefly this thesis’ theorization of gender. While

³¹ Fox Keller, 1978: 409-33.

³² Fox Keller, 1995: 28.

³³ Merchant, 1980.

³⁴ Merchant, 1990: 1.

³⁵ Merchant, 1990: 17. Importantly, however, this aspect of her argument has been justifiably attacked for its simplistic representation gender of alchemy. See Newman, 1998: 216-26.

³⁶ Merchant, 1990: 20.

³⁷ Fox Keller, 1985.

³⁸ These disparate texts include Jordanova, 1989; Schiebinger, 1989; Laqueur, 1990; Rossiter, 1982; Fox Keller, 1983.

recognizing the necessity of “cultural specificity and historical variability” in gender narratives, this thesis fixes its vocabulary within a rigid, interpretative framework.³⁹ Primarily, this language is bound to a seventeenth-century Netherlandish ideation of gender in genre painting, and to its operation within a strict culture of visual symbology. Acknowledging and accepting Judith Butler’s anti-binarist theorization of gender, this thesis nonetheless recognizes the binaristic identities of ‘male’ and ‘female’ both within this specific cultural symbology and within alchemical philosophy.⁴⁰ In its use of the terms ‘gender’, ‘female’, ‘male’, ‘masculinity’ and ‘femininity’, this project alludes to an early modern cultural, and mainly alchemical, abstraction of corresponding societal and biological conceptions. Wherever its discourse encompasses discussions of men and women in Netherlandish society, this thesis clearly identifies a transition in both its vocabulary and treatment of ‘gender’.

3 Current Criticism

Embracing several different subject fields, this thesis has benefited from a broad range of criticism, from studies in chemistry to gender theory. The most relevant materials in all these areas emerge explicitly throughout the course of the thesis. The following sections, however, summarize the state of research in two areas which require early introduction.

3.1 Seventeenth-Century Netherlandish Chymical Genre Painting

Only tentative steps have been taken to examine Netherlandish chymical genre painting, although countless examples survive, often in excellent condition. A formidable study of immense value, Jacques van Lennep’s *Alchimie* examines carefully the entire history of alchemical art.⁴¹ However, as van Lennep’s main area of interest is traditional emblematic illustration, sixteenth- and seventeenth-century paintings are discussed only briefly. Forming the foundation of alchemical genre criticism, however, is the frequently cited *Alchemist in Life, Literature, and Art* by John Read.⁴² Published in 1947, this book contains the mainly descriptive chapter ‘The Alchemist In Art’, which introduces briefly the foremost alchemical genre artists of the early modern period. Although this remains an important contribution, Read’s volume is outdated and, in parts, simplistic. In contrast, the most recent scholarly

³⁹ Hawkesworth, 1997: 681. For a discussion of the necessity of “genuine historicization and deconstruction” of terms see Scott, 1986: 1065.

⁴⁰ Butler, 1999: 3-33.

⁴¹ Van Lennep, 1985: 360-66.

⁴² Read, 1947: 56-84.

contribution to the field is the doctoral thesis *Painted Science: Convention and Change in Seventeenth-Century Netherlandish Paintings of Alchemists, Physicians and Astronomers*.⁴³ In this fascinating study, Jane Russell Corbett dedicates two chapters to paintings of chymists at work, focusing on the pictorial conventions governing the theme, and tracing the way in which variants were produced throughout the seventeenth century.⁴⁴ Unfortunately, this excellent survey does not encompass a discussion of gender issues.

Published in 2002, *Transmutations: Alchemy in Art* is also a valuable aid to students of chymical genre art.⁴⁵ This forty-page study by Lawrence M. Principe and Lloyd DeWitt reviews the Eddleman and Fisher Collections, held by the Chemical Heritage Foundation in Philadelphia. While of significant value to the field, this booklet essentially aims to introduce an uninitiated audience to the subject of alchemy and to paintings specific to the collection. While achieving its objective, this concise study is limited in both scope and scholarly analysis. Preceding this publication, Aaron Sheon produced an article on part of the collection in the pamphlet which accompanied the exhibition of the paintings at the Franklin Institute in 1973.⁴⁶ Again, while this article competently introduces the contents of the show, it lacks both scope and academic depth in its discussion of chymical paintings.

In their research of specific painters, some scholars have addressed individual chymical scenes, but they have generally failed to consider this class of painting as a whole. These specialized studies, which most notably take Jan Steen, David Teniers, Thomas Wijck and David Ryckaert as their subjects, are all referenced fully in this thesis. *Ambix*, a journal for the history of alchemy and chemistry, has also published a number of relevant articles. 'The Iconography of the Laboratory' by C. R. Hill, for example, concerns itself chiefly with the technical instruments and processes featured in chymical genre painting.⁴⁷ In addition, 'I Am The Poison Dripping Dragon' by Jane P. Davidson examines the significance of iguanas in the alchemical and occult paintings of David Teniers II.⁴⁸ Despite the undoubted contribution of such papers to the subject in general, these highly specialized studies offer little to scholars of gender in alchemy.

⁴³ Russell Corbett, 2004.

⁴⁴ An article summarizing Russell Corbett's discussion of alchemist paintings will appear as 'Convention and Change in Seventeenth-Century Depictions of Alchemists' in Wamberg ed., 2005: 195-212.

⁴⁵ Principe and DeWitt, 2002.

⁴⁶ Sheon, 1973.

⁴⁷ Hill, 1975: 102-10.

⁴⁸ Davidson, 1987: 62-80.

3.2 Women and Early Modern Alchemy

Neglected for so many decades, research into the history of women in science is undoubtedly burgeoning. With numerous historians and gender theorists addressing the role and significance of women in the history of science, this broad field is perceived increasingly as distinctly independent. The study of women and the female in the history of chemistry, however, is more problematic. While interest in this area is certainly growing, new publications usually go no further than reorganizing the findings of much earlier research. *Women in Chemistry: Their Changing Roles from Alchemical Times to the Mid-Twentieth Century*, for example, is an invaluable fully-referenced publication which offers an expansive, but concise summary of previous studies.⁴⁹ Focused, analytical research in this area is, however, scarce. Enquiries into the female scientists of the early modern period are usually biography-based, expounding the principal female figures of the time.⁵⁰ Little has been written on the lives and work practices of everyday female chymists. Jayne Archer's doctoral thesis, *Women And Alchemy In Early Modern England*, is one of few academic efforts to address properly the historical inherency of women to the development of chemistry.⁵¹ This remarkable study, which seeks to restore the commonplace female chymist to a scientific context, draws, in part, on *The English Housewife In The Seventeenth Century*.⁵² Other publications in the area, most notably, 'Managing an Experimental Household: The Dees of Mortlake and the Practice of Natural Philosophy' by Deborah Harkness, examine the role of wives in the lives of specific alchemists.⁵³ The work of Donald R. Dickson similarly investigates the alchemical role of Thomas Vaughan's 'Rebecca'.⁵⁴

Pioneering research into gender and chymical art, M. E. Warlick examines genre imagery in terms of traditional alchemical symbolism as well as in terms of female chymistry. Despite the fact that Warlick's contribution to this specialized subject constitutes just two short chapters, her work is central to this project. 'Moon Sisters: Women and Alchemical Imagery' addresses images of female chymistry in relation to alchemical philosophy and celebrated female alchemists.⁵⁵ In this study, she discusses briefly chymical genre paintings by David Ryckaert III. 'The Domestic Alchemist: Women As Housewives In Alchemical Emblems' attends to domestic processes in traditional alchemical iconography; unfortunately, it does not

⁴⁹ Rayner-Canham and Rayner-Canham, 2001.

⁵⁰ These biography-based texts include Nummedal, 2001: 56-68; Ilsley, 1963.

⁵¹ Archer, 1999.

⁵² Hole, 1953.

⁵³ Harkness, 1997: 247-62.

⁵⁴ Dickson, 1998: 34-46; Dickson, 2003: 129-42.

⁵⁵ Warlick, 2002.

explore genre art in any capacity.⁵⁶ Although Warlick's publications in this specific area are embryonic, her work has been fundamental to the development of this thesis.

4 Social Contexts of Art Production

An integral part of this thesis' methodology, the issue of art production in the seventeenth century necessarily requires explication. While Part II of this introduction addresses the issues surrounding the practice and culture of alchemy in the seventeenth century, this section delineates a social background for the practice and production of art in the Netherlands. Firstly, it addresses the divide of the Northern and Southern Netherlands, explaining the inclusive approach adopted by this thesis. Following this, the production and marketing of genre art in the seventeenth-century Netherlands are discussed.

4.1 The Northern and Southern Netherlands: a Background

Much has been written over the past ten years on the physical and ideological partitioning of the Northern and Southern Netherlands during the seventeenth century. Exploring the difference between the two regions, several weighty tomes chart the dissolution of medieval unity through detailed documentation and analysis.⁵⁷ As this complex history is recorded elsewhere, the following expounds the relevance of geographical demarcation to this study and defines further its parameters.

It is fair to suggest, as many have, that the Spanish recapture of Antwerp in 1585 effectively signalled the definitive division of the Northern and Southern Netherlands.⁵⁸ The differences between the Dutch Republic and the Southern Netherlands of the seventeenth century have been well-documented. In just the past decade, scores of books and articles have examined every aspect of Dutch society, while numerous others have explored the societies and cultures of the Southern Netherlands. Despite the marked distinction between the regions, this thesis, in line with current critical trend, is in principle inclusive, exploring the theme of 'chymistry' within the genre paintings of both regions. Although few today would consider this method contentious, the following section explains further this encompassing approach.

⁵⁶ Warlick, 1998.

⁵⁷ Most notably, Geyl, 2001; Prak, 2005; Blok, 1970; Israel, 1998.

⁵⁸ See, for example, Vlieghe, 1998a: 1.

Traditionally, art historians emphasized the disparity between Dutch and Flemish painting, reviewing every difference in a bid to define, and better understand, the intricacies of ‘Dutch’ and ‘Flemish’ art.⁵⁹ However, in recent years academics have debated the “Dutchness of Dutch art”,⁶⁰ posing the question, “Flemish art, does it really exist?”.⁶¹ In Pelican’s newest survey of Flemish art, Hans Vlieghe underlined the continuities of Netherlandish art. Throughout the book, he suggests that the cohesion of these two countries essentially outweighed the regional differentiation which occurred, after all, across all provinces and cities. Vlieghe observes that:

[...] artists who were active in the Southern Netherlands between 1585 and 1700 must have felt that only to a limited extent did they belong to an artistic tradition that was any different from that in the Northern Netherlands. This is most clearly shown by the fact that both branches of the history of art of the Low Countries are regarded as a single entity by seventeenth-century art-historiography. Certainly the art of the North and South had much in common: its bourgeois character; the iconography and typology which were both rooted in the same – mainly Antwerp – sixteenth-century tradition; and the mobility of a number of important artists, such as Brouwer, De Heem and Quellinus, who worked in both parts of the Netherlands, and were therefore able to put their stamp on artistic development both in the North and the South.⁶²

Currently, Vlieghe’s theory of a “common culture” has many important advocates, with numerous high-profile studies, exhibitions and conferences fusing the two previously separate fields.⁶³ Concurring with the current theorization, this thesis also possesses a thematic basis for its synthesis of Southern and Northern arts; genre paintings of the chymical workshop emerged during the seventeenth century almost exclusively in the Northern and Southern Netherlands.⁶⁴ While numerous critics have explored the free “artistic collaboration and market exchange” between the Catholic South and Protestant North, nowhere is this more apparent than in the highly referential field of alchemical genre painting.⁶⁵ By the seventeenth century this theme, which appears to have been equally popular in both

⁵⁹ See, for example, Gerson and ter Kuile, 1960.

⁶⁰ Stephanie S. Dickey, ‘Antwerp and Amsterdam: Artistic Exchange c.1580-1675’ Workshop, *Historians of Netherlandish Art Conference, Antwerp, 2002*. See <http://www.hnanews.org/2005/workshops/dickey.htm> (accessed 10 November 2005).

⁶¹ Vlieghe, 1998b: 187-200.

⁶² Vlieghe, 1998a: 1.

⁶³ These include the exhibition ‘Sinners and saints, darkness and light: Caravaggio and his Dutch and Flemish followers’, 1999; the conference ‘Dutch artists in Britain, 1550-1750’, 25-27 January 2001, Leiden Institute for Early Modern Studies; Manuth and Rüger, 2004; Baarsen et al., 2001.

⁶⁴ A specific type of chymical genre painting emerged in Italy at the same time; the differences between the Netherlandish and Italian paintings are significant and are discussed further in Chapter II: 78.

⁶⁵ Stephanie S. Dickey, ‘Antwerp and Amsterdam: Artistic Exchange c.1580-1675’ Workshop, *Historians of Netherlandish Art Conference, Antwerp, 2002*. See <http://www.hnanews.org/2005/workshops/dickey.htm> (accessed 10 November 2005).

Netherlands, was dominated by two Southern figures: David Teniers the Younger and, by legacy, Pieter Bruegel the Elder. With strong ties to Antwerp, these disparate figures essentially shaped the character of Netherlandish alchemical art for centuries. Chapter I describes the remarkable influence of Bruegel's prints and Teniers' paintings in the formation of a new genre. Nearly all the Southern painters featured in this project settled in Antwerp and it is clear from the biographies included that cross-fertilization between all Netherlandish painters was rife.⁶⁶ In addition, both the Northern and Southern Netherlands drew from a shared heritage of emblem books and proverb prints. Most importantly for this thesis, the two regions were also submerged in a shared alchemical culture and exposed equally to its associative philosophy and iconography. Thus, while this thesis recognizes some regional variation in the paintings it examines, it would be both contrived and erroneous to deny the homogeneous nature of Netherlandish alchemical genre painting. For this thesis, then, geographical demarcation is informative, but not definitive.

4.2 Art Production and its Markets

[...] what really changed our view of Dutch painting most fundamentally, so that no survey, be it a book or a lecture course, can ever be the same as, say ten years ago, are the studies about the art market, about the relations between producing, selling and buying of paintings, about the socio-economic circumstances under which art was made, sold and used. In contrast with the rather crude Marxist approach from the sixties and seventies, the more recent achievements in this field went hand in hand with a host of new archival research, which, since the generation of Bredius, had long been neglected.⁶⁷

Speaking in 2002, Eric Jan Sluijter paid testament to the recent and revolutionary advances in the excavation of the seventeenth-century art market. In the three years since, this body of literature has grown further still, with publications exploring the production and trading of painting, most often through data-based, socio-economic studies.⁶⁸ This extensive and often meticulous research demands special review and cannot be condensed to a few brief paragraphs. However, in order that the content of this thesis may be properly contextualized, the following section offers a brief outline of painting production and the art markets of the seventeenth-century Netherlands.

⁶⁶ For example, the alchemical genre painters Jan Steen, Cornelis Bega, Richard Brakenburgh and Thomas Wijck all seem to have trained under Adriaen van Ostade, whose work features in Chapter I.

⁶⁷ Plenary address entitled 'State of the Art in Seventeenth-Century Dutch and Flemish Studies', Eric Jan Sluijter, *Historians of Netherlandish Art Conference, Antwerp, 2002*. See <http://www.hnanews.org/2005/sluijter2.htm> (accessed 10 November 2005).

⁶⁸ Recent publications include van der Veen, 2000: 137-71; North, 1997; Montias, 1996: 67-88; van der Woude, 1991: 285-329; Biesboer, 2002.

Traditionally, studies of the commercial processes of art production in the seventeenth century focus on the Northern Netherlands. However, in more recent years, projects centring on commerce have increasingly encompassed the art and artists of the South. This new habit of inclusion transpires, it seems, not from an acknowledgement of universality, but rather from a recognition of difference. More than ever, the subtlety of regional variation is being examined by economic and sociological historians. As such, studies today often centre on specific cities, rather than on counties or wider regions.⁶⁹ Focusing on the specificity of demography, legislation and working practices, these surveys examine the detailed textures of highly localized markets. Ironically, this fresh nuanced approach has led to a recognition of the broad commonalities of the Northern and Southern markets. The long-recognized variations of the Southern markets are now more often understood in terms of inevitable, but not necessarily divisive, regional differentiation. As such, current macro-historical surveys of Netherlandish art frequently incorporate discussion of both the North and the South.

The structures of art production and art markets, then, were broadly the same for both the Northern and Southern Netherlands.⁷⁰ The manufacture of paintings was based upon a strict guild structure.⁷¹ The Guilds of St. Luke, evident in both Netherlands, governed painters through fairly uniform legislature. Guild rules were strict and often personally intrusive, dictating the lives of both the painters and their families. In order to join the profession, an aspiring painter was obliged to serve a four to six year apprenticeship with a 'master' of the guild. This extensive training was expensive, with rates increasing according to the calibre and popularity of the master. Apprenticed at the age of ten or twelve, a boy would execute a wide range of chores in his master's studio. In addition to menial service, pupils would be tutored in art, initially through the copying of drawings and prints, eventually graduating to painting live models. In the later stages of their tuition, trainees were commonly allowed to work directly on the master's canvas. The more proficient the student, the greater their participation in the production of the master's painting. After about six years, a student would usually apply for guild membership by submitting their own 'masterpiece' for consideration. If the standard was considered high enough, the artist's name was recorded in the guild's register. Once registered, the artist could legitimately produce, sign and sell his own paintings and, as an enrolled master, assume apprentices.

⁶⁹ These include Biesboer, 2002; Montias, 2003; Montias, 1996: 67-88; van der Veen, 2000: 137-71.

⁷⁰ For a detailed analysis of the Northern and Southern art markets see de Marchi and Miegroet, 1994: 451-64.

⁷¹ For more on the guild structure see Prak, 2003: 236-51.

In an effort to reflect the economic reality of the industry, historians in recent years have referred not to the 'art market', but to the 'art markets' of the seventeenth century. The energized economy of the Golden Age and shifts in political and religious powers had a remarkable effect on the forces and structures of the art markets. As the patronage of the church evaporated, the art market opened, giving way to increased demand, increased production and a diversification of retailing possibility. It is estimated that 70,000 paintings were produced in the Netherlands every year for the duration of the seventeenth century.⁷² While it is now generally agreed that contemporary commentators overstated the accessibility of the Dutch art market, it is fair to suggest that the industry catered to "various interests and levels of income and social status".⁷³ An important component of this industry, genre painting was produced in a variety of sizes, styles, qualities, prices, places and for an equally diverse consumer. The best genre artists, like Gerrit Dou, Johannes Vermeer and Frans van Mieris, often worked exclusively for a single client over a long period of time. Painters such as these could command substantial sums for a single work of art and rarely offered direct replications of their paintings. At the other end of the scale, less popular painters generated vast quantities of cheap, similarly themed paintings. Sometimes these paintings were copies of the studio's most successful works, with little or no variation, completed by an array of studio hands. Studios, of all standards, frequently specialized in a few highly specific themes, such as *kermissen* [carnivals] or *boordeelkens* [brothel scenes]. As this thesis shows, numerous artists specialized in the theme of 'the alchemist'.⁷⁴ It has been estimated, for example, that "between three hundred and fifty and four hundred extant examples of *Alchemists*" feature in the oeuvre of David Teniers the Younger alone.⁷⁵ Despite this vast number, the alchemist was not Teniers' sole specialization. Like most artists, Teniers had several specialities, including witchcraft and devilry, merry-making peasants, the Temptation of St. Anthony and the village barber-surgeon.

For the most part, art was sold to an anonymous market, either directly through the studio or through an art dealer. Paintings, however, were also available from a variety of other local sources. Prints and paintings were sold in bookshops, inns, at stalls at *kermissen*, in addition to Guild-organized exhibitions. Subject to strict conditions, artists could also submit their work to auctions or lotteries.⁷⁶ Like many successful painters, Teniers cultivated strong ties with local art dealers, who promoted his work to a wide market. Instrumental in the success

⁷² North, 1997: 1.

⁷³ Westermann, 2004: 33.

⁷⁴ The subject of alchemical genre painting and the work of David Teniers the Younger is introduced at greater length in Introduction Part II: 40-41.

⁷⁵ Davidson, 1987: 62.

⁷⁶ For more on auctions see Montias, 2003.

of a painter, art dealers frequently commissioned expensive work on behalf of wealthy corporate or private clients.⁷⁷ Conversely, many artists including Vermeer and David Teniers the Elder were successful art dealers in their own right. This newly democratized market revolutionized the production of art, engendering a modern and self-sustaining cycle of supply and demand. As products of this energized industry, the paintings discussed by this thesis reflect the developing commercial-consciousness of artists. An appreciation of lucrative themes and formulas, in addition to the direct replication of profitable scenes, all signify the urgency of unprecedented competition.

5 Technical Issues

5.1 Quantitative Scope

In introducing this study, some observations must be presented. At the outset, it is important to note that women are anomalous in seventeenth-century Netherlandish alchemical genre painting. As this study concerns itself exclusively with paintings that feature focal females, the reader will not necessarily gauge the marginality of these works. The vast majority of seventeenth-century Netherlandish alchemical genre paintings depict women only as anonymous, background characters, if indeed they are included at all. While estimates are difficult, it is a reasonable assertion that focal females occur in less than five per cent of all known alchemical genre paintings.⁷⁸ The scope of this thesis has been comprehensive, investigating every known alchemical genre painting which includes a female figure. Again, while approximations are problematic, the examples encompassed by this dissertation probably represent two-thirds of all known female-focal Netherlandish alchemical genre paintings. Those works not referenced here are excluded either because of their condition, their similarity to another painting of higher quality or because they add little to the arguments of this thesis. None, of course, has been rejected because it fails to conform to the theories contained herein. The only painting of special significance to be excluded from this inquiry is *The Explosion in the Alchemist's Laboratory* by Justus Gustav van Bentum (Fig. 2).⁷⁹ This, along with a small number of other works, was disqualified due to its ambiguous date. It is unknown whether this remarkable painting belongs to the seventeenth or eighteenth

⁷⁷ For more on the role of art dealers in the Netherlands see Montias, 1988: 244-56.

⁷⁸ This figure reflects the data gathered during the course of this research. It has been provided as a guideline; the actual percentage may be less.

⁷⁹ Justus Gustav van Bentum, *The Explosion in the Alchemist's Laboratory*, date unknown, Chemical Heritage Foundation, Philadelphia 00.01.285. Oil on canvas, 46" x 37". Provenance: Fisher Collection.

century, but on assessment, this thesis considers it more characteristic of later genre art. It is therefore incorporated into the conclusion to describe the course of alchemical genre painting through the eighteenth and nineteenth centuries.

5.2 Problems of Authorship and Date

The cataloguing of paintings included in this thesis is occasionally imperfect. The accurate attribution of a collection is often a time-consuming and expensive enterprise. Consequently, many holding institutions tolerate inaccuracies and gaps in their catalogues. In some instances, therefore, the artist, date and provenance of paintings referenced by this thesis remain unknown. The point at which these works acquired their present titles is also unknown. Within the time constraints of its research, this thesis has endeavoured to restore accurate profiles to many of these paintings. As a result, many holding institutions have altered their attributions in line with its findings. However, the scope of this thesis could not encompass systematic research to investigate accurately each painting, and therefore some gaps inevitably remain.

5.3 Iconographical Sources

The alchemical genre paintings examined by this thesis are derived predominantly from the collections of the Chemical Heritage Foundation, Philadelphia and the Wellcome Library, London.

Containing over ninety paintings and two hundred works on paper, the Eddleman and Fisher Collections of the Chemical Heritage Foundation originate from two separate corporate sources. Founder of Fisher Scientific, Chester Garfield Fisher began acquiring alchemical paintings in the 1920s. Amassing a remarkable body of alchemical art, Fisher Scientific International Inc. donated its collection to the Chemical Heritage Foundation in March 2000. Inspired by Fisher's passion for painting, Roy Eddleman, CEO and founder of Spectrum Laboratories, began accruing his own collection in the 1960s. Having cultivated a similarly impressive fund of alchemical artworks, Eddleman donated his paintings and drawings to the Chemical Heritage Foundation in November 2002. Ranging from the seventeenth to the nineteenth century, the majority of these works explore the various roles of the alchemist and chemist. With an exceptional corpus of seventeenth-century Netherlandish genre paintings, the Chemical Heritage Foundation has provided many of the paintings examined by this thesis.

In London, the Wellcome Library Iconographic Collections represent an equally valuable source of alchemical imagery. Containing over 100,000 prints, drawings, paintings and photographs, the Iconographic Collections centre on the history and evolution of medicine. The majority of the works in the Iconographic Collections were acquired by Henry Wellcome and his staff between 1890 and 1936, in an effort to create a 'Museum of Man'. New accessions are received by the Wellcome Trust each year and consequently the collection continues to grow. Possessing a globally significant body of seventeenth-century Netherlandish chymical genre paintings, this collection has proved fundamental to this thesis.

The remaining alchemical paintings utilized by this project originate from several sources, including the National Gallery, London and the Rijksmuseum, Amsterdam. Unsurprisingly, the Rijksbureau voor Kunsthistorische Documentatie has been instrumental in identifying paintings with alchemical subjects. Additionally, this thesis has made abundant use of museum catalogues and archives, as well as private collections.

PART II

alchemy (ˈælkɪmɪ) 1. The chemistry of the Middle Ages and 16th c.; now applied distinctively to the pursuit of the transmutation of baser metals into gold, which (with the search for the alkahest or universal solvent, and the panacea or universal remedy) constituted the chief practical object of early chemistry.⁸⁰

In its compulsion to compartmentalize a mutable universe, the modern era has successfully reduced an unfathomable art and science to a palatable, single-dimensional concept. While the simplicity of present definitions is undoubtedly misleading, the emphasis on transmutations and elixirs has legitimate historical roots. Since the Middle Ages, European alchemists sought the transmutation of base metals through the procurement of the elusive ‘Stone’. Similarly, the quest for the curative and immortalizing elixir represented a principal objective for the *adepts* of ancient China, as well as those of early modern Europe. Yet, despite the historical veracity of these twin ambitions, alchemy is nonetheless an extraordinarily challenging phenomenon, traversing countless disciplines and transcending definition. In academic circles, at least, it is widely acknowledged that the field even now lacks any kind of “comprehensive explanation”⁸¹ or “totalising theory”.⁸²

In light of this ambiguity, the following introduction expounds the key alchemical concepts and histories most relevant to this project.⁸³ The first section addresses the problems of vocabulary inherent to any discussion of alchemy. Crucially, it establishes the functional lexis for this specific project and, furthermore, offers explicit definition of the ‘alchemies’ discussed in the ensuing chapters. The subsequent segment offers a historical context for the thesis’ analysis of seventeenth-century genre painting, delineating the range of practitioners in early modern society and exploring their varying status. The next part explores the diverse manifestation of alchemical artistic culture in the seventeenth century. Here, the breadth and significance of alchemical art is reviewed, with specific attention paid to the emergence of the theme within genre painting. The final paragraphs introduce the gendered language and symbolism of alchemy and, in particular, examine the female principle and its meaning within the theoretical binaristic relationship of the ‘chymical marriage’.

⁸⁰ Simpson ed., 1989, 1: 300.

⁸¹ Hopkins, 1934: 3.

⁸² Linden, 2003:3.

⁸³ Full explications of alchemical concepts marginal to the discussions of this thesis can be found in Abraham, 2001; Holmyard, 1957; Eliade, 1979.

1 Definitions and Terminology

By the time of Zosimos of Panopolis (c.300 AD), alchemical literature contained a “bewildering confusion of Egyptian magic, Greek philosophy, Gnosticism, Neo-platonism, Babylonian astrology, Christian theology, and pagan mythology”.⁸⁴ Characterized by complex allegory and obscure symbology, Zosimos’ mystifying tracts embody the cryptic tone intrinsic to all subsequent alchemical cultural products.⁸⁵ Drawing upon a multitude of ancient and modern traditions, this “confusion” intensified as alchemy emerged in medieval Europe via the Islamic texts of Arabia. As *The Mirror of Alchimy* attests, there was little consensus concerning terminology among Western theoreticians, each of whom professed their own interpretation of the “Art” or “Science”:

In many ancient Bookes there are found many definitions of this Art, the intentions whereof we must consider in this Chapter. For *Hermes* saith of this Science: *Alchimy* is a Corporal Science simply composed of one and by one, naturally conjoyning things more precious, by knowledge and effect, and converting them by a naturall commixtion into a better kind. A certain other saith: *Alchimy* is a Science, teaching how to transforme any kind of metall into another: and that by a proper medicine, as it appeareth by many Philosophers Bookes. *Alchimy* therefore is a science teaching how to make and compound a certain medicine, which is called *Elixir*, the which when it is cast upon mettals or imperfect bodies, doth fully perfect them in the verie projection.⁸⁶

Inevitably, by the seventeenth century the central issue of definition was still unresolved; ‘alchemy’ remained a concept without strict boundary or fixed interpretation. Consequently, as Stanton J. Linden writes, “current scholarly concern is much more with the variety and diversity of conceptions of alchemy, the multiplicity of its definitions, the theoretical and practical malleability that makes alchemy useful and attractive to a broad interdisciplinary audience, and its origins in several ancient cultures”.⁸⁷ He adds, “it is much more common to see alchemy as pluralistic rather than singular, as ‘alchemies’ rather than ‘alchemy’”.⁸⁸ Given the wide-ranging nature of the field, this thesis explores only selected facets of what might be termed ‘alchemy’.

In order to anchor its discussion of alchemical painting, this thesis must first identify and properly define those concepts most relevant to this project. In the past decade, several

⁸⁴ Holmyard, 1957: 25-26.

⁸⁵ For more detail see Read, 1936: 40.

⁸⁶ Linden ed., 1992.

⁸⁷ Linden, 2003: 4.

⁸⁸ Linden, 2003: 4.

important texts have explicated carefully the semantic difficulties inherent to the subject.⁸⁹ Specifically, established definitions of alchemy and its derivative forms continue to elude contemporary scholarship and terminology remains highly contentious. As neither issue has been resolved satisfactorily, the following sections articulate the operational vocabulary for this thesis.⁹⁰

According to Lawrence Principe “the words *alchemy* and *chemistry* (in all their orthographic and grammatical variants) are used interchangeably in almost all seventeenth century contexts”.⁹¹ While this statement has attracted some censure, it attests, at least, to the deeply intimate relationship between the two terms.⁹² To describe the *generic* nature of alchemy/chemistry in the early modern period, this thesis turns again to Principe. Recently, the chemical historian has advocated the use of the obsolete term ‘chymistry’, to indicate the “sum total of alchemical/chemical topics as understood in the seventeenth century”.⁹³ This useful archaism helpfully avoids the connotations “implicit in the use of either *chemistry* or *alchemy*”.⁹⁴ In addition, then, to signifying the quest for the Philosophers’ Stone, it also encompasses metallurgy, crystallization, glassmaking and all other chemical- and mineral-based activities of the seventeenth-century workshop.

As a blanket term, however, ‘chymistry’ does not accommodate the nuances of specialized alchemical practices and theories. Generally, the arguments of this thesis are not concerned with generic ‘chymistry’, but with ‘exoteric alchemy’ and ‘esoteric alchemy’. Although these two alchemies are evoked in the majority of present-day texts, they are nonetheless inexact, umbrella terms, which have developed in response to a deficient vocabulary. Acknowledging that both expressions encompass a vast and intersecting range of ill-defined and subsidiary ‘alchemies’, this terminology nevertheless has particular convenience and appropriateness to this project. When this thesis, then, refers to ‘alchemy’, it refers not to generic chymistry, but to an exoteric and esoteric fusion.

⁸⁹ Principe and Newman, 2001: 385-431; Newman and Principe, 1998: 3:32-65; Principe, 1998: 8-10; Linden, 2003.

⁹⁰ So as not to complicate a sufficiently confusing subject further, the following discussion is restricted to the Western alchemies of the seventeenth century.

⁹¹ Principe, 1998: 8. See also Newman and Principe, 1998: 3:32-65.

⁹² Many alchemy historians have expressed concerns about Principe and Newman’s ‘Alchemy vs. Chemistry: The Etymological Origin of a Historiographic Mistake’ through the ‘The Alchemy Website’. These detractors include some of the leading figures in the field. For more detail see http://www.levity.com/alchemy/a-archive_apr05.html (accessed 10 November 2005). This thesis uses the word ‘chemistry’ only in its present day sense.

⁹³ Principe, 1998: 9.

⁹⁴ Principe, 1998: 9.

Exoteric alchemy, then, is concerned exclusively with practical alchemy: the physical operations of the laboratory. For this thesis, exoteric alchemy incorporates, among other things, the physical processes of metallic transmutation or *chrysopoeia*. 'Chrysopoeia' specifically describes the gold-making ambition of alchemy and is applied frequently throughout this project. Alchemists of the early modern period believed that all metals aspired to perfection, that is, gold. By manipulating the balance of the mythological properties 'mercury' and 'sulphur', alchemists believed they could generate 'perfect' or pure gold from any metal.⁹⁵ Alchemical theory maintained that this correction could be achieved through the Philosophers' Stone which could transmute or 'perfect' a molten base metal upon contact. This miraculous Stone, most often described as a powder or tincture, was generated through the reconciliation of opposites in the *opus alchymicum*.⁹⁶ For this thesis, 'exoteric alchemy' also includes the physical quest for the *elixir vitae* or Elixir of Life, which was believed to cure all known disease and to prolong human life, possibly indefinitely.⁹⁷ The nomenclature regarding the complete alchemical process also requires some clarification. Historians of alchemy, as well as the alchemists themselves, have often referred to the entire process as 'the Great Work', or *magnum opus*. Similarly, it is often just called the Art, the Work or the *opus*. While these terms are fairly distinct in etymology, this thesis, in line with present day criticism, employs them interchangeably.

For the majority of alchemical studies, 'esoteric alchemy' is a far more elusive concept, indivisible, in many ways, from the exoteric processes of the *opus*. A myriad of abstract ideas and beliefs, esoteric alchemy is a highly inclusive term which alludes to the spiritual, metaphysical and philosophical aspects of the *opus*. The countless theoretical components represented by esotericism include the Christian, Greek mythological and sexual allegories inherent to alchemical languages and operations; the colour and astrological sequences at the heart of the transmutation process; notions of the microcosm and macrocosm; the hierarchy of the seven metals; numerology; Paracelsian metaphysical theory; and the interdependency of the Aristotelian elemental principles with the four Galenic humours and the four seasons. While a full explication of esoteric alchemy cannot be contained within an introduction of this

⁹⁵ 'Mercury' and 'sulphur' were mythical substances unrelated to modern interpretations of the words. A third substance, 'salt' was added by Paracelsus in the sixteenth century. *Tria prima* is discussed further in Chapter III, 110-11. The mercury-sulphur theory is discussed further at a later point in this introduction, 42-43.

⁹⁶ This term describes the distillation and conversion processes through which the 'fifth element' was produced. For more on this concept see Abraham, 2001: 137.

⁹⁷ This healing agent is commonly interpreted as the liquid state of the Philosophers' Stone, although like all alchemical concepts, it defies categorical definition. See Abraham, 2001: 165-66, 215; Eliade, 1979: 111-36, 160-75.

kind, there are some key points worth emphasizing.⁹⁸ First, is the importance of *prima materia*.⁹⁹ *Prima materia* is the ‘first matter’ from which all things were created and that could, upon alchemical intervention, be restored. For the attainment of ‘perfection’, a substance must be first brought back to its original, or *prime*, state. This phase of the *opus* is ordinarily called *nigredo*, or the black stage; the matter is ‘dead’ and awaits ‘resurrection’.¹⁰⁰ A second key concept pertains to the importance of balance. Powerfully manifest in alchemical culture, this theme incorporates physical, spiritual, elemental, humoural, sexual, cosmological and astrological systems of balance. By manipulating the equilibrium of these systems, alchemists by their ‘art’ could redress or perfect ‘nature’. This theme is explored further in a later discussion of alchemy’s central iconographical concept, the Red King and White Queen. A third underlying theory relates to the alchemical quest for perfection. Ultimately, the early modern alchemist was concerned only with the goal of perfection: perfection of metal, perfection of the corporal body and perfection of the spirit.¹⁰¹ This ideology was inextricably bound to the status of the initiated alchemist, or *adept*, as God’s chosen servant. Esoteric alchemy, for this thesis, also refers to the transmutation of the alchemist from humble man to enlightened and sanctified philosopher. This internal transformation again occupies a highly ambiguous position within alchemical philosophy; the conversion is at once potentially both physical and spiritual, literal and metaphorical. Additionally, esotericism pertains to the acquisition of knowledge through book-learning and writing. Importantly for this study, ‘esoteric alchemy’ also includes the impenetrable secret languages of alchemy. From the earliest alchemical writings, the secrets of the Great Work were encrypted through a mutable, metaphorical language, which, from the Middle Ages, was pictorial as well as literary. This peculiar symbology, discussed later, incorporates images of Hermaphrodites, coffins, red lions, green lions, encircled serpents, black toads, phoenixes, peacock tails and pelicans, among countless other emblems. This visual imagery, which is most abundant in medieval and early modern Western treatises and manuscripts, occupies an important role in this research.

Other potentially unfamiliar expressions in this thesis include *iatrochemistry*. While Chapter III explains the word more fully, *iatrochemistry* alludes simply to medical alchemy. While the meaning of most other alchemical terms is indicated through context, most can be fully understood with reference to *A Dictionary of Alchemical Imagery* by Lyndy Abraham¹⁰² or

⁹⁸ The composition of esoteric alchemy is so profound and encompassing that it cannot be presented accurately here even in summary. For concise summation of esoteric alchemy see Linden, 1996: 7-26.

⁹⁹ See Abraham, 2001: 153-56.

¹⁰⁰ See Eliade, 1979: 153-62.

¹⁰¹ For more on the alchemical quest for perfection see Newman, 2004: 11-33.

¹⁰² Abraham, 2001.

Mark Haeffner's *The Dictionary of Alchemy*.¹⁰³ In order to maintain precision, this project, wherever possible, utilizes an unambiguous alchemical lexicon.

1.1 Terminology of Cultural Products

Unsurprisingly, the fundamental issue of terminology also affects studies of alchemy's visual and literary cultures. Evoked frequently throughout this project, the terms 'alchemical literature' and 'alchemical genre painting' present particular obstacles due to their misleading semantic similarity. As such, the following offers explication for these terms within the context of this thesis.

This work applies the terms 'alchemical literature' and 'alchemical genre painting' only within strictly defined parameters. 'Alchemical literature', therefore, refers to the literary texts produced by, and for, alchemists. It is an inclusive term which may, for example, refer to the literatures of both ancient Babylonia and twentieth-century Europe. Even within the early modern period, the content of such literature was markedly varied, encompassing practical chymical instruction as well as obscure esoteric discourse. Printed manuals, esoteric manuscripts and tracts describing alchemical processes, histories or philosophies, may all, therefore, be classed as 'alchemical literature'. Crucially, however, the term 'alchemical literature' within this project does not extend to texts which simply contain alchemical subjects or themes; within this framework, therefore, Ben Jonson's *Alchemist* and John Donne's 'Love's Alchemy' do not constitute 'alchemical literature'. By contrast 'alchemical genre painting', or alternatively 'chymical genre painting', is a highly specific term, with very different connotations. Discussed further in later paragraphs, 'alchemical genre painting' refers exclusively to genre paintings which depict the chymist or chymical workshop. Unlike other alchemical art forms, these paintings, which may be sympathetic to, or satirical of, alchemy, do not necessarily operate in accordance with traditional alchemical philosophies or artistic conventions. Instead, these works are generally entertainment pieces, executed by ordinary painters and directed towards a lay market. 'Alchemical genre painting', then, does not refer to paintings of non-chymical subjects, which may contain latent alchemical themes or subtexts.

It is important to note, however, that some semantic problems regarding this diverse collection of paintings remain. In generalized discussions of the chymical theme it is often impossible to articulate succinctly the nuances inherent to each depiction of chymical activity.

¹⁰³ Haeffner, 2004.

The term 'alchemical genre painting', for example, draws limited distinction between images of the scholar in his study and those of the laboratory-based chymist. However, while the basic terminology of this thesis does not accommodate these important distinctions, the diversity of alchemical enterprise is of primary consideration to this project. As such, the subtle nuances of the chymistry depicted within these scenes will be fully explored throughout the course of this study.

2 Alchemical Practice in the Seventeenth-Century Netherlands

While flourishing in the Middle Ages, alchemy reached its zenith in Europe during the seventeenth century. The invention of the printing press had an unusually delayed effect in this specific field, impacting alchemy only in the last quarter of the sixteenth century.¹⁰⁴ Once underway, however, the publication rate of alchemical treatises in Northern Europe was phenomenal, peaking in around 1680 and plummeting after the turn of the century. From careful data-based studies it is clear that several thousand alchemical treatises were published in Europe over the course of the century.¹⁰⁵ All key esoteric, exoteric and biography-based texts from Arabia, Ancient Greece and Europe were available in print, with many including excellent reproductions of fine copperplate engravings.¹⁰⁶ Although most appeared in Latin upon publication, these books were often translated into the major European languages.¹⁰⁷ Publishing many of these, the Netherlands also produced and attracted the foremost alchemical figures of the early modern period, including Paracelsus, Cornelius Drebbel, Jean Baptista van Helmont, John Dee, Cornelius Agrippa and Michael Maier.

Although attitudes varied according to geographical specificity and date, chrysopoeia was generally tolerated during the early modern period, although practice was often subject to

¹⁰⁴ This delayed reaction may have been related to an initial reluctance to disseminate without restriction the previously closed 'secrets' of alchemical knowledge.

¹⁰⁵ See Doberer, 1948; Ploss et al., 1970: 72. See also Waley Singer, 1928-31; Wilson, 1939: 1-836 and the statistical information offered by <http://www.levity.com/alchemy/statists.html> (accessed 10 November 2005).

¹⁰⁶ For more on the engravings of seventeenth-century alchemical treatises see Klossowski de Rola, 1997.

¹⁰⁷ Indeed, the Netherlands was possibly the first country to adopt the vernacular in its alchemical allegorizations. A Middle Dutch poem written by "Gratheus filius philosophi", from the second half of the fourteenth century, rejects Latin in favour of Dutch, "for the benefit of all those Ladies and Gentlemen who do not understand Latin". See Birkhan, 1990: 163; Pereira, 1999: 347-48.

strict licence.¹⁰⁸ The papal decree of 1317 against alchemy, *De Crimine Falsi Titulus VI. I Joannis XXII*, was applied only rarely, and then usually in cases of fraud. This lenience towards the practice of alchemy offers significant obstacles to scholars keen to understand the intricacies of alchemical enterprise in the seventeenth century. Had alchemy been illegal, or had prohibiting legislation been strictly enforced, researchers would undoubtedly benefit from a wealth of judicial documentation. As it is, records are slight in many areas. Historical research is hampered further by the variability of alchemy and the correspondingly diverse character of its practitioners. Alchemists ranged from intellectual champions such as Isaac Newton and Robert Boyle to ignorant ‘puffers’, desperately captivated by the illusion of the Philosophers’ Stone.¹⁰⁹ Moreover, numerous ‘alchemists’, including a few celebrated figures, were straightforward fraudsters.

Despite these complications, it is possible to reconstruct a general picture of alchemical practice in the seventeenth century. By the beginning of the sixteenth century, alchemy “was an entrenched interest within court circles”.¹¹⁰ Monarchs and members of the aristocracy entertained all manner of alchemists, keen to peddle stories of magical transmutations. Elizabeth of England, Christina of Sweden, Rudolf II of Austria, among numerous other European rulers, all funded an array of often nomadic chrysopoeians and natural philosophers. Like all important houses, royal courts would keep sizeable chymical laboratories for the production of household supplies and luxuries. While accommodating experimentation into natural philosophy and newer sciences, these laboratories would also often manufacture chemical-, mineral- and herbal-based medicines. Maintaining extensive domestic workshops, sovereigns interested in chrysopoeia would also often sponsor alchemists working within their own homes.¹¹¹ Instrumental in the political evolution of the Netherlands, Philip II of Spain was a fervent advocate of alchemy.¹¹² Throughout his reign Philip cultivated relationships with chymists of several nationalities, including Flemish, German, Italian and English. Supervised by senior officials in both the Netherlands and Spain, these workers were specialized iatrochemists and chrysopoeians, eager to fill the ever-depleted Hapsburg coffers. During the latter half of the sixteenth century at least, the Southern Netherlands supported a

¹⁰⁸ In England, for example, the Act against Multipliers enacted under Henry IV in 1404, was essentially governed by licence. Guarding against unregulated transmutation it stated, “that none from thenceforth should use to multiply gold or silver, or use the graft of multiplication; and if any do, they incur the pain of felony”. The act was repealed in 1689, apparently upon the instigation of Robert Boyle. See Principe, 1998: 1, 105.

¹⁰⁹ Referring to the overuse of bellows, the term ‘puffer’ describes an unsuccessful and under-educated would-be alchemist.

¹¹⁰ Webster, 1979: 307.

¹¹¹ See, for example, a description of Elizabeth’s erratic sponsorship of John Dee in Woolley, 2001: 115-29, 195.

¹¹² See Puerto Sarmiento, 1997: 17, 107-40; Puerto Sarmiento, 1999: 429-46.

strong tradition of highly skilled chymists. Exploiting this, Philip appointed a body of Flemish distillers to work towards the preparation of pharmaceuticals and perfumes for the royal household. A corps of significant merit, this Netherlandish expertise operated within the royal stillrooms of Madrid, Aranjuez and the Escorial.

After Philip's death in 1598, the situation for alchemists in the Spanish-Hapsburg employ altered, probably in response to the disapproving attitude of the Church and the repression of the Holy Office.¹¹³ However, while court-sponsored chrysopoeia may have waned in Spain, alchemy nonetheless retained cachet in Netherlandish high society well into the seventeenth century. Emphasizing the significance of alchemy to Netherlandish nobility, Jonathan I. Israel, in his history of the Dutch Republic, writes:

The passion for alchemy which transcended faiths and political barriers infusing the souls of many prominent personalities in seventeenth-century Europe – not least Leopold Wilhelm, governor-general of the Spanish Netherlands in the years 1647-56, who turned Brussels for a time into a noted centre of alchemistic endeavour – was a central element in the religious and scientific outlook of the Boreelists and their allies.¹¹⁴

Preserved amongst the upper classes, interest in alchemy cemented several eminent political and religious relationships.¹¹⁵ At the same time, lower-level domestic alchemy seems to have flourished, as the number of alchemical treatises published in the Netherlands increased throughout the seventeenth century.¹¹⁶ The occurrence of alchemical texts in post-mortem inventories of burgher's estates gives further indication that the Dutch and Flemish were keen consumers of such literature, confirming also that alchemy may have served as a pastime for more privileged individuals.¹¹⁷

It is, however, at the lowest end of the social scale that the practice of alchemy, and specifically chrysopoeia, is least documented. During the Middle Ages, alchemical scholarship was essentially confined to the monastery, the traditional centre for the storage and production of knowledge. By the beginning of the seventeenth century, however, the

¹¹³ However, the Austrian Hapsburg interest in alchemy continued throughout the seventeenth century with both Ferdinand III and Leopold I. See Wheatcroft, 1997: 193.

¹¹⁴ Israel, 1998: 589.

¹¹⁵ See Israel, 1998: 589.

¹¹⁶ The decline of court alchemy in Spanish-controlled areas is not reflective of Europe in general.

¹¹⁷ It is certainly clear from the work of Jayne Archer that chymistry was a popular amateur pursuit for English women of the upper classes, many of whom showed special interest in chrysopoeia. Studies also show that male members of the European nobility were often serious experimental hobbyists in the early modern period. Devotion to intellectual pursuits, including chymical experimentation and theorization, undoubtedly served as an expression of male accomplishment and endeavour in select circles. This theme is explored further in Chapter II of this thesis. See Archer, 1999: 1.i-3.xxv.

structures of alchemical learning had been transformed. Increasingly neglected by the elite echelons of religious brotherhoods, alchemy was reclaimed by the uninitiated and untrained.¹¹⁸ While it is unknown exactly what prompted this shift, the advent of printing and the mounting hostility of the Church towards alchemy unquestionably played a role. In addition, the reluctance of Netherlandish universities to incorporate chrysopoeia and its associated philosophies into its syllabuses ostensibly absolved alchemy of any academic exclusivity. These factors, combined with the fantastic rumours of miraculous alchemical bounty, inspired the imagination of the common man. From the imperfect evidence offered by genre painting, contemporary literature and studies of the craft workshop, it is likely that the lower classes practised alchemy within a basic workshop, attached to, or integrated into, the home.¹¹⁹ This space would have ranged from a rudimentary kitchen conversion to a purpose-designed and properly equipped workshop. Chrysopoeian efforts, it is now believed, may have generally represented a small part of a much broader and more profitable chymical business. The wide range of services and products offered by the village chymist to the local community would, in turn, have subsidized chrysopoeia and other less lucrative enterprises. Like other craft professions, practical alchemy at this level was probably a family affair, involving both wife and children, in addition to outsourced assistants.¹²⁰

Unlike many analogous trades in the Netherlands, alchemy was not regulated by a guild system. Instead, it is likely that as a local trade, alchemical practice was entirely self-governing. It is also likely that this autonomy reflected the distinctive secrecy which engulfed all alchemical activities. Eager to unravel the secrets of the Great Work, adepts were careful to preserve alchemical advancements even within their own workshops. As a non-guild industry, it remains unknown how many professional, local-level alchemists operated in the Netherlands during this time. However, considering the disproportionate occurrence of alchemists in Netherlandish art and literature and the countries' high production of alchemical treatises, it is possible that professional alchemy was more common in the Netherlands than in other European countries. The popularity of the alchemist theme in mainstream Netherlandish culture certainly suggests that the village chymist was a figure familiar to the general public. For the most part, this thesis deals with paintings of the local-level alchemist, a character far removed from the majesty of the royal courts. However, even within this relatively tight category there is broad variation of character. The Netherlandish genre painters of the seventeenth century depict dishevelled, poverty-stricken puffers, successful

¹¹⁸ See Archer, 1999: 4.ii; Shapin, 1990; Crisciani, 1995: 149-84; Halleux, 1979.

¹¹⁹ See Pereira, 1999: 336-38.

¹²⁰ This hypothesis is certainly supported by genre painting and contemporary literature. This craft workshop structure is discussed and referenced at greater length in Chapter IV: 151-52. See de Vries and van der Woude, 1997; Pott-Buter, 1993: 35-67; Wiesner, 1994; Roper, 1991.

chrysopoeians with bulging purses, contemplative scholars, callous charlatans, educated iatrochemists and well-heeled hobbyists. Although detail may be wanting, contemporary sources collectively attest to the wide range and quality of chymical services available to Netherlandish society. While it would be speculative to infer historical accuracy from genre paintings, they do appear to confirm both the popularity and variety of chymists during this period.

3 Alchemical Culture

Composed in either the first or second century AD, 'Dialogue of Cleopatra and the Philosophers' is one of the earliest known alchemical tracts and significantly betrays a strong symbolic emphasis.¹²¹ Alluding to the distinctive and perplexing symbology which would come to dominate alchemical culture into the modern age, this short dialogue evokes imagery of sex, birth, death and resurrection, the foremost themes of esoteric philosophy. About five hundred years later, these themes are resumed by the most famous and important of all alchemical documents, the *tabula smaragdina*, or *Emerald Tablet*. Purportedly authored by the mythical founder of alchemy Hermes Trismegistus, the *Emerald Tablet* is pre-medieval, with its earliest known incarnation probably occurring in the *Kitâb Sirr al-Asrar*, an Arabic pseudo-Aristotelian compendium of around 800 AD.¹²² Translated into Latin as *Secretum Secretorum* by Johannes Hispaniensis (c.1140) and by Philip of Tripoli (c.1243), the *Emerald Tablet* became an intrinsic part of Western alchemical lore. In the late seventeenth century, Isaac Newton developed his own English translation of the short text:

Tis true without lying, certain & most true.
That wch is below is like that wch is above & that wch is above is like yt wch
is below to do ye miracles of one only thing.
And as all things have been & arose from one by ye mediation of one: so all
things have their birth from this one thing by adaptation.
The Sun is its father, the moon its mother,
the wind hath carried it in its belly, the earth its nourse.
The father of all perfection in ye whole world is here.
Its force or power is entire if it be converted into earth.
Seperate thou ye earth from ye fire, ye subtile from the gross sweetly wth
great industry.

¹²¹ Anonymous, 'Dialogue of Cleopatra and the Philosophers' (first or second century AD).
Reproduced with notes in Linden, 2003: 44-45.

¹²² Debate engulfs this issue of origin. Others suggest that an earlier source is *Kitâb sirr al-halîqa* (sometimes called *Kitâb al-`ilal*) which is attributed to Apolonius of Tiana. This was translated into Latin by Hugo de Santalla at the beginning of the twelfth century. For more on this alternative argument see Travaglia, 2001.

It ascends from ye earth to ye heaven & again it desends to ye earth and
receives ye force of things superior & inferior.¹²³

Conjuring images of the Sun and Moon, Heaven and Earth, man and woman, gestation and the four elements, this cryptic and highly metaphorical text fundamentally informed the character of medieval and early modern alchemical literature. Expressing key alchemical ideas, the archetypal enigmatic language of the *Emerald Tablet* epitomizes Western alchemical literature of the first millennium AD. Even a cursory reading of these few famous lines yields evidence of fundamental alchemical concepts: conversion, perfection, microcosm/macrocosm, distillation/sublimation, the chymical wedding and the Philosophical Child, amongst others. For centuries, this symbolic language essentially remained confined to the written word. Through repetition and moderation, alchemical authors evolved an ever-changing symbology which potentially guarded the methodological and ingredient secrets of the Philosophers' Stone.

3.1 A Visual Culture

During the late Middle Ages, the dense symbology of alchemical literature began its transformation into pictorial representation. Highly emblematic, this striking visual manifestation of the alchemical language incorporated a broad range of artistic styles and forms. Occurring across numerous formats, this diverse iconography most often appears in books and manuscripts. Assimilating words, phrases or proverbs, or appearing alongside technical prose or obscure poetry, this emblematic imagery frequently contains a significant literary dimension. However, despite this textual emphasis, alchemical pictures share little with conventional illustration. Instead, emblematic pictures are usually self-governing, operating without necessary reference to auxiliary literary content. Expressing and evoking alchemical ideas, this peculiar iconography is characteristically ambiguous; customarily, it does not clarify, but complements any accompanying literature. The earliest examples, from the late fifteenth century, are mainly manuscript-based and incorporate key alchemical insignia. Exemplifying this emblematicism, several fifteenth-century versions of *Aurora Consurgens* include thirty-eight watercolour illustrations.¹²⁴ Highly symbolic, these pictures embrace motifs typical of medieval and early modern alchemical art, including an eagle and

¹²³ Dobbs, 1988: 183-84.

¹²⁴ Pseudo-Thomas Aquinas, *Aurora Consurgens* (fifteenth century). These manuscripts do not always include coloured illustrations. Those that do include: Prague, Universitni Knihovna, MS VI, Fd. 26; Prague, Chapitre Métropolitain, MS 1663, O. LXXIX; Glasgow, University Library, Ferguson MS 6; Zurich, Zentralbibliothek, Rhenoviensis MS 172; Berlin, Staatsbibliothek Preussischer Kulturbesitz, Germ. MS, qu. 848; Leiden, Vossiani Chemici MS, fol. 29; Paris, Bibliotheque Nationale, Parisinus Latinus MS 14006.

hermaphrodite (Fig. 3), Sun and Moon, King and Queen, dragon, snake, human genitalia, peacock, cherubim and images of death, sex and birth.¹²⁵ Crucially, while these images evoke specific esoteric concepts, *Aurora Consurgens* significantly resists ‘translation’ and thus shields its secrets from “ungodly, foolish, slouthful and unthankfull hypocrites”. A comparison of *Aurora Consurgens* with the fifteenth-century English ‘Ripley Scroll’ yields evidence of a shared emblematic vocabulary. Including images of a Sun and Moon, serpent, birds, dragon, queen, and the elements, the ‘Ripley Scroll’ confirms the symbolism at the heart of European alchemical culture. Common to both medieval manuscripts and early modern books, this figurative imagery illustrates the binary characteristics of alchemical discourse. Thus, *Aurora Consurgens* and the ‘Ripley Scroll’ predictably offer binaristic pairings in the guise of the Sun and Moon, Man and Woman and King and Queen.

The emblematic art represented by *Aurora Consurgens* and the ‘Ripley Scroll’ evolved throughout the course of the sixteenth century, rapidly dominating broader alchemical culture. By the end of the century, this visual symbology was widely recognized, disseminated throughout Europe via exquisite manuscripts and high-quality printed tomes. These pivotal texts, which include *Rosarium Philosophorum* and the *Splendor Solis*, were frequently translated and reprinted. During the early modern period, the diversity of book and manuscript art was immense and included individual alchemical emblems, complex allegorical narratives and finely wrought sequential scenes. While this complex range inevitably resists convenient synopsis, an excellent and exhaustive review of alchemical emblems is provided by van Lennep’s *Alchemie*.¹²⁶ Despite the disparity of media, style and form, the pictures reviewed by van Lennep are united by a common currency of stock emblems and by a shared unintelligibility.¹²⁷

The popularity of alchemical emblematic art reached its peak some time towards the close of the seventeenth century. By this stage, technological advances in printing processes had ensured an unprecedented high-quality finish to illustrated texts. Reproducing numerous examples, Stanislas Klossowski de Rola’s *The Golden Game: Alchemical Engravings of the Seventeenth Century* explores some of the most prevalent picture-based texts of the period. Often published in the Netherlands, these books, which include Michael Maier’s *Atalanta*

¹²⁵ Illustration in *Aurora Consurgens*, Zurich, Zentralbibliothek, Rhenoviensis MS 172, endpaper.

¹²⁶ Van Lennep, 1985.

¹²⁷ Twentieth-century alchemical research focused predominantly on these emblems and their idiosyncratic ambiguity, with efforts directed towards the deciphering of the supposed alchemical code. Although some meanings have been ascribed to some symbols, it is generally agreed that there is no fixed alchemical vocabulary. Instead, most scholars believe that, despite recurrence of specific images, the ‘meaning’ of an alchemical emblem is dependent on its immediate context. For more on the symbolism of alchemy see Roob, 2001; Klossowski de Rola, 1973; Roberts, 1994.

*Fugiens*¹²⁸ and *Symbola aureae mensae*,¹²⁹ generally consist of fine copperplate engravings, rather than the woodcuts typical of the fifteenth and sixteenth centuries. Testifying to the dominant tradition of alchemical symbology, these engravings frequently contain symbols evident in medieval art. In addition to lions, dragons and birds, suns, moons, kings, queens and entombed lovers pervade the pages of these printed seventeenth-century treatises. Remarkably, the binaristic emblematicism manifest in the *Emerald Tablet* continued to thrive until c.1700.

3.2 Alchemy in Genre Art

An important centre for alchemical texts, the Netherlands produced many of the most important engravers, authors and publishers of the period. Leiden and Antwerp were both significant seats for alchemical graphic culture, while Amsterdam occupied a position as one of the foremost European venues for the publication of alchemical texts and engravings.

Curiously, however, while actively participating in this broad Northern European trend, the Netherlands engendered its own independent branch of alchemical art. Emerging as a major art form in the first decades of the seventeenth century, genre painting embraced a vast range of 'everyday' subjects. From drunken prostitutes to starving children, from jolly fishmongers to quiet astrologers, subjects for Netherlandish genre painters were more or less inexhaustible. Moralistic, didactic, comical, lewd, reverential, satirical, wistful and wry, these scenes of 'everyday life' also exploited every available style from overt caricature to perfect verisimilitude. Amongst the countless subjects jostling for artistic consumption, the chymist and his workshop enjoyed particular success. With its genesis in the satirical prints of the mid-sixteenth century, these genre scenes emerged as the leading form of alchemical art in both the Northern and Southern Netherlands during the seventeenth century. Discussed at greater length in Chapter I and Chapter IV, *The Alchemist* by Pieter Bruegel the Elder was one of the first alchemical scenes to exist as an independent work of art. Inspiring generations of alchemical painters, the highly satirical prints produced from Bruegel's drawing were some of the most influential of the period. Unlike the esoteric emblematic art of manuscripts and books, sixteenth-century prints such as these were not aimed at an initiated 'alchemical' audience. On the contrary, most were instead comical entertainment pieces, directed towards a general market and designed to ridicule the gullibility of

¹²⁸ Maier, 1618.

¹²⁹ Maier, 1617.

chrysopoeian fantasists. These caricature prints remained popular throughout the seventeenth century, surviving in essence through to the nineteenth century.¹³⁰

Judging by the number of extant examples, genre paintings of the chymist were coveted during the seventeenth century, peaking in popularity in around 1670. Cultivated mainly in Haarlem and Antwerp, this theme encompassed all forms of chymistry and exploited every existing stylistic and tonal variant. Thus, Jan Steen offers caricatured visions of greedy chrysopoeians, while Thomas Wijck presents sympathetic studies of quiet alchemical scholars. Similarly, while Hendrick Heerschop depicts the chymical misadventure of a moneyed hobbyist, Gerard Thomas portrays the regular routine of a village iatrochemist. To a greater extent, the range of attitudes displayed by genre artists towards their subject reflects contemporary opinion. The most common target for satire appears to be the untrained, ill-educated village 'alchemist', who is addicted to the dream of the Philosophers' Stone. By contrast, the esoteric scholar, who values learning and philosophy alongside exoteric pursuits, surfaces as the most revered subject.

As this thesis shows, despite the wide variety of chymical genre painting, reiteration and reference between these painters was endemic. Backdrops, characters, apparatus and entire scenes were copied with conspicuous abandon. Painters of every quality regularly filched the arrangements of earlier, often printed, pieces. Undoubtedly, the most emulated chymical artist of the period was David Teniers the Younger (1610-90). Discussed in Chapter I, David Teniers was the most popular and prolific of all Netherlandish chymical genre painters. Highly influential, his oeuvre neatly exemplifies the theme of the chymist in Netherlandish genre art and helps establish a model for the paintings examined by this thesis. Like most chymical genre painters, Teniers situates his chymist within a visible, professional workshop; the amateur hobbyist is only rarely a subject for genre painters of the seventeenth century. Unfailingly male, the protagonist is usually accompanied by a collection of male apprentices and assistants of varying ages. Appearing intermittently, the occasional female character is almost always relegated to the obscurity of the distant background, often disappearing through a doorway. Reflecting and establishing numerous trends, Teniers' oeuvre encompasses pictures of both ill-trained and expert chymists, both prosperous and failing. While his paintings are ordinarily sympathetic towards alchemists, the artist occasionally executed sharp satires. Prints after his work depict monkeys operating bellows (Fig. 4),¹³¹

¹³⁰ See, for example, Artist Unknown, *Hocus Pocus or Searching For the Philosophers Stone*, 1800. Reproduced in van Lennep, 1985: 410.

¹³¹ Pierre François Basan after David Teniers, *Le Plaisir des fous*, eighteenth century, Chemical Heritage Foundation, Philadelphia 00.03.196.

while paintings, such as *Alchemist Heating a Pot*, more typically portray a well-groomed alchemist with heavy purse in a well-equipped and ordered laboratory (Fig. 5).¹³²

Like many seventeenth-century painters, Teniers executed chymical equipment with considerable accuracy.¹³³ In line with current criticism, this thesis uses the presence of chymical apparatus to identify 'chymical' paintings. In her study of Teniers, Jane P. Davidson articulates a similar approach to classification:

David the Younger's paintings of alchemists can always be identified (and thereby separated from his frequent paintings of village doctors and old scholars) by the presence of certain laboratory apparatus which were indispensable to an alchemical operation. All the paintings of alchemists contain either crucibles, alembics (distillation flasks), or athanors (large metal furnaces that resemble stoves). Most of the paintings contain several of these pieces of apparatus, although the presence of any one object is sufficient to identify the subject as alchemy.¹³⁴

Amending this classification in line with Principe's terminology, this thesis interprets laboratory paraphernalia as evidence of general 'chymical' activity, rather than 'alchemy'. Conforming to convention, Teniers consistently incorporates alchemical books, papers and both terrestrial and celestial globes, alongside chymical apparatus. With a heavy emphasis on motif, chymical paintings also frequently integrate symbols of vanitas, such as skulls, snuffed candles and hourglasses.

Serving as a template for countless chymical paintings, Teniers' work was exploited by artists keen to duplicate the painter's artistic and financial achievements. Consequently, elements from Teniers' work regularly appear in chymical paintings from the mid-seventeenth century onwards. However, despite the blatant repetition of theme and motif, the breadth of chymical genre art during this period was extensive. This diversity, which will emerge explicitly during the course of the thesis, encompasses every contemporary conception and perception of alchemy. Genre paintings both celebrate and condemn alchemy; however, as Chapters I and II show, satirical art more often focuses on chrysopoeia, while paintings sympathetic to alchemy more commonly concentrate on esotericism. In exploring these variations, this thesis uncovers the underlying themes and motifs which unify the apparent disparateness of the genre.

¹³² David Teniers the Younger, *Alchemist Heating a Pot*, c.1660, Private Collection. Currently with Chemical Heritage Foundation, Philadelphia 00.03.26. Oil on panel, 16" x 12".

¹³³ This precision has prompted speculation that Teniers, like several other contemporaneous artists, was an alchemist as well as an artist. See, for example, Davidson, 1987: 72.

¹³⁴ Davidson, 1980: 40.

4 Gender Symbolism in Esoteric Alchemy

As the *Emerald Tablet* clearly illustrates, gender lies at the heart of alchemical symbology. Discussed at length during the course of this thesis, the language of gender and sexuality pervades every aspect of the *opus*. Throughout the Middle Ages and early modern period, alchemists and alchemical writers evoked gender and sex in both theoretical and physical treatises. A common metaphorical vocabulary emerged, transcending the closed arena of alchemy and infiltrating the public sphere through drama and poetry. The word ‘womb’, for example, is employed across early modern Europe to describe the alchemical alembic, while the phrase ‘women’s work’ universally represents the second stage of the *opus*.¹³⁵ Equally, literary and pictorial references to *lac virginis*, menstrual blood, incest, prostitutes, sperm and eggs were also widespread at the time. Much of this terminology developed from the primary alchemical theme of generation. Alchemical theory states that the Philosophers’ Stone, or Philosophical Child, is ‘born’ of two reconciled partners, an idea aligned with the literal birth of a child in alchemical texts. Thus, auxiliary themes of intercourse, gestation and breastfeeding necessarily originate from this principal notion.

Yet, the significance of gender far transcends this often fragmented and unsystematic vocabulary. Instead, the male and female essentially head a complex binaristic ideology, which informs almost every facet of alchemical theory.

4.1 The Chymical Marriage

Key components of an intricate theoretical structure, the male and female of the alchemical equation assume various guises in alchemical art and literature: Red Man and White Woman, King and Queen, Adam and Eve, brother and sister, husband and wife, father and daughter, son and mother, dog and bitch, cock and hen, twins and the two-headed Hermaphrodite. As with so many alchemical emblems, the meaning of these figures is implicitly dependant on context and, as such, their connotations are incalculable. However, while each configuration possesses innate degrees of difference, the fundamental notion of equilibrium underpins all alchemical images of male and female partnership. In essence, each alludes to the chymical marriage.

¹³⁵ This terminology is discussed in later chapters, particularly, Chapter III: 116.

With its genesis in Islamic alchemy, the sulphur-mercury theory of the generation of metals serves an imperative role in the chymical marriage. Central to both the early Arabic texts and the later Geber/pseudo-Geber tracts of the Middle Ages, the sulphur-mercury theory stated that the differences between metals was determined by the proportional content of two conflicting properties, philosophical sulphur and philosophical mercury or *argent vive*.¹³⁶ By manipulating these ratios and attaining absolute balance, perfection and the goal of the *opus* could be reached. The opposition inherent to sulphur and *argent vive* is signified in alchemical treatises by a complex gendered characterization.¹³⁷ In effect, sulphur and *argent vive* represent a litany of male and female qualities: sulphur represents the hot, dry, active masculine principle, while *argent vive* denotes the cold, moist, receptive female. Similarly, sulphur is associated with fire and air, while *argent vive* corresponds to earth and water. Assuming the identities of Sol and Luna, these male and female personalities of the chymical marriage are also aligned to Gold and Silver. Thus, the chymical marriage describes the complete reconciliation of opposites, a unification fundamental to the manufacture of the Philosophers' Stone.

Characterized by a series of successive refinements, the *opus alchymicum* comprises a cycle of dissolution and coagulation, or *solve et coagula*: the matter of the Stone is decomposed and then reformed repeatedly until perfection is realized. Specifically, the stage of coagulation signifies the successful union of opposites and, therefore, represents the physical and metaphysical conception of the 'chymical marriage'. The 'chymical marriage' occurs at various junctures throughout the course of the *opus*; as such the corresponding visual representation depends substantially on which stage is being described and the level of refinement attained. Thus, the image of the cock and hen denotes an initial, crude phase, while the presence of the King and Queen indicates a refined point of conclusion. Intrinsic to this hypothesis is the alchemical concept of 'peace and strife'.¹³⁸ In her invaluable dictionary, Lyndy Abraham describes 'peace' as "the harmonious state attained when the opposing principles of the opus, sulphur (male, hot, dry, active) and argent vive (female, cold, moist, receptive), are united in the chemical wedding".¹³⁹ Through a process of 'strife' or

¹³⁶ Known in medieval Europe as Geber, Jabir ibn Haiyan (c.721-815) was the most famous and influential of all Arabic alchemists. See Newman, 1991; Nomanul Haq, 1994; Partington, 1923: 219-20; Holmyard ed., 1928.

¹³⁷ For a summary of the 'chymical' or 'chemical' marriage see Abraham, 2001: 35-39.

¹³⁸ For complete description of the dual concepts of 'peace and strife' see Abraham, 2001: 141. See also Knoeff, 2002: 170.

¹³⁹ Abraham, 2001: 141.

opposition, the chymical marriage is realized and the conflicting, quarrelling elements are reconciled to peace.¹⁴⁰

Critical to the arguments of this thesis, the chymical marriage and the theory of ‘peace and strife’ are fundamental to all conceptions of alchemy. Incorporating the symbology of alchemy into its methodology, this project reinterprets the chymical marriage within the context of seventeenth-century Netherlandish genre painting. Thus, opening with an analysis of domestic discord in paintings of the chymical workshop, this thesis explicates the refashioning of gendered emblems with reference to both traditional alchemical imagery and Dutch genre iconography.

¹⁴⁰ Numerous contemporary references to peace and strife exist. Perhaps the most explicit of these belong to Benjamin Lock, who states: “peace is made by ioyning 2 extremes together, that is to say sulph: and arg: vive”. He continues, “after long strife [the elements] are made frendes, concluding in such a perfecte unity as can not be broken”. *Benjamin Lock, His Picklock to Riply his Castle*, London, Wellcome Institute for the History of Medicine, Wellcome MS 436, fol. 25.

CHAPTER I

EMBLEMATA AND DOMESTIC DISCORD: FEMALE DISQUIET AND EMBLEMATIC INTERTEXTUALITY.

Counterbalance to the sulphurous male, the female of the chymical marriage is one of two defining components within esoteric alchemy. The 'She' of the alchemical equation is the moon, silver, air, water and White Queen, to the Male's sun, gold, fire, earth and Red King. Heading an unfathomably intricate theoretical system, this female principle is inextricably entwined with the male. Through their dynamic equilibrium, the union of male and female engenders perfect and hallowed issue in the form of the elixir, or the Philosophers' Stone. Crowned by this gendered partnership, the complex binaristic structures of esoteric alchemy reflect the fundamental philosophy of balance through opposition.

Traditionally, however, this model of gender equilibrium did not extend to the practical sphere. In medieval Europe, adepts were supposed to be male, untouched and untainted by the female and the feminine world.¹ In a quest which demanded sacrifice and spiritual purity, alchemists renounced all sexual contact. Located within universities and monasteries,² the learning of alchemy and its associated philosophies by necessity excluded women.³ In these closed arenas, females existed only as "abstract figures, such as the Virgin Mary, Sapientia, female saints or muses".⁴ The propensity towards the physical exclusion of women was entirely separate from the esoteric notion of the chymical marriage; these gender ideologies essentially operated on different, but mutually tolerating, theoretical planes.⁵ By the early modern period, however, the alchemical recluse had all but vanished. Relocated from institution to the private home, alchemy found itself amongst the family.⁶ Early modern archival evidence confirms that few alchemists abstained from female contact, with numerous

¹ For more on the 'anti-feminism' of alchemy see Roberts, 1994: 89.

² To be sure, alchemy itself did not generally feature in the syllabuses of medieval universities. However, alchemists undoubtedly exploited numerous philosophical and medical doctrines taught at universities. For more detail, see Crisciani, 1997.

³ Alchemy had a long-standing relationship with religion. The most eminent of medieval European alchemists and natural philosophers either belonged or were associated with religious orders. Roger Bacon (1214-92), for example, was a Franciscan, Albertus Magnus (1193-1280) and Thomas Aquinas (1225-74) were both Dominicans, while Sir George Ripley was a Carmelite. For these alchemists see Stavenhagen, 1974: 5; Klossowski de Rola, 1997: 114; Waite, 1970: 135. For the relationship between alchemy and religion in the Middle Ages, see Ogrinc, 1980: 103-32; de Pascalis, 1995; Obrist, 1993: 43-64; Theisen, 1995: 239-53.

⁴ Archer, 1999: 4.ii.

⁵ For more on the male exclusion and dominance of the female in alchemy see Newman, 1998.

⁶ See Harkness, 1997. For further discussion of this see Chapter II and Chapter IV: 143-152.

celebrated figures boasting wives and children. By the seventeenth century the tradition of the chaste adept was maintained only by religious brotherhoods and by stories of the mythologized 'wandering adept', a fabled figure who roamed the lands refraining from all forms of worldly luxury.⁷ Yet, while few early modern practitioners embraced monastic seclusion, the alchemical realm remained inherently fraternal. Although responsible for the management of the household and the domestic stillroom, early modern women were generally excluded from the practice of alchemy.⁸ It is fairly certain that women did not play any active role in the extraordinary production of alchemical literature in the seventeenth century.⁹ Nor does this literature refer to any significant contemporary female practitioners or theorists. Additionally, archival sources reveal no independent female alchemists in any part of contemporary Europe.¹⁰

Ousted from the laboratory, the female is absent from most depictions of the chymical workshop. Appearing only occasionally in Netherlandish chymical genre painting, the female is an incongruous element, which therefore demands special attention. As Chapter II of this thesis explains, this element is often applied in accordance with doctrines of esoteric philosophy. In these paintings, artists tolerant of alchemists and alchemy harness the female as an emblem of domesticity, which strengthens their portrayals of societal and alchemical equilibrium. Conversely, this opening chapter exposes the exploitation of the female as an emblem of domestic discord. Here the female does not represent the harmonious counterbalance of *argent vive*, but instead signifies an unwelcome force in a corrupt masculine arena. In scenes of domestic and alchemical turmoil, the male rejects the female, and in doing so, potentially rejects the ballast of the White Queen. Hendrick Heerschop, Jan Steen, Richard Brakenburgh, Adriaen van de Venne and Adriaen van Ostade all employ female characterizations in their unequivocal condemnation of alchemists and alchemy.

Examining female absence and presence in alchemical Netherlandish genre art of the seventeenth century, this tripartite chapter explores the development and origin of specific portraits of domestic discord and their relationship to the practice of alchemy. In particular, it expounds the gendered symbolism of chymical genre painting, locating female emblems within the iconographical traditions of Dutch emblemata and ancient alchemical symbology. The first section analyses the image of the mother cleaning her baby and its evolution from

⁷ These legends were cultivated by numerous alchemical tracts, including *Trismosin*, 1598 and *Philaletha*, 1667.

⁸ For more on the role of women in the stillroom and on the history of women in alchemy see Chapter IV.

⁹ Nummedal, 2001: 57.

¹⁰ The issue of female chymists and their lack of independence in the seventeenth century is discussed at length in Chapter IV.

the Dutch emblem book; the second examines the recurrence of the unhappy matriarch, while the closing part discusses heterogeneous portraits of female disquiet.

In its discussion of chymical paintings, this chapter reveals the importance of repetition and reference to the development of alchemical art. It contends that through this matrix of allusions, and specifically through the depiction of marital disintegration, artists denounce the social consequences of human folly and the alchemical quest. In addition, it proposes that these images of marital disharmony, and similarly gendered emblems, would have communicated alchemical meanings to a contemporary audience familiar with alchemical symbology and concepts.

Mother and Infant, Dit lijf, wat ist, alsstanck en mist?

1.0

The Philosophical Child is central to alchemical doctrine and iconography. Born from the union of Sol and Luna, the male and the female of the chymical wedding, the Infant Stone encapsulates concepts central to alchemical lore: unification, procreation, re/generation and purification. Naturally, therefore, the 'Infant' appears often in illustrative emblematic compositions, sometimes as a baby with its parents, as an egg, or as a seed in an alembic. Predominant in chymical manuscripts, the image of the baby also recurs with conspicuous frequency in Netherlandish paintings of the alchemist's laboratory. Deviating from symbolic representation, these genre paintings contain a more true-to-life depiction of the chymist's family. Babies, children and young animals are all popular features of these paintings. While the 'Infant' adopts various guises in alchemical art, a distinctive emblem resurfaces in genre painting. In both Hendrick Heerschop's *Alchemist's Experiment Takes Fire* (Fig. 6)¹¹ and Adriaen van Ostade's *Alchemist* (Fig. 7), a child appears with its mother, situated on the fringes of the scene.¹² In both paintings the mother is wiping the bottom of the baby, an icon of significance to both Netherlandish literature and alchemical iconography. This section explores the significance of this emblem within a chymical context and examines the relationship between genre paintings and emblemata.

¹¹ Hendrick Heerschop, *The Alchemist's Experiment Takes Fire*, 1687, Chemical Heritage Foundation, Philadelphia 00.01.276. Oil on canvas laid down on board, 21" x 17 1/2". Provenance: Fisher Scientific; Sir William Jackson Pope, May 1928 (Berolzheimer information from Pope); van Duren Gallery, London, 1928 (RKD photo).

¹² Adriaen van Ostade, *The Alchemist*, 1661, National Gallery, London NG846. Oil on oak, 34 cm x 45.2 cm. Signed and dated near the fireplace: *Av. Ostade*. Provenance: bought with the Peel collection, 1871.

1.1 Hendrick Heerschop's *Alchemist's Experiment Takes Fire*

Little is known of the life and training of Hendrick Heerschop.¹³ Genre painter and etcher, he was born in Haarlem in either 1620 or 1621. Possibly a student of Rembrandt in Amsterdam, Heerschop was pupil to Willem Claesz Heda in Haarlem in 1642. In 1648, he entered the artists' Guild of Haarlem and is mentioned again in guild records in 1661. Hendrick Heerschop's *Alchemist's Experiment Takes Fire* is uncharacteristic of seventeenth-century Netherlandish alchemical painting. The archetypal dark, cluttered spaces of Teniers and van Ostade give way to the clean lines and uniform walls more common to the Italian School. The straw-strewn floors of van Helmont and van der Bossche are transformed into spotless surfaces filled with shiny objects: an oversized pewter plate, a substantial golden pestle and mortar, a hefty pair of bellows and a tall polished urn. Upon the smooth, milky walls, sturdy shelves hold decorative vessels, whose exotic shapes lend an air of elegance to the room. Utility is supplanted by ornament. The arch of the window is reflected in the curve of the doorway to produce a sense of symmetry and order. The colourful and costly variations of the palette compound the sense of luxury. The furniture is draped in rich, vibrant cloths; swathes of crimson hang beneath an open book, while the worktop is cloaked with layers of blue fabric. The primary figure of the scene, a seated male, is dressed in lavish textiles. Swathes of green material clad his legs, while a chestnut jacket shrouds his torso. Here is a moderately affluent man settled in his wealthy surroundings. In the background, in a room beyond, sits the family: a mother with her two young children. They are dressed well, and sit quietly, a picture apart.

This is not a workshop but a private space for personal endeavour, an area in which a whim is indulged. The small laboratory sparkles with the newness and cleanliness of unused tools. The scene shows just one small furnace under the window, while a diminutive distillation bubbles away, tucked neatly in the corner of the room. This is an amateur chymist at work. In the early modern burgher home, such experimentation was a worthy pastime, beneficial to both the running of the household and to the betterment of the scholarly mind. But this is not simply an exercise in functional chymistry; this picture specifically depicts an aspirant chrysopoeian, the transmuter of metals.

The pewter pan that lies in the bottom right hand corner of the foreground has a small curved section extracted, with this imperfection turned towards the viewer. This categorically

¹³ For a biography of Heerschop see Thieme-Becker, 1996-97, 16: 235.

identifies the painting as chrysopoeian. The warming pan, occurring in several contemporary alchemical paintings, refers to a celebrated tale in the alchemical canon.¹⁴ The story existed in several variations throughout early modern Europe, but the most common concerns the English mathematician and natural philosopher, John Dee, and his dubious sycophant, Edward Kelly. Accounts suggest that to prove their chrysopoeian abilities to Elizabeth I, Dee or Kelly cut a circular shape from the rim of a cheap warming pan. Using the elixir which “they found [...] at Glastenbury”, they then transmuted the piece into silver and returned it, with the plate, to Elizabeth.¹⁵ In his *Theatrum Chemicum Britannicum*, Elias Ashmole turned rumour-monger:

Moreover, for neerer and later Testimony, I have received it from a credible Person, that one Broomfield and Alexander Roberts, told him they had often seen Sir Ed: Kelly make Projection, and in particular upon a piece of Metall cut out of a Warming pan, and without Sir Edwards touching or handling it, or melting the Metall (onely warming it in the Fire) the Elixir being put thereon, it was Transmuted into pure Silver: The Warming-pan and this piece of it, was sent to Queen Elizabeth by her Ambassador who then lay at Prague, that by fitting the Piece into the place whence it was cut out, it might exactly appeare to be once part of that Warming-pan.¹⁶

Similar reports spread throughout Europe, causing great sensation and enduring in the popular imagination for centuries to come.¹⁷ Heerschop’s scene, however, relates a very different tale. In the unfortunate absence of alchemical “pure Silver”, the chymist’s pains, along with the family warming pan, are squandered in a futile and avaricious quest.

This quiet indication of failure is compounded powerfully by a spectacular explosion within this legitimate and prosperous interior. Frozen eternally in mid-air, a shattered alembic is engulfed by flames and smoke. The alarmed chymist shies away from the noise, his face filled with sudden fright. His head is turned back towards the experiment, while his arms and legs reach out in the opposite direction. As the chair topples forward, its irregular diagonals create linear turmoil in an otherwise perpendicular space. While the explosion causes consternation in the small laboratory, in the background the family, calmly composed, continue with their everyday duties. The strangely static family group appears not to hear the blast which startles the chymist. The mother quietly cleans the baby’s bottom, oblivious to the cacophony of the dramatic accident. Occupying their own arched frame, they embody an independent and distinct family portrait. Lawrence M. Principe and Lloyd DeWitt suggest

¹⁴ The warming pan is not to be confused with the similarly shaped, but deeper, blood-letting plates which are common to paintings of the barber-shop and the physician’s workshop.

¹⁵ Ashmole, 1652: 481.

¹⁶ Ashmole, 1652: 481-82.

¹⁷ The fable appears again, for example, in Chapter 1 of Atwood, 1850: 55.

that the mother's actions of cleaning her child "may well be making a scatological criticism of her husband's obviously unsuccessful activities".¹⁸ While an early modern viewer would have recognized this correlation, the maternal composition implies far more than this. The significance of this image lies in the cipher of the Dutch emblem book.

Derived directly from the pages of the emblem book, Heerschop's portrait of the mother and baby is charged with moralistic undercurrents. In a quintessential Dutch emblem composed originally by Adriaen van de Venne, a woman wipes an infant's bottom under the motto, "Dit lijf, wat ist, alsstanck en mist?" [This body, what is it, but stink and dung?] (Fig. 8).¹⁹ Beneath the image, a poem by the strict Calvinist Johan de Brune explains that human bodies, however exquisite, are conceived in base sexual union and, as such, are no more than flesh, prone to decay and putrefaction. This emphasis on vanitas, signified by the presence of skulls, hourglasses and snuffed candles, recurs with notable consistency in paintings concerned with avarice or egotism.²⁰

Further to this emblematic significance, the image of the mother and baby operates in accordance with themes of contemporary satire. The bodily excretions of young children are of special relevance to the alchemical process. 'Children's Piss' is a synonym for the mercurial water or *prima materia*, at the stage of putrefaction and blackness in the initial phase of the *opus*. Excrement, either human or animal, is of even greater import in the *opus*. On a practical level it was used during the distillation process to create heat for the alembic. More importantly, esoteric philosophy proposed that the waste used in laboratory procedures was somehow transubstantiated into the *prima materia*; it was from dung that the elixir would develop. Not surprisingly this scatological aspect was keenly and widely ridiculed by writers and artists throughout Europe, who hijacked the terminology of alchemy in comedic attacks on fraudsters and gullible fools. In Ben Jonson's *Alchemist*, Subtle uses the alchemical metaphor of the purification of matter out of dung when berating Face for ingratitude, after he has been rescued from obscurity:

Thou vermin, have I ta'en thee out of dung,
So poor, so wretched, when no living thing
Would keep thee company, but a spider, or worse?

¹⁸ Principe and DeWitt, 2002: 26.

¹⁹ William de Pass after Adriaen van de Venne, *This Body, What Is It, But Stink and Dung?*, Emblem III from de Brune, 1624: 17.

²⁰ The inconsequentiality of human existence and actions was an enormously popular subject in Netherlandish literature. These symbols of genre painting occur also within emblem books. See, for example, Cats, 1632: 137 in which a snuffed candle is accompanied by the motto "Quid est homo? Lucerna sub dño posita" [What is man? But a candle under the sun].

Rais'd thee from brooms, and dust, and watering-pots,
Sublimed thee, and exalted thee, and fix'd thee
In the third region, call'd our state of grace?²¹

Jonson's parody of the alchemical process assumes a certain degree of lay understanding.²² His audience, largely ignorant of complex chymistry, must recognize the relevance of "watering-pots" and "dung" to Jonson's alchemical joke. Similarly, in *Pantagruel* when François Rabelais parodies the well known belief that the elixir can be produced from dung, there is an assumed level of comprehension in the readership:

But Panurge threw up most violently, seeing a prefect fermenting a huge vat of human piss with horse shit, adding in large quantities of Christian crap. Shame on the disgusting fellow! All the same, he assured us that this sacred distillation was drunk by their kings and royal princes, and prolonged their lives a good fathom or two.²³

Central to seventeenth-century satirical attacks, bodily waste was evoked frequently to ridicule and revile the chymical scams of shrewd swindlers and those credulous enough to believe them.

1.2 Adriaen van Ostade's *Alchemist*

Occurring in conjunction with the sensational explosion, Heerschop's allusion to dung evokes the scepticism of satirists like Jonson and Rabelais. The derisive allusion to bodily excretions was not rare in alchemical paintings, and had been exploited a century earlier in the work of Pieter Bruegel the Elder.²⁴ The development of the mother and baby motif in genre painting, however, seems specific to the seventeenth century, occurring again in Adriaen van Ostade's *Alchemist*.

²¹ Jonson, 1995: 31 [I.i.64-69].

²² Writers also employed this aspect of alchemy in non-satirical works, which further proves a lay appreciation of alchemy. John Donne's 'To The Countess Of Bedford' and 'To Mr Rowland Woodward' both evoke the image of alchemical 'dung'. See Donne, 2000: 52, 194.

²³ Rabelais, 1991: 568.

²⁴ A diagram reproduced in van Lennep's *Alchemie* shows a man defecating into a balneum which would provide the heat for the alembic. On his buttocks is written "Qui merdam seminat, merdam metet" [He who sows shit reaps shit]. Van Lennep explains that "allusions aux excréments ne sont pas rares dans les traits alchimiques" [allusions to excrement are not rare in alchemical works], and are often used to ridicule the belief that filth was an integral part of exoteric alchemy; van Lennep, 1985: 347. He further suggests that Bruegel's *Dulle Griet*, 1561, mocks the chymists who believed that faeces could cultivate gold. For further discussion of this painting and excrement, see van Lennep, 1985: 346-47.

Baptized in Haarlem on 10 September 1610, Adriaen van Ostade (originally Adriaen Hendricx) became one of the most prolific Netherlandish artists of his generation.²⁵ According to Jacobus Houbraken, he studied alongside Adriaen Brouwer and Jan Miense Molenaer from 1627, under the tutelage of Frans Hals. Specializing in low-life genre painting, van Ostade also produced numerous portraits and etchings. By 1634 he had joined the Haarlem Guild of St. Luke and, significantly, later acquired as pupils the future alchemical painters Jan Steen, Cornelis Bega, and Richard Brakenburgh. In 1662 he was elected dean of the guild, achieving wide success as a painter before dying in 1685. Typical of Netherlandish alchemical paintings, van Ostade's *Alchemist* portrays a very different scene to *The Alchemist's Experiment Takes Fire*. In a darkened, cluttered interior, hunched in front of his fire, the red-nosed village alchemist attempts to transform base materials into gold. The room is scattered with symbols which mark human mortality: a prominent hourglass, a snuffed candle and crumbling walls. The floor is uneven and littered with broken pottery, scraps of cloth and upturned vessels. The antithesis of Heerschop's stark, clean room, this space is squalid and used, with powerfully conflicting lines and shadowy corners. Yet, despite the disparity between the two paintings, they share the familiar motif of de Brune's mother and infant. In the background, tucked into a corner, a woman, presumably the chymist's wife, is cleaning her baby while another child plays with apparatus nearby. As in Heerschop's work, the mother and baby comprise a separate picture; they sit in a detached area, with independent lighting and a view to the outside world. They are a picture apart. Like *The Alchemist's Experiment Takes Fire*, van Ostade's *Alchemist* condemns the practice of chrysopoeia as narcissistic folly, offensive to God's autonomy in the creation of matter, and pathetic in its disastrous financial consequences. In confirmation of this reading, a parchment underneath the foreground stool is inscribed with the motto "oleum et operam perdis" [Your time and effort will be in vain]. The dilapidated interior reflects the financial consequences of the alchemist's foolish business venture. This is a portrait of economic failure, familial disintegration and moral irresponsibility. Van Ostade, like Heerschop, assimilates the mother and baby into the primary moralistic message of his painting, communicating the threat that cupidity and egocentricity pose to the stability of the Netherlandish home.²⁶

²⁵ For a biography of van Ostade see Thieme-Becker, 1996-97, 26: 74-75. See also Pelletier, 1994; van der Coelen, 1998.

²⁶ The insolvency of alchemical enterprise was satirized vigorously across the arts in the seventeenth century. The Republic's decentralization and increasing industrial specialization prompted a shift in art and literature towards themes of personal liability and individual industry. See, for example, van Lennep, 1985: 360-62; de Jongh and Luijten, 1997: 291-93.

1.3

While the mother and baby icon is used by Heerschop and van Ostade to promote themes of familial responsibility, it is simplistic to reduce these works to their emblematic components. As de Jongh and others have suggested, while the discovery of a correspondence between genre paintings and emblem books has provided new insights, it has also encouraged oversimplification: an entire painting is in danger of being reduced to a single message. It is important to emphasize that both the Heerschop and van Ostade paintings are multivalent works, operating on numerous levels. Both artists exploit the parallel of the alchemist in an exploration of the transmuting properties of art; as *prima materia* and dung transmute into gold, base paint transmutes into art, or perhaps more cynically, gold coinage. During the Middle Ages and early modern period, painting had a peculiar relationship with alchemy.²⁷ For much of this time Northern European painters were, by necessity, chymists, manufacturers of pigments, oils and varnishes.²⁸ Consequently, artists accumulated significant expertise in experimentation and frequently documented their work and new discoveries.²⁹ From this practical chymistry emerged a natural affiliation with both esoteric alchemy and chrysopoeia. Constantijn Huygens, for example, attacked Hendrick Goltzius' fascination with alchemy in his unfinished autobiography.³⁰ Karel van Mander's authoritative *Schilerboeck* relates, mistakenly, how van Eyck 'discovered' the secret of oil paint in his alchemist's laboratory.³¹ This story gained special currency in the seventeenth century, and was highly mythicized through rumours of secret alliances and hermetic codes. Moreover, the myth surrounding van Eyck's creation is inextricably linked to smell; curious viewers noted that his paintings smelt different from other artists', which encouraged much speculation.³² Seventeenth-century artists, particularly van Ostade, often used the image of the mother cleaning the baby's bottom to signify 'Smell' in allegories of the five senses.³³ This emphasis on odour in Heerschop's and van Ostade's work enforces the relationship between the mystery of the Philosophers' Stone and the artist's palette. The seventeenth century marked a culmination of growing self-consciousness in artists and print-makers both

²⁷ See Newman, 2004: 115-163.

²⁸ For more on the relationship between artists and chymists see Ball, 2002: 72-102.

²⁹ From as early as the fourteenth century, artists carefully recorded their recipes and alchemical experiments in the creation of new pigments. See Cennini, 1960: 24-25, 28-30, 33-34.

³⁰ See Huygens, 1971: 72. For more on Goltzius' involvement with the alchemist Leonard Engelbrecht see Bredius, 1914: 137-46.

³¹ Van Mander wrote of van Eyck: "He was (according to some) also a wise, learned man, very inventive and ingenious in various aspects of art; he investigated numerous kinds of paint and to that end practised alchemy and distillation". He then relates the artist's discovery of a new type of oil paint, which was admired throughout Europe. Van Mander, 1994, 1: 56-57.

³² See Jones, 2002: 8-9.

³³ See for example, Adriaen van Ostade, *Sense of Smell*, date unknown, The Hermitage, St. Petersburg, Russia; Jan Miense Molenaer, *Smell*, c.1637, Royal Cabinet of Paintings, Mauritshuis, The Hague.

in the Northern and Southern Netherlands. As the Republic became more prosperous at the beginning of the century the art market grew rapidly. This, combined with increased specialization and wider availability of materials, led to increased productivity. These developments engendered a generation of self-discriminating painters, who saw themselves less as craftsmen and more as artists. As such, paintings began to address the purpose of art and the role of its creators. These newly analytical artists openly employ the metaphor of dung to describe the materials and processes of their work. In an etching of 1645, Aert van Waes of Gouda depicts a painter defecating on his palette (Fig. 9).³⁴ While this print alludes to the sublimation of paint, it also expresses the desperate circumstances in which domestic, destitute artists found themselves. Facing promised triumphs, as well as real-life failure, the painter aligns himself with the impoverished village chymist. The allusion to the mother and baby in alchemical art, therefore, not only evokes the moralistic meanings of the emblem book, but also addresses the plight of the domestic artist and the nature of art itself.

Maternal Distress, *Rijcke-Armoede*

2.0

The chrysopoeian desecration of the family purse embodies the antithesis of Northern Netherlandish industry. Unsurprisingly, then, the theme of the last family coin entering the alchemist's crucible is one which pervades genre painting in the Dutch Republic. Several drawings and paintings depict the moment at which the final coin is sacrificed to the flames of the furnace. These censorious works, while characteristically depicting the empty family purse, famished children and bare cupboards, also describe a specific gender delineation.³⁵ The male chymist is regularly portrayed hunched over a furnace while his nearby, wailing wife gestures to their hungry children. While the male embodies the wasteful and immoral sphere of chrysopoeia, the female is the harassed protector of the house, guardian of both the children and the family funds. Through the course of centuries, the distressed wife and starving children developed into a stock symbol, signifying female vulnerability and victimhood.

³⁴ Aert van Waes, *Painter Defecating on Palette and Brushes*, 1645. Reproduced in de Jongh and Luijten, 1997: 251.

³⁵ Examples not discussed in the following analysis include Dutch School, *The Alchemist*, date unknown, Musée d'art et d'histoire, Geneva; Dutch School, *The Alchemist*, date unknown, Panstwowe Zbiory Sztuki na Wawelu, Krakow.

The next section explores the function of the anguished mother and negligent father within alchemical genre paintings. Furthermore, it examines the development of these images and the intertextuality of gendered alchemical motifs in the work of Adriaen van de Venne, Richard Brakenburgh and Jan Steen.

2.1 Adriaen van de Venne's *Rijcke-Armoede*

A leading illustrator of Dutch emblem books, Adriaen van de Venne possessed a keen understanding of the moralistic force of art and the relationship between word and picture.³⁶ According to Cornelis de Bie, van de Venne was born in Delft in 1589, after his parents fled persecution in the Southern Netherlands. For the most part, van de Venne was self-taught, benefiting only from the tuition of undistinguished local craftsmen. Working as an illustrator and print designer, he settled in Middleburg in 1614, collaborating with his brother Jan, a well-known publisher, in the production of emblem books. Relocating to the Hague, van de Venne registered in the Guild of St. Luke in 1625 and was repeatedly elected dean. Throughout his career, he worked as a painter, book illustrator, print designer, propagandist and poet, variously exploring the relationship between text and imagery. Collaborating with leading Netherlandish emblem book writers such as Jacob Cats, van de Venne's illustrations, which include the mother and baby emblem (Fig. 8), contributed significantly to the popularity of Dutch emblemata. Steeped in the emblem book tradition, van de Venne's genre scenes epitomize the intertextuality and interlacement which characterize alchemical genre paintings. While *Rijcke-Armoede* (Fig. 10) envelops the essence of emblem literature, it also exemplifies the custom of conscious reference to a universal body of alchemical art.³⁷

Rijcke-Armoede is part of a series of brunailles, a sketch-style of oil painting executed in brown monochrome. Each one bears a proverb-based caption, leading the viewer to a clear interpretation of the work. This painting depicts a crude, disordered laboratory in which a chymist is seated at the kitchen furnace. On the furnace breast is tacked a note bearing the words 'Rijcke-Armoede', or, 'Rich-Poverty'. Instructive titles or statements within artworks were common during this period, occurring often in paintings, drawings and genre prints. While the primary principle of *Rijcke-Armoede* is not clarified by a verse or narrative, the motto and emblematic indicators laid out for the perceptive Netherlandish viewer evoke the lemma and pictorial elements of the emblem book.

³⁶ For further discussions of van de Venne see Thieme-Becker, 1996-97, 34: 213; Bie, 1662; Bol, 1989; Francken Dz., 1878; Plokker, 1984; Bol, 1958: 131.

³⁷ Adriaen van de Venne, *Rijcke-Armoede*, 1630, Chemical Heritage Foundation, Philadelphia 00.01.284. Oil on panel, 15" x 19 1/2". Signed and dated lower centre. Provenance: Fisher Collection; gift of Fisher Scientific International.

The painting depicts a domestic arena typical of Netherlandish genre paintings. A male figure, with bent head and practised absorption, inserts an unseen object into the crucible he holds in his left hand. In the background behind the chymist stands a woman with two children by her side. Her face, contorted by anguish, is turned upwards towards heaven and in her opened hand she reveals the last family coin. Abandoned by her husband and financially ruined, this solitary female appears entirely powerless in the face of poverty. The two small boys by their mother's side beg for food; the distressed child on her right carries a spoon, indicting hunger, while the other looks to his mother for a sign of hope, tugging at her sleeve and holding out a hand for sustenance. As Heerschop's chymist remains unaware of, and indifferent to, his family in the backroom, so too is van de Venne's alchemist oblivious to his domestic responsibilities. This is a scene of private familial tragedy, in which the solitary female confronts the inevitable fate of her young family. *Rijcke-Armoede* is an unequivocal condemnation of the domestic chymist, lambasting his transmutational aspirations as foolish and foolhardy.

2.1.i Pieter Bruegel's *Alchemist*

To comprehend fully the domineering didacticism of *Rijcke-Armoede* one must look to the genre prints of the sixteenth century. Van de Venne's art was heavily influenced by both the landscapes of Jan Bruegel the Elder and the moralizing peasant vignettes of his father Pieter Bruegel the Elder. A drawing produced by the latter in 1558 is particularly relevant to an emblematic investigation of van de Venne's brunailles. It is believed that Pieter Bruegel the Elder was born in Breda, sometime between 1525 and 1530.³⁸ Settling in Antwerp, Bruegel developed a reputation as an innovative and accomplished painter and draughtsman, exploiting the commercial and publishing opportunities offered by the vibrant city. He had registered with the Antwerp Guild of St. Luke by 1552 and, following a trip to Italy, cultivated a long-term relationship with the Flemish artist and publisher Hieronymus Cock and his publishing house, 'Aux Quatre Vents' [At the Four Winds]. Heavily influenced by Hieronymus Bosch, the prints produced from Bruegel's drawings enjoyed remarkable popularity. Drawing on allegory and proverb, Bruegel's prints not only informed the work of his extensive artistic family, but appreciably influenced generations of Northern European artists. One of the earliest alchemical genre prints, *The Alchemist* (Fig. 11) inspired

³⁸ For more on the biography and work of Bruegel see Thieme-Becker, 1996-97, 5: 100-02.

generations of alchemical painters.³⁹ Made from Bruegel's original design drawing, these prints were widely disseminated by Hieronymus Cock, achieving a vast audience across Europe and attaining remarkable longevity.⁴⁰ Eddy de Jongh and Ger Luijten, in a survey of Netherlandish genre prints, argue that those "after Bruegel placed an indelible stamp on the appearance and iconography of later prints".⁴¹ Describing the durability of the artist's work, they add:

Copying and making restrikes from old copperplates is a leitmotif that runs throughout the history of printmaking and in this particular context it is impossible to overstate the importance of these practices for the availability of prints decades, even centuries after they first appeared. The copperplates of *Spring and Summer* after Pieter Bruegel published by Hieronymus Cock in Antwerp in 1570 were still being laid on the press at the end of the eighteenth century in Amsterdam.⁴²

The Alchemist amounts to a violent but entertaining attack on household transmutational alchemy. The print depicts a makeshift laboratory, probably a kitchen, a chaotic haven for puffers, fools and naughty children. In this dishevelled room, an unkempt man sits at a furnace, dropping a coin into a crucible. A pot on the stove spills its steaming contents onto the work surface, but blinded by his drooping cap, the father works on. With his back to his wife, the would-be alchemist is oblivious to his busy family. His three children play dangerously close to an oversized, smoking cauldron, with one wearing the customary pot on his head, signifying both the myopia of his father and, in the tradition of Dutch emblemata, his lack of training. On the floor a grotesque fool with a distorted face comically mocks the work of the chymist by wasting precious coals on an upset crucible. Towards the right of the scene a scholar sits with an open book pointing to the word 'Alghe-mist', a pun on the terms 'alchemist' and 'all is ruined' or 'all is dung'.⁴³ The fruition of the alchemist's endeavours is anticipated in the window scene: mother, father and children are forced into the poorhouse. This print is an unambiguous denunciation of the 'puffer', the amateur, provincial chymist whose greed and egotism bring ruin to the whole family. Articulating this condemnation, the cryptic caption which lies beneath the image appears to attack the ignorance and laziness of

³⁹ Pieter Bruegel the Elder, *The Alchemist*, 1558, Philadelphia Museum of Art, Pennsylvania. Engraved by Phillipe Galle, distributed by Hieronymus Cock. As Bruegel's work was accessed by other artists mainly via print, this chapter refers to a print version of *The Alchemist*.

⁴⁰ Literature on this print and its original drawing is exhaustive and includes: Orenstein ed., 2001: 170; van Lennep, 1985: 348-50; Warlick, 2002: 27; Read, 1947: 63-66; Principe and DeWitt, 2002: 11-12; Warlick, 2001: 20, 21, 30; Winner, 1979: 193-202.

⁴¹ De Jongh and Luijten, 1997: 16.

⁴² De Jongh and Luijten, 1997: 16.

⁴³ Evoking the scatological aspects of the *opus*, this reference anticipates the primary theme of seventeenth-century alchemical satire discussed earlier. See Orenstein ed., 2001: 170.

aspiring chrysopoeians, while ironically appropriating the idiosyncratically obscure language of alchemical literature:

DEBENT IGNARI RES FERRE ET POST OPERARI
IVS LAPIDIS CARI VILIS SED DENIQVE RARI
VNICA RES CERTA VILIS SED VBIQVE REPERTA
QVATVOR INSERTA NATVRIS IN NVBE REFERTA
NVLLA MINERALIS RES EST VBI PRINCIPALIS
SED TALIS QVALIS REPERITVR VBIQVE LOCALIS.⁴⁴

Bruegel's print contains motifs which would be used in Netherlandish genre paintings over a century later: both the hat pulled low over the alchemist's eyes and the children in cupboards are evident in Pierre Chenu's engraving after a seventeenth-century painting, *Menage du Chimiste*;⁴⁵ the aping of the chymist's actions appears in Richard Brakenburgh's *An Alchemist's Workshop with Children Playing* (Fig. 12), while messy interiors, hourglasses, upturned vessels, family disintegration, the inclusion of a motto and the image of the last coin characterize countless alchemical paintings.⁴⁶ *Rijcke-Armoede* exploits Bruegel's *Alchemist* in various ways: the door and barrel which comprise a table is taken directly from the earlier engraving, the unusually large and bulbous distillation apparatus behind Bruegel's wife reappears behind van de Venne's husband and a motto is tacked to the mantle in both pictures. Both works also use the theme of the last coin to describe the collapse of the family.

Most significant for this study, however, is the gender polarity which Bruegel's composition establishes. While they clearly embody a professional partnership, colluding in the same alchemical enterprise, the male and female occupy entirely different spaces. Erect on a stool and with his back to his family, the chymist faces into the fumes of the furnace. The wife, however, squats awkwardly with her back to her husband, her body turned fully outwards towards the viewer; the male is introverted, the female extroverted. Restricted by a sagging cap, and with his back to those in the overcrowded room, the male rejects the intrusion both of the maternal world and of the viewer. In contrast, the woman's body is turned to the fore and her eyes gaze engagingly into those of the viewer, evoking a pathos otherwise absent from the work. As the male holds the 'last coin' in his hand, the female holds the empty

⁴⁴ Translation: "The ignorant ought to suffer things and labour accordingly / The law of the precious Stone, common but also rare / Is a certain thing, vile but found everywhere / With the four natures, stuffed in a cloud / It is no mineral, and while it is unique / It is of such a kind as to be found everywhere."

⁴⁵ Pierre Chenu, *Menage du Chimiste*, date unknown, location unknown. Distributed by Basan, Paris. Reproduced in Read, 1947: 77. The engraving was originally based on a painting erroneously attributed to Thomas Wijck.

⁴⁶ Richard Brakenburgh, *An Alchemist's Workshop with Children Playing*, c.1685, Chemical Heritage Foundation, Philadelphia 00.03.11. Oil on canvas, 30" x 34".

purse in hers. There are distinct parallels between this and van de Venne's work. In *Rijcke-Armoede*, the male and female occupy independent spaces: the chymist sits while his wife stands statuesquely by. These figures, like those of Bruegel, are completely separate, the antithesis of the alchemical, and indeed Christian, marriage. The positioning of van de Venne's and Bruegel's alchemists is also strikingly similar; both are turned towards the furnace and facing the left of the painting, away from the viewer and the wife. As in Bruegel's composition, van de Venne's female turns towards the viewer, inspiring pity through her open, tormented expression. She even holds out her empty left hand, like Bruegel's wife, to indicate the exhaustion of the family purse. Moreover, the mother and children again comprise an independent maternal picture, away from the father and the patriarchal realm of the furnace.

Significantly, however, Bruegel's model places the wife in the heart of the workshop; she is pictured seated, settled into the chymical environment and peering over the fool's stove.⁴⁷ By her feet have fallen a pair of bellows. Although the couple occupy separate spaces, then, the female is clearly complicit in the collapse and ruin of family. Van de Venne, however, transmutes Bruegel's scene into a moralistically gendered vision, which casts the female as the guardian of the household that the male threatens to destroy. Here, the artist presents a wife absolved of the guilt. The male and female symbolize a dichotomy, not simply in an alchemical sense, but in a moralistic context. As the Sulphurous male represents an inventory of philosophical components, van de Venne's male signifies gullibility, egotism, greed, spiritual degeneration, weakness and sightlessness. In contrast, the female denotes the family, virtue, victimhood, powerlessness and yet, conversely, maternal strength. The female and the family are at the mercy of an insatiable male greed. From Bruegel's early and qualified depiction of gender division descended a bountiful alchemical legacy. The wailing mother with hungry children would become a standard feature of alchemical art, signifying the personal tragedy of domestic chrysopoeia.

2.2 Richard Brakenburgh's *Alchemist's Workshop With Children Playing*

In cultivating a web of emblematic and chymical allusions, *Rijcke-Armoede* establishes itself as part of the alchemical tradition, influencing Richard Brakenburgh's portrayal of the

⁴⁷ The location of the wife within the heart of the workshop is discussed at greater length in Chapter IV in reference to images of female chymistry. Significantly, Cornelius Saftleven's *Alchemist*, possibly genre painting's earliest interpretation of the Bruegel print, relocates the wife to the fringes of the scene, away from the chymical arena. For discussion of this painting see Russell-Corbett, 2004: 70-71. Cornelius Saftleven, *The Alchemist*, 1631, location unknown. Reproduced in Sotheby's London, 2002: 53.

chymical workshop. Born in Haarlem in 1650, Richard Brakenburgh was a genre, portrait and history painter, in addition to being an engraver, draftsman and poet.⁴⁸ Pupil of Hendrik Mommers, the artist is also reported to have studied under the alchemical painters Jan Steen and Adriaen van Ostade. By 1670 Brakenburgh was living in Leeuwarden, where in 1671 he married. In 1687 he was registered at the artists' Guild of St. Luke in Haarlem. Writing poetry, the artist joined Haarlem's Chambers of Rhetoric and composed a New Year's poem in 1697 for 'De Witte Angieren' [The White Carnations]. A moderately successful painter, Brakenburgh in his later career focused primarily on scenes of folk festivals and merriment in the manner of his supposed masters, Steen and van Ostade. He died in Haarlem in 1702.

Like van de Venne's work, Brakenburgh's *Alchemist's Workshop with Children Playing* (Fig. 12) mocks the puffer. In this painting we can see a reworking of Bruegel's fractured family unit and a reinterpretation of the male/female divergence. Although the workspace is more professional, the inclusion of six children and a wretched wife primarily suggests the collapse of the family. Within a dark and cluttered interior, a family drama unfolds. Scattered about the room are symbols signifying transience, vanity, greed and waste: an hourglass, mussel shells, the untidy floor, a balance and snuffed candles. In the centre background five anonymous assistants work at a table while on the right another, possibly a child, pulls a lever behind the alchemist.⁴⁹ To the right of the picture a chymist, surrounded by various distillations, labours at an open furnace. Unlike the chymists in the works of Bruegel and van de Venne, Brakenburgh's male is turned inwards towards the centre of the painting and his wife. His wife, standing next to him in the centre of the painting, looks down beseechingly into her husband's eyes, gesturing to the children playing on the floor. In the bottom left corner of the painting, four small children play among themselves. Reminiscent of both van de Venne and Bruegel, one of these children carries a spoon, another points to an empty cupboard, while at the opposite side of the painting a fifth child tugs at the skirts of his mother and a sixth, in the gloom, stands by her arm. Of the main group, one boy mimics his father by using bellows to fan the expensive coals on which empty crucibles sit. The son, blinded by a drooping hat, is reminiscent of both the fool and the chymist in Bruegel's print. By replacing the fool with the chymist's son, Brakenburgh not only calls attention to the dangerous inheritance of chrysopoeia, but also to the male susceptibility to the alchemical dream. The mother, who is inextricably bound to her children, becomes a single female symbol for the family. Although, as in the earlier works, the two central characters occupy separate spaces,

⁴⁸ For a biography of Brakenburgh see Thieme-Becker, 1996-97, 4: 514.

⁴⁹ These figures have been taken from the works of other Netherlandish artists. Principe and DeWitt point out that "the figure in the red cap who holds the balance is drawn from Brouwer's repertoire, while the figure with the cone-shaped hat is taken from such scenes by Steen as *Twelfth Night* and *As The Old Sing, So The Young Twitter*". Principe and DeWitt, 2002: 19.

the mother and father in *Alchemist's Workshop with Children Playing* are connected by a glimpse, which holds, perhaps, a glimmer of hope.

The forlorn female is the key focus of this painting; in a murky workshop, she is the only character of the fourteen in the room to be adequately lit.⁵⁰ The light from an unseen source highlights the whiteness of her forearm and the arch of her elegant neck, as her grey collar and sleeves radiate in the light. The chymist's wife is a powerful yet delicate figure, lacking the crudity of Bruegel's and van de Venne's women; she is a pillar in an otherwise shambolic room. Conceivably, she is the white woman of the chymical marriage, and in depicting the husband's rejection of his wife and family, the painting predicts chymical, as well as familial, failure. While Brakenburgh's work remains a satire, it does not contain the grotesque caricatures of Bruegel or the exaggerated figures of van de Venne. Instead, Brakenburgh presents the viewer with naturalistic people. This is a lifelike mother, with similarly realistic husband and children. The tragedy of the scene, the dissolution of the marriage and the starvation of the children, therefore, has greater poignancy than in Bruegel's *Alchemist*. Ironically, by moving away from single-faceted, emblematic and overtly didactic designs, Brakenburgh paints a more compelling picture of alchemical folly. Upsetting the equilibrium of the Christian marriage, Brakenburgh depicts the female not only as the protector of the children and the household, but as a potential redeemer of the male. Surrounded by suffering children, Brakenburgh's exalted female is a tower of hope and virtue in a den of male immorality. While she retains the associations of both Bruegel's and van de Venne's women, Brakenburgh's female transcends alchemical and emblematic symbology to convey the real-life hardship and deprivation of the chymical family and the chymist's wife.

2.3 Jan Steen's *The Last Coin* and *The Village Alchemist*

The image of the distressed mother and starving children in alchemical genre painting was pioneered in part by Jan Steen, whose alchemical work strongly influenced Brakenburgh. Born in Leiden in 1626, Jan Steen was the foremost humorist of the Netherlandish genre painters.⁵¹ Registered at Leiden University in 1646, Steen by 1648 was closely involved with the establishment of Leiden's Guild of St. Luke. Although little is known of his training, it is believed that his masters included the painters Nicolaes Knüpfer and Adriaen van Ostade. It

⁵⁰ Significantly, this female characterization, standing erect with her left hand raised to eyes as if weeping, echoes a 'weeping woman' fertility emblem of alchemical genre art discussed later by this thesis. This motif, while alluding to pregnancy, denotes female distress and powerlessness. For more on this emblem see Chapter III: 119-29.

⁵¹ On Jan Steen see Thieme-Becker, 1996-97, 31: 509-15; Kloek, 1998; Westermann, 1999; Gudlaugsson, 1975; Kloek et al., 1996.

is feasible, therefore, that van Ostade introduced Steen to the subject of the village alchemist. Producing over eight hundred paintings of varying style and quality, Steen painted subjects ranging from landscapes to religion. The best known of his work, however, are the emblem-based comical peasant scenes, in which the artist's moral perspective is often indicated by an instructive inscription. While Steen's work often combines the comical with a moralistic perspective, his portrayals of the village alchemist lack the bawdy overtones of much of his output. In these paintings, Steen's standard mood of frivolity is replaced by sobriety; his figures are less pantomimic and more naturalistic. These paintings of the alchemist convey the gravity and depravity of the chymical workshop. In both *The Last Coin* (Fig. 13)⁵² and *The Village Alchemist* (Fig. 14),⁵³ Steen incorporates the icon of the wailing wife and child.⁵⁴ Whereas many artists employed the image of the mother and children to suggest male egocentricity and greed, Steen also uses the family to indicate male aggression. Within the small rustic laboratory of *The Last Coin* the chymist sits at the furnace, and with his left hand drops the household's last coin into a crucible.⁵⁵ Although his body faces to the right of the painting and into the worktop of the furnace, his head is turned round towards the left. His brow is furrowed and his narrowed eyes stare into those of his wife, echoing the shared gaze of Brakenburgh's couple. Standing next to him, the woman holds one hand to her weeping and partially closed eyes, while the other hangs down to her side where a fretful child clings to her dress.⁵⁶ Like the wife in Brakenburgh's composition, the female is the brightest feature of the room. While two men skulk in the darker corners of the room, the broad white collar of the wife illuminates her face and emphasizes the curve of her sagging shoulders. The chymist gestures towards the sacrificial coin as if to assert the absolute autonomy of his actions. The mother has no defence against her husband's momentous and destructive act. Her face is bowed to the floor and she appeals to no one. Yet, the mother is not a figure of unconditional submission; while all other characters seem to sit, she stands resolutely, like the wife and mother in the paintings of Brakenburgh and van de Venne, and she protects her child, who

⁵² Jan Steen, *The Last Coin [or De Alchemist]*, 1665, Städelsches Kunstinstitut, Frankfurt. Oil on canvas, 34 cm x 28.5 cm. Sales by auction: A. Sijdervelt, Amsterdam (23 April 1766), Holderness, London (6 March 1802), entered collection of Eduard Gustav May in 1842.

⁵³ Jan Steen, *The Village Alchemist*, early 1660s, The Wallace Collection, London P209. Oak panel, 41.7 cm x 29.8 cm x 0.4 cm. Signed upper right. Provenance: Hertford House inventory 1870; Dorchester House inventory 1842; with 3rd Marquess of Hertford by 1833; Christie's (25 April 1801); Charles Leviez, Langford (29 April 1762); probably Jan Jacob van Mansvelt sale, Utrecht (8 April 1755).

⁵⁴ In addition, there exist at least two other paintings by Steen which feature the alchemist's wife. Jan Steen, *The Alchemist*, date unknown, Private Dutch Collection. Reproduced in Brinkman, 1982: 51. Jan Steen, *The Alchemist*, 1668, Ca' d'Oro, Venice. Reproduced in Brinkman, 1982: 50.

⁵⁵ *The Last Coin* is replicated almost exactly by a later painting. Jan Steen, *The Alchemist*, 1688, location unknown (formerly in the collection of Earl of Crawford and Balcarras). Reproduced in Brinkman, 1982: 49.

⁵⁶ Again, the female figure with her left hand raised to her eyes recalls the 'weeping woman' emblem discussed in Chapter III: 119-29. This association compounds the atmosphere of despair.

hides behind her skirts, shielded from the alchemist's glower. The male and female of this alchemical equation are not so much independent, but rather destructive, oppositional forces, caught in the devastating chrysopoeian vortex. *Rijcke-Armoede* and Bruegel's *Alchemist* portray the chymist as self-absorbed, utterly consumed and seduced by the wild promises of transmutation and almost unaware of the enormity of the possible consequences. Steen, however, depicts a chymist conscious and uncaring of the danger in which he places his family. This alchemist is a tyrant, cruel and domineering, far from the scrawny and feeble figures of many alchemical paintings.

Amalgamated into a single image, the mother and child are inextricably bound to evoke sorrow and pity. In another painting by Steen, *The Village Alchemist*, the artist initially seems to present a more sympathetic view of alchemy. In the centre foreground of a chymical workshop, an ample, elderly man with a bent back sits at a work surface stirring the contents of a ceramic pot, which sits atop coals. He faces slightly forward and towards the right of the painting. This amiable looking man wears a red physician's cap and a vibrant mustard work vest, under which is a tawny smock with blue detail. His white collar protrudes above his vest and nestles against his face. The crimson hat accentuates the rosy colour of the chymist's cheeks and nose. On his desk are signs of chymical endeavour: a small alembic, a pestle and mortar, a quill holder and a scrap of paper. To his right and in the background, two slightly exaggerated and comical assistants pore over a large document. One of these men is impaired by his falling hat, which droops over his eyes: an indication of the puffer's lack of vision and understanding. In the background, behind the alchemist and to the left of the painting, a woman holds a baby to her partially bared breast. Her neck is strained as her eyes and face are turned upwards to the ceiling. Although it is difficult to discern the items suspended above her, the main object which meets her gaze appears to be a deflated bladder, an emblematic reminder of vanity and the futility of earthly ambitions.⁵⁷ Her lips are parted and in her left hand she holds a light-coloured cloth to her weeping eyes. The baby which she holds in her arms playfully reaches for the scrap of cloth into which the mother cries, heightening the poignancy of the scene. There is little else in the painting: a shelf on the wall, a coal bucket and further objects hanging from the ceiling. The unusual absence of a detailed context in *The Village Alchemist* places special emphasis on the characters Steen presents.

It is the portrait of the chymist which is of particular significance in this painting. Steen's chymist is markedly similar to those depicted by David Teniers the Younger. Son of painter David Teniers the Elder, David Teniers the Younger was baptized in Antwerp on 15

⁵⁷ For more on the emblematic use of the bladder see Schama, 1991: 503.

December 1610.⁵⁸ After serving an apprenticeship with his father, Teniers registered with the Antwerp Guild of St. Luke in 1632-33 and in 1637 married Anna Bruegel, daughter of Jan Bruegel the Elder. In 1644 Teniers was elected dean of the Guild and in the same year joined the Chambers of Rhetoric. With an excellent relationship with Antwerp art dealers, Teniers was an exceptionally productive artist and the foremost producer of alchemical genre scenes. His work, which is wide-ranging both in subject and quality, was highly prized across Europe and in 1651 Teniers was appointed court painter to Archduke Leopold William, Governor of the Southern Netherlands. Moving to Brussels, Teniers was later court painter to Don John of Austria, who succeeded the Archduke in 1656. The artist worked for Don John until 1659, and died in 1690. Teniers is, by far, the most prolific and best-known artist of the alchemical genre, with over three hundred paintings dedicated to the subject of chymistry.⁵⁹ While the style and quality of his work is erratic, Teniers' moral perspective remained largely constant. His paintings are typically indulgent of alchemists, often portraying proficient and responsible men working within a controlled chymical context.⁶⁰ His interiors, as exemplified by *Alchemist Heating a Pot* (Fig. 5), are orderly and neat, lacking the clutter and degeneration which usually characterize paintings of Netherlandish workshops. This particular interior also lacks the usual topoi signifying transience; there are no skulls, snuffed candles or broken pottery to predict ruin. Teniers' chymist is characteristically attired in rich blue robes and cap with ermine trim, and by his side hangs a plump purse. This chymist and his workshop seem quiet, cautious and well-organized. The elderly man who leans over the furnace, with hoary beard, reddened nose, richly coloured clothes, studied concentration and avuncular face is a recurring character in Teniers' paintings. Although this archetypal figure was copied by generations of alchemical artists, Teniers' chymist is incongruous in Steen's painting. Steen's work tends to depict reckless, overindulgent revellers and lovers, the direct opposite of Teniers' diligent worker. Yet Steen's village alchemist is Teniers' elderly, industrious chymist, with his rosy nose, snowy beard and benign expression, hunched over a chymical experiment.

Steen's chymist could be mistaken as an exercise in artistic imitation. However, the introduction of the mother and baby is key to a complete understanding of *The Village*

⁵⁸ As Read succinctly notes "there were four David Teniers in direct succession, all of whom were painters" Read, 1947: 73. This thesis refers to David Teniers the Younger (1610-90), the second and most celebrated of this series of painters. For more on the life and works of Teniers see Thieme-Becker, 1996-97, 32: 527-29.

⁵⁹ See Davidson, 1980: 38; Principe and DeWitt, 2002: 13.

⁶⁰ While most critics would agree with this statement (see, for example Davidson, 1980: 33, 44), some interpret Teniers' paintings as condemnatory of alchemy (Klinge, 1999: 136). This chapter contends that most theories regarding Teniers' criticism of alchemy arise not from an analysis of his paintings, but from inherently unsound criticism of earlier years.

Alchemist. As Teniers only rarely features women in his depictions of the chymical workshop, Steen's inclusion of the female in a Teniersesque context is striking. In the manner of Brakenburgh and van de Venne, Steen employs the icon of the lamenting mother to describe domestic devastation, the impact of which is further amplified by the poignant portrayal of a nursing baby. Conforming to convention, Steen's maternal figure is set aside as a distinct emblem, detached from the main body of the picture. Whereas the three male characters are in close physical proximity, in a cosy huddle, the female and child are ousted to the edge of the painting. As with van de Venne, the chymist is turned away from his wife, seemingly unaware of his tormented, beleaguered family. Thus, *The Village Alchemist* incorporates the female and the family to prompt a dramatic shift in perspective, from the lenience and non-judgementalism of Teniers to the critical and moralistic slant of Steen.

In his many paintings on the subject, Teniers, unlike many early modern artists, neglected the devastating consequences of alchemy on the ordinary provincial family. By including a dominant reference to a celebrated and much imitated Teniers character, *The Village Alchemist* subverts this tradition of gentle indulgence. By juxtaposing a stock character from the brush of the sympathetic Teniers with a weeping mother and child, Steen mocks the blind optimism of both the reckless alchemist and the tolerant artist.

2.4

Intertextuality is inherent to the development of alchemical art. The emblematic, illustrative images found in books and manuscripts aptly demonstrate the referential nature of alchemy. Hermaphrodites, eggs, ponds, kings, queens, snakes and peacocks recur throughout the centuries and throughout Europe, suggesting a universal code through which the secrets of alchemy might be uncovered. This variety of emblematic representation often provides clues to alchemical processes, ingredients, instruments and stages and also frequently includes obscure reference to alchemical philosophies. The image of the distressed mother and self-interested father potentially operates within these same perimeters. Initiated by Bruegel, this seventeenth-century pairing denotes a specific set of polar values. As the alchemical male represents the sun and the female the moon, so too, the male denotes irresponsibility and the female responsibility. Like Dutch emblemata, as the maternal symbol was applied and developed throughout the years, it could promote specific responses, independent of its framework; shorthand for over a century's worth of allusions.⁶¹

⁶¹ This shorthand is further analysed by Chapter III of this thesis, which examines the evolution and eventual consolidation of these wailing women into stock symbols of inherent female despair.

The complexity of this reference network is revealed by *The Village Alchemist*, which incorporates multiple emblems to moralizing effect. Steen here demonstrates how combining stock figures from recognizable works enhances the didactic impact of his work. The seventeenth century, of course, was a time of great fluctuation and change in the Netherlands and this is reflected in alchemical symbology. Symbolic forms did not remain static, but were constantly shifting in line with new contexts and interpretations. Steen's paintings demonstrate how original meaning was retained, while new interpretations and developments of the maternal image were advanced.

The Old Hag, *Gore Besjen!*

3.0

As this survey has suggested, alchemical genre paintings of the seventeenth century operated within a known matrix of reference. Heerschop's image of the mother cleaning her baby and van de Venne's use of the wailing woman and hungry children illustrate how specific emblems were cultivated and employed by generations of alchemical artists. However, in an investigation of domestic discord, there are certain scenes and images which occur less frequently in alchemical iconography, and which fail to adhere to a certain pattern or tradition, yet have specific reference to Netherlandish culture. This, the third and final section of this chapter, examines these distinct images and seeks to determine their meaning within the context of Netherlandish art and literature.

3.1 *Trouble Comes to the Alchemist*

A number of Netherlandish genre paintings depict the iatrochemist in his workshop.⁶² These chymists, who usually followed the work of Paracelsus, believed that the primary business of alchemy was medicinal, rather than chrysopoeian. These iatrochemical paintings often portray a consulting area, littered with the standard topoi of vanitas and transience: the hourglass, a horse skull, a human skull and extinguished candles. Likewise, the inclusion of the globe, a quintessentially Paracelsian prop, biological diagrams, pharmaceutical containers

⁶² The iatrochemical workshop and its female occupants are the subject of Chapter III of this thesis. For comprehensive definitions and descriptions of iatrochemistry see Chapter III: 108-11.

and powders confirms the space as chymical.⁶³ *Trouble Comes to the Alchemist* (Fig. 15) by an unknown follower of the Dutch School is one such iatrochemical painting.⁶⁴ This scene depicts a uroscopy: the study of the patient's urine to determine a diagnosis. Although scenes of medical procedures, and uroscopies in particular, are widespread, this is a very unusual composition. The bearded chymist sits at a low green table, beneath which lies a small, sleeping dog. Although there are subtle signs of chymical activity, there is no furnace or distillation in this room. Instead, this appears to be a consultation room. By an open door stands a woman, possibly the patient, dressed in brightly coloured clothes. She leans forward, with her hands on her hips, as the iatrochemist holds what is probably a urinal of her waste. This figure is quite typical of chymical genre paintings and, indeed, the image of the female patient is one which demands its own independent study.⁶⁵ However, another female character commands attention. Above the alchemist, a stout, old woman leans out of a wooden hatch in the wall. Onto the balding pate of the man below, she empties the contents of what appears to be a chamber pot. As the urine rains onto the chymist below, he holds up his hand in a comically inadequate defence.

3.1.i The Old Hag

This image of the elderly woman is taken directly from a succession of seventeenth-century genre prints. The earliest of these is by Hendrick Bary and was produced in the mid-1650s (Fig. 16).⁶⁶ Executed after a lost painting by Frans van Mieris, Bary's print was, in turn, copied by artists such as Jan de Bisschop. The original engraving depicts an elderly woman with a wrinkled face, dressed like the character in *Trouble Comes to the Alchemist*, with a white ruff and cap. She is a pantomimic figure, whose appearance places her within an extensive literary and artistic tradition of repellent, mannish women, a caricature still exploited today.⁶⁷ She empties the pot in much the same way as the female in the painting of the iatrochemist, looking down as the contents pour away. Beneath the picture lies a verse:

⁶³ The inclusion of the celestial globe is often suggestive of iatrochemistry: Paracelsus constructed an entire cosmology with chymistry at its core. He viewed the world as a great distillation vessel and its changes as parallel to the operations carried out in the laboratory. The human body itself, as the 'microcosm', bore resemblances not only to the universe, the 'macrocosm', but to chemical processes also. This is one of the main reasons for the continual and prominent inclusion of the globe in so many Netherlandish depictions of the alchemist's workshop.

⁶⁴ Artist Unknown, *Trouble Comes to the Alchemist*, date unknown, Chemical Heritage Foundation, Philadelphia 00.01.269. Oil on wood panel, 30 1/2" x 21 1/2". Provenance: Fisher Collection. Previously attributed to Pieter van Slingelandt.

⁶⁵ This image is considered at length in Chapter III.

⁶⁶ Hendrick Bary after Frans van Mieris, *Old Hag Print*, mid-1650s, Rijksprentenkabinet, Rijksmuseum, Amsterdam. Reproduced in de Jongh and Luijten, 1997: 337.

⁶⁷ For a discussion of "the disorderly woman" in European early modern culture see Davis, 1975: 124-51.

Hou! gore Besjen, hou! hebt gij uw' Eer verloren
Dat gij uw' Vuylicheyt op Eerb're hoofden stort?
Of tracht gij, door dien Drek, ons d'ogen uyt te boren;
Op dat uw' rimp'lend Vel niet meer gezien en word?⁶⁸

The verse, in part, refers to a common offence in Dutch cities. Practically every Dutch town had regulations in place designed to improve the hygiene of residential neighbourhoods. As such, the woman in the picture is flouting a by-law by discharging her waste into the street. While proverbial based genre prints might have used the image as an illustration of unsanitary habits, the woman in *Trouble Comes to the Alchemist* throws her waste not into the street, but onto the 'honourable head' of the alchemist below. Although the urine of Bary's old hag does not soil any unsuspecting heads, earlier prints were produced on that very theme. In their discussion of Bary's image, Eddy de Jongh and Ger Luijten trace its origin to a classical source.⁶⁹ Popular prints of the seventeenth century, which probably served as inspiration for van Mieris, depict the feud between Socrates and his shrewish wife Xanthippe in which she poured a jug of water or a pot of urine over her husband's head. This scene appeared in emblem books at least forty years prior to the production of Bary's print. In 1607, for example, Otto Vaenius presents Socrates as the paradigm of 'Patience' in his *Emblemata Horatiana*, with an accompanying verse:

Den goeden Socrates sachtsinnigh
Sweegh stil als hem sijn wijf toeschoot
Veel smadelijcke woorden vinnigh
En hem uyt spijt met pis begot.⁷⁰

Although this scene rejects the grotesque characterizations of later works it nonetheless relishes the proverbial cantankerousness of Socrates' wife. A close analysis of *Trouble Comes to the Alchemist* confirms this association: lying open on the table is a poem signed 'Socrates'. The verse alludes to the vengeance of a scorned wife:

ick wist wel vrou
ten is geen wonder

⁶⁸ Translation: "Stop! Dirty little old wife, stop! Have you lost your honour, / Stop! That you throw filth on honourable heads? / Or do you attempt, with this shit, to blind our eyes, / So that we no longer see your wrinkled skin?"

⁶⁹ For a discussion of this image see de Jongh and Luijten, 1997: 337-40.

⁷⁰ Otto Vaenius, *Emblemata Horatiana* (Antwerp, 1612): 152-53. Cited in de Jongh and Luijten, 1997: 340. Translation: "The good mild-mannered Socrates / Fell silent when his wife scolded him / With many scornful words / And in a rage soaked him with piss."

het reghenen sou
near dit gedonder.⁷¹

While these verses and prints offer a more nuanced cultural context for *Trouble Comes to the Alchemist*, the painting reflects neither Vaenius' 'Patience' nor Bary's concern for hygiene. Instead, above all, this is a comical scene which once again mocks the chymical obsession with urine and the pretensions of the physician. Conducting a uroscopy while being covered with urine is probably less about domestic disharmony and more about straightforward, scatological amusement. The inclusion of the recognizable emblem of the old hag increases the comic potential of *Trouble Comes to the Alchemist*, rather than its moralistic authority. Although the emblem of the old hag was adopted by several genre prints to enhance their comedic quality, it was not implemented as an alchemical motif. However, as the following study shows, the old hag emblem does in fact carry a further significance.

3.2 David Teniers' *Alchemist*

Trouble Comes to the Alchemist uses the internal wooden hatch to signal unwelcome female intrusion into a male space. This basic construct is typical of several hundred chymical paintings, which exploit the hatch-door to illustrate an infringement on the patriarchal workspace. David Teniers' *Alchemist* (Fig. 17) aptly demonstrates the archetypal portrayal of the intruding head.⁷² In this scene, a studious chymist dressed in lavish fur-trimmed blue robes is seated at a desk on which rest a globe, an hourglass, an open book and most significantly, a bulging purse. With his grey head bent, the chymist reads from a smaller volume which he holds in his hands. Although only two assistants feature in the background, this is a large, busy workshop, filled with bubbling distillations and furious chymical activity. In the top right of the picture, however, high towards the ceiling, a small white capped head peers through a wooden hatch. The face, which is seemingly female, is gaunt, without detailed features or expression. It is only the slightness of the face and inclusion of the white cloth cap which unequivocally suggest femininity. This is an intentionally significant area of the painting; a powerful diagonal created by the steps of the furnace and the crouching assistant commandingly directs the viewer to the top right corner. With variations, this head appears in countless alchemical paintings; frequently the head is detailed and patently male,

⁷¹ Translation: "I knew well, woman, / It's no surprise, / That rain would / Follow this thunder."

⁷² David Teniers, *The Alchemist*, c.1645, Herzog Anton Ulrich Museum, Braunschweig. Reproduced in Davidson, 1980: Plate 25.

while sometimes the head belongs to a female.⁷³ Occasionally, however, the face is non-descript, shrouded by a drooping hat or by the darkness of the laboratory. Although this hatch-way intrusion assumes numerous forms, specifically female characterisations demand special attention. Female infringement of male chymical space is rare and often occurs as part of a broader gender narrative. Yet, while the appearance of the female in this alchemical painting may refer to such subtexts, it more obviously alludes to a universal fear of death and divine Judgement.

An engraving by Franciscus van der Steen after a David Teniers painting shows a husband and wife counting their money in a small room (Fig. 18).⁷⁴ The couple are elderly and surrounded by bags of coins and account papers. With their fur-trimmed robes, the couple are not dissimilar to Teniers' many representations of alchemists. While the husband holds a swollen bag of money on his lap, his wife uses a balance to weigh some gold. Towards the top of the room is a small window, through which Death pokes his head. Death, a grinning, skeletal being, holds aloft an hourglass to show the oblivious couple below that their time has come. Below the picture, a passage reads:

STULTE HAC NOCTE ANIMAM TUAM REPETUANT A TE ET HAEC QUAE
PARASTI CUIUS ERUNT: sic est qui sibi thesaurizat et non est in Deum dives.
LUCAE XI.C⁷⁵

The extract from the parable of the rich fool underscores the doom-laden atmosphere of van der Steen's moralistic composition. This is a portrait of avaricious folly, a warning to those obsessed with earthly riches and a sentiment particularly apt for an alchemical subject.⁷⁶ While it occurs only rarely in Netherlandish genre painting, the personification of Death was a common feature of genre prints, especially in those that depict the weighing and counting of money. Typical of these instructive engravings, van der Steen's *Couple Weighing Money*

⁷³ For example, a head poking through a wooden hatch onto a chymical workshop occurs in several paintings belonging to the Chemical Heritage Foundation, including: David Teniers, *Interior of a Laboratory with an Alchemist*, 1690, Chemical Heritage Foundation, Philadelphia 00.03.23; Anonymous Teniers Follower, *Alchemist with Book and Crucible*, c.1630, Chemical Heritage Foundation, Philadelphia 00.01.258; Anonymous Teniers Follower, *An Alchemist's Laboratory*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.18.

⁷⁴ Franciscus van der Steen after David Teniers, *Couple Weighing Money*, c.1655, Rijksprentenkabinet, Rijksmuseum, Amsterdam. Provenance: Collection P. C. Baron van Leyden, Koninklijke Bibliothek, The Hague (Lugt 240) inv. RP-P-OB-59.901. Reproduced in de Jongh and Luijten, 1997: 291. Possibly after: David Teniers, *Elderly Couple Weighing Money*, Collection of Suzanne and Norman Hascoe.

⁷⁵ Translation: "Thou foolish one, this night is thy soul required of thee; and the things which thou hast prepared, whose shall they be? So is he that layeth up treasure for himself, and is not rich towards God. Luke, Chapter XI."

⁷⁶ Ger Luijten notes that scenes of Death surprising counting couples were often pasted to the lid of coin weight boxes in both the Northern and Southern Netherlands. De Jongh and Luijten, 1997: 293.

precisely illustrates the practice of representing Death. His skeletal grim reaper, who leans through an upper interior window, in the corner of the painting, exemplifies the customary compositional arrangement for Death in early modern print-making. Other genre prints which employ this design include two different works by Jan van der Bruggen, both also entitled *Couple Weighing Money* (Figs. 19 and 20) and inspired by the same Teniers painting.⁷⁷ Although the original work by Teniers does not include the figure of the grim reaper or the biblical inscription, Eddy de Jongh writes:

There is no doubt that this commentary reflects Teniers' intentions with his painting. The print was published by his brother Abraham, [...] who was himself a painter of genre scenes, and it is perfectly possible that David was consulted over the text.⁷⁸

It is likely, therefore, that both Teniers and the reading public were at least partially aware of the practice of featuring the protruding head of Death in scenes of avarice. It is plausible, then, that alchemical genre painters, reluctant to incorporate abstract characterizations into their work, used instead the head-through-the-hatch motif as an expression of external judgement. The hatch imagery, almost by proxy, invites the viewers to evaluate the moral fabric of the scenes laid out before them. As the figure of the grim reaper occurs in prints exploring human greed, so the head-through-the-hatch motif occurs in paintings condemning materialistic chrysopoeia. As such, the anonymous head featured so prominently in alchemical paintings may comprise a further, if non-gendered, component of the great Netherlandish emblem code.

3.3

Including examples of the incongruous female, *Trouble Comes to the Alchemist* and David Teniers' *Alchemist* reach beyond the gender dynamics explored by Heerschop, van Ostade, Steen, van de Venne and Brakenburgh. Subscribing to gender stereotypes, *Trouble Comes to the Alchemist* undoubtedly employs the emblem of the old crone to increase the visual merriment of the composition. But, considering the wide recognition of the death-hatch motif, *Trouble Comes to the Alchemist* is more than just comic. While she is a comedic figure, the old woman, and her careful positioning within the canvas, portend disaster, adding an element of folly to an otherwise farcical scene. Similarly, the seemingly female head in the works of Teniers and many other alchemical artists may also be a representation of Death.

⁷⁷ Jan van der Bruggen after David Teniers, *Couple Weighing Money*, c.1690, Bibliotheque Nationale de France, Paris. Mezzotint, 29.5 cm x 21.7 cm; Jan van der Bruggen after David Teniers, *Couple Weighing Money*, c.1690, Stichting Atlas van Stolk, Rotterdam. Mezzotint, 26.7 cm x 19.3 cm.

⁷⁸ De Jongh and Luijten, 1997: 293.

All these works, and the women they depict, are grounded in proverb-based emblem and genre prints. As Netherlandish genre art values lifelikeness, works featuring single-faceted emblems such as the old hag are uncharacteristic of early modern alchemical art. While they allude to the genre prints from which they borrow, *Trouble Comes to the Alchemist* and *The Alchemist* resist strict emblematic format. Instead, they disguise their plunder, just as Heerschop and van Ostade hide the mother and baby emblem, deep within an everyday context. Thus, the emblematic tradition of alchemical iconography is maintained within the fleshy characterization of genre paintings.

Ostensibly, *Trouble Comes to the Alchemist* and Teniers' *Alchemist* bear little relation to the sensitive depictions of gender dynamics evident in the paintings by Brakenburgh or Steen. However, while these two works abandon the motifs traditionally favoured by alchemical painters, they nonetheless maintain conventional themes. Reflecting the gender polarity in alchemical scenes from Bruegel onwards, both paintings portray the physical separation of the male and female. In both cases, the female is located within a distinct area, far removed from the bustle of male enterprise. Additionally, both paintings represent violent conflict between the male and the female; as the old hag splashes urine over her male counterpart, Teniers' female potentially heralds Death for the men toiling below. As with more orthodox alchemical genre paintings, this physical opposition suggests a gendered conflict of ideology. Inevitably, then, despite their uniqueness within alchemical genre art, these distinctive characters emerge as routine emblems of female judgment. Representing a disruptive force in a masculine environment, the female characters in *Trouble Comes to the Alchemist* and *The Alchemist* conform in many ways to those created by Heerschop, van Ostade, Steen, van de Venne and Brakenburgh.

4 Conclusion

Seventeenth-century Netherlandish alchemical genre painters were fixated by domestic discord and the position of the displaced female. Through complex reference and allusion, the works of Heerschop, van Ostade, Steen, van de Venne and Brakenburgh explore the binary nature of the male and female within the context of the Christian marriage and the Netherlandish household. These works consistently show that male rejection of the female produces turmoil and despair: babies howl, children go hungry and wives weep into their sodden handkerchiefs. They suggest a specifically male vulnerability to the grand promise of transmutation, which engenders avarice, egotism, recklessness and cruelty. In genre painting, at least, the male chymist is consistently portrayed as the sole source of his own downfall,

leading his family into economic ruin. In contrast, the female is depicted as protector of the young and defender of the family purse. In a perverse bastardization of alchemical polarities, the male and female of these paintings represent an inclusive binary system of values: as the male signifies recklessness, the female signifies caution; as the male represents egotism, the female selflessness. Similarly, as the male symbolizes irresponsibility, introversion, gullibility and dreaminess, the female denotes responsibility, extroversion, awareness and practicality. However, this represents an absolute corruption of the chymical marriage: as the female is rejected by the male, harmony is inevitably displaced by turmoil.

The application and development of the emblematic women explored in this study are fused inextricably to the alchemical tradition of reiteration and symbolic reference. As medieval manuscript art replicates the Red King and White Queen in an expression of the chymical marriage and method, genre artists of the seventeenth century employ the polarized mother and father to convey the folly of domestic-alchemical practice. The intertextuality of gender emblems in alchemical art is extensive, and is explored further in the following chapters. While this study has alluded to the borrowing of gender emblems within genre paintings, prints and Emblemata, the practice originates from the gender symbolism which underlies all Western alchemies. Symbols of gender do not simply ornament grey alchemical tracts, but command the spiritual, social and scholarly life of the chymist, his workshop and his family.

These genre paintings, therefore, do not simply reveal the turbulence of a mismanaged household, but also allude to the importance of the female in the alchemical equation. While male chastity lies at the philosophical core of traditional alchemy, contemporary accounts more often celebrate the chymist as a Christian man, whose social, familial and spiritual responsibilities are fulfilled through alchemy. Collectively, these paintings equate alchemical failure with the abandonment of Christian and social values. The consent of God and the purity of the soul were not only essential to the success of chymical experiments, but also intrinsic to daily life. A corrupt husband and father could never, therefore, achieve the status of adept, but would instead descend into misery and poverty. These paintings do not celebrate abstract ideologies, but allude to the wretchedness which confronts the ungodly, condemning the sacrifice both of the family to the chrysopoeian dream, and of the Christian God to the enthralled worship of Mammon.

CHAPTER II

PATER ET MATERFAMILIAS:

DOMESTIC QUIET IN PAINTINGS OF THE 'CHYMICAL MARRIAGE'.

The Sun is its father, the moon its mother,
the wind hath carried it in its belly, the earth its nurse.¹

The perfect and hallowed union of polar opposites is intrinsic to all ancient and modern alchemical philosophies. The red man and white woman, the King and Queen, Sol and Luna, the incestuous union, the balance of metals and elements, the esoteric and the exoteric and even the interdependence of the macrocosm and microcosm contribute to an understanding of what is encompassingly termed the 'chymical marriage'. This 'marriage' depicted throughout alchemical art essentially describes chemical processes of the *opus alchymicum*, the cycle of *separatio* and *conjunctio*. However, as with most concepts alchemical, the chymical marriage is an inextricably multivalent and ambiguous term, whose complexity is conveyed through the improbable simplicity of emblematic art. In all alchemical traditions the chymical marriage is symbolized by the unification of man and woman. Often portrayed by copulating lovers, the joining of hands and the Hermaphrodite Rebus, the iconographical marriage celebrates the reconciliation of two equal and opposite forces, through which the Philosophical Child or Stone is born.

Graphic representations of the Red King, White Queen and Philosophical Child promote a compelling portrait of an alchemical family. As key alchemical emblemata, the members of this peculiar kin have been subject to extensive research.² Exhaustively documented and widely embraced by the academic world, these studies have engendered in turn more specialized investigations into notions of gender and family in natural philosophy. Developing a well-established thread, M.E. Warlick of Denver University has pioneered research into images of women and domesticity in alchemical emblematic manuscript art.³ However, her paper, 'The Domestic Alchemist', represents first steps into the vast and largely uncharted field of domesticity in alchemical art. Surprisingly, representations of domesticity have received relatively little attention from serious scholars and it is in the field of alchemical genre painting that this neglect is most acute. Female and familial constructs in

¹ Dobbs, 1988: 183-84.

² See, for example, van Lennep, 1985; Roberts, 1994: 84-91.

³ Warlick, 1998. Warlick is currently working on a book in which she will develop the theme of her paper.

alchemical genre art have yet to be examined in any depth, an oversight made more surprising by the strong parallels between the gender and family ideals proposed by alchemical tradition and those held by early modern Netherlandish society. Considering the recent criticism directed towards female domesticity in genre art and the mounting emblematic research on alchemical art, it is clear that an exploration of the representation of gender ideals in alchemical genre painting is overdue.

Sensible, then, of the critical milieu, this chapter explores the idealized depiction of gender, marriage and the family in alchemical paintings of the seventeenth century. The first chapter of this thesis examines representations of a purely exoteric endeavour: visions of shambolic, working laboratories reflecting a wholly practical aspect of the art. Books, in these paintings, are usually strewn about the workshop, bullishly discarded along with the esoteric philosophies hidden within. By way of contrast, this chapter surveys pictures of alchemical perfection, in which societal, spiritual and chymical duality balance to create an enduring aura of universal harmony. Male balances female, theory balances practice, private balances public, esoteric balances exoteric, sulphur balances mercury, father balances mother. Whereas scenes of domestic discord embody the repulsion of polar opposites, these paintings of domestic harmony present completion through opposition.

These paintings, which this thesis conditionally terms 'genre scenes of the chymical marriage', are highly idiosyncratic within alchemical art. They invariably depict the model Dutch household, an idyll of prosperity and Christian living. These scenes contain a male and female, husband and wife, working independently of one another as microcosmic cogs in the efficient domestic engine of the macrocosmic Republic. The father, usually positioned at a desk overflowing with manuscripts, pores studiously over heavy tomes, immersed in chymical treatises. Distillations and chemical apparatus bubble away unobtrusively in darkened corners. Occupying an entirely separate space, the mother, sometimes accompanied by a dutiful brood, sits engrossed in some mundane chore.

Principally focusing on the paintings of Thomas Wijck, this chapter is structured around the three most common household tasks undertaken by women in alchemical paintings: the preparation of food, needlework and the teaching of children. While these housewifely activities conveyed specific connotations to a contemporary viewer, their significance to this thesis lies predominantly in the artistic and theoretical balance they lend to the portrait of the scholarly alchemist.

With some considerable success, historians in recent years have made sustained efforts towards unmasking the Dutch home and its inhabitants. Simon Schama's *Embarrassment of Riches* and Wayne Franits' *Paragons of Virtue* offer a comprehensive picture of Dutch family life in the Golden Age, partly through an analysis of seventeenth-century paintings.⁴ Both these studies, and numerous others besides, have recognized the risk of interpreting genre paintings as historically accurate portrayals of everyday life. It has been shown that genre paintings, in the manner of emblemata, often advance an imagined ideal to which the viewer may aspire, rather than depict the actual day-to-day living of citizens of the Republic.⁵ Equally detrimental to the study of this area is the tendency to read Netherlandish genre paintings purely in terms of emblematic symbolism. Franits advocates a conciliatory approach to analysing images of domesticity in genre art, which recognizes both the importance and limitations of what Svetlana Alpers erroneously dubs "emblematic interpretation".⁶ When writing of the recurrence of specific domestic duties in Dutch painting, Franits notes that:

The selectivity of domestic imagery, or more precisely, the conventions by which it is governed, bespeaks an intrinsic level of significance within the individual themes themselves. For not only artistic concerns, but more importantly, popular attitudes and ideas dictate the existence and production of contemporary imagery. Thus, meaning in Dutch paintings is not necessarily concealed from the viewer but is an essential constituent, intimately bound up with their mimetic qualities.⁷

As such, this chapter does not aim to locate images of female domesticity and male scholarship within the historical context of the seventeenth-century Dutch household and workplace. Nor, considering the research already invested in paintings of domestic virtue, does this chapter seek to expound the moral connotations and broad cultural associations of specific household tasks. Instead, this chapter explores themes of domesticity in relation to their chymical context and seeks to establish their role within the wider system of alchemical symbology.

⁴ Schama, 1991; Franits, 1995.

⁵ See Franits, 1995: 1-17.

⁶ Alpers, 1983: 229.

⁷ Franits, 1995: 14.

The Chymical Scholar

1.0

While Hendrick Heerschop, Adriaen van Ostade, Adriaen van de Venne and Jan Steen pay testament to the folly of would-be chrysopoeians, the work of the Netherlandish artists Thomas Wijck and Gerrit Dou bears witness to a very different chymical character. These artists celebrate the philosophical and spiritual contemplation of the independent scholar, the student of esoteric chymistry. Their paintings of the chymical scholar portray the alchemist removed from the splutter of the spitting furnace, sitting in quiet meditation, surrounded by books and papers; the very antithesis of his van Ostade counterpart. Gradually developed into a distinctly formulaic vision of alchemical endeavour, the image of the lone male student gained momentum through the seventeenth century, surviving in bastard form for a further two hundred years.⁸

The seventeenth-century renderings of the chymical scholar in his study are part of an important and ancient iconographical tradition.⁹ Although most historians locate its origin in the Renaissance images of St. Jerome, in essence, the image of the chymical scholar derives from a much earlier source.¹⁰ The genesis of this theme lies in the portraits of classical authors, from which evolved the early medieval images of quill-wielding evangelists and illuminated portraits of writers. These in turn inspired the fourteenth-century Italian prints and paintings of St. Jerome in his study.¹¹ These compositions, which typically feature a balding and bearded Jerome alone at a desk, either reading or writing, flourished in Italy and Northern Europe during the Renaissance.¹² Throughout this period the St. Jerome composition served as a malleable model for numerous other portraits; paintings of fêted Renaissance figures frequently locate their subject within similarly bookish confines. By the mid-sixteenth century, however, such representations of Jerome were rare. Instead, from this

⁸ Nineteenth-century reinterpretations of this theme include Charles Meer Webb, *The Search for the Alchemical Formula*, 1858, Chemical Heritage Foundation, Philadelphia 00.03.32; Edward Allan Schmidt, *The Chemist*, date unknown, Chemical Heritage Foundation, Philadelphia 00.01.246.

⁹ For the origin of the scholar in his study theme see Rice, 1988: 75-111. For a full examination of this iconography in Renaissance Italy also see Thornton, 1997.

¹⁰ See, for example, de Jongh, 1997: 330.

¹¹ The earliest surviving example, a fresco by Tomaso da Modena in the church of S. Nicolò in Treviso, is believed to date from around 1360.

¹² Eugene F. Rice notes: "A north Italian master, perhaps Altichiero of Verona (d. c.1385), had painted a famous portrait of Petrarch at work in his study, a fresco that became the model for several early representations of Jerome. Other pagan, Jewish, and Christian authors – King David, the evangelists, Ovid, Seneca, Valerius Maximus, St. Augustine, St. Thomas Aquinas, St. Catherine – were shown similarly closeted." Rice, 1988: 106.

point onwards prints and paintings of the scholar in his study became increasingly secularized.

During the seventeenth century, prints and paintings of the scholar in his study attained significant popularity in the Netherlands.¹³ Shedding religious insignia, these prints nonetheless retained the motifs of scholarship, books, hourglasses, inkwells, candles and skulls, thus preserving the serene atmosphere of the Jerome study. In *Mirror of Everyday Life*, de Jongh and Ger Luijten consider the range of meaning within these early modern prints, analysing the distinction between commendable scholarship and degenerate melancholy. The melancholic student of alchemy is certainly evident in seventeenth-century Italian genre painting. Executed by an anonymous Italian painter, *An Alchemist in his Study* (Fig. 21), for example, depicts a young man languishing in a dark, cluttered interior, crowded with books, globes, alembics and retorts.¹⁴ Caught in contemplation, his sad, young face is drawn to pleasures of the outside world visible through a vast window. The painting is unambiguous in its condemnation of alchemy and even scholarly activity as a whole. The study is laden with tokens of death and destruction: in the bottom right corner of the chamber a skeleton rests outstretched on the floor, while a sarcophagus lies in the centre left of the scene. In a final, ominous touch, a sinister white rabbit with one red eye peers furtively at the viewer from behind the scholar's desk. This censorious painting condemns alchemy and scholarship in a dichotomous vision which sets dark against light, captivity against freedom, age against youth and death against life. The sentiment underpinning this painting is certainly concordant with the prints of Melancholia examined by de Jongh and Luijten. However, such associations of alchemy and melancholy are rare in Netherlandish genre painting, with Thomas Wijck and his many followers offering a quite different vision of the chymist in his study. In capturing the meditative and pious atmosphere of St. Jerome prints, Wijck's work illustrates a clear disparity between the Italian and Netherlandish approaches to portraying the alchemical scholar.

1.1 Thomas Wijck and the Chymical Scholar

Thomas Wijck is an artist fundamental to this thesis. While his work provides a basis for the greater part of this chapter, Wijck also furnishes Chapter IV with much of the material for its discussion of the ostensible female chymist in genre painting. Born in Beverwijck possibly in

¹³ For more on these prints see de Jongh and Luijten, 1997: 329-32.

¹⁴ Roman School, *The Alchemist in his Study*, late seventeenth century, Chemical Heritage Foundation, Philadelphia 00.03.39. Oil on canvas, 19" x 25". Provenance: Eddleman Collection.

1616, Thomas Wijck was a painter who probably trained in Haarlem.¹⁵ Although little evidence remains regarding his training, it is noteworthy that Wijck studied in the studio of Adriaen van Ostade, whose alchemical work is examined in Chapter I. Travelling extensively throughout his lifetime, it is likely that by 1640 Wijck was residing in Rome. Much of his work is clearly influenced by the Italian School both in subject and style, and includes scenes of both Rome and Naples. It appears that Wijck then returned to Haarlem, registering at the Guild of St. Luke in 1642 and marrying two years later. His presence in Haarlem is recorded in 1658, 1659, 1669 and 1676 and it is believed that he journeyed to London, with his painter son Jan, sometime between 1660 and 1668. He was buried in Haarlem on 19 August 1677. Towards the end of his career Wijck abandoned landscapes and street scenes in favour of more typical Dutch genre subjects, such as the alchemist's study. Thomas Wijck's alchemical oeuvre is highly idiosyncratic but was instrumental in the gradual standardization of images of the chymical student. Generally, these specialized paintings betray the artist's powerful inclination towards the Italian School in technique, subject, style and palette.

His painting, *The Alchemist #1* (Fig. 22) is typical of both his work in general and his specialized theme of the alchemical academic.¹⁶ From beyond a shadowy arch, the unseen viewer intrudes upon a space of balance and quiet. Wearing the fur-trimmed robe of a scholar, a chymist sits at a large table, festooned with scrappy ephemera, books and the predictable paraphernalia of natural philosophy. Typical of Wijck's chymical scenes, the lone male is positioned by the window, his head bent and eyes trained on the written word of his tome. This is not a workshop, but a study. While this figure delves into chymical theory, a solitary furnace, edging out of frame, gently heats a single distillation. The room is strewn with scraps of paper, resting on chemical jars, littering the floor and falling off the desk. The light from the window catches brilliantly the broad white pages of a book, propped open against a large, handsome globe. Through the elegant windows, the vivid blue of the sky and the leafy green of an overhanging branch invite the viewer into the warmth of a Haarlem morning.

Primarily, this is a painting about harmony. The chaotic, discordant lines which dominate the chrysopoeian laboratory of Pieter Bruegel are usurped by fluidity and balance. The single, flowing line of the enveloping arch embraces the upper half of the canvas. This organic

¹⁵ For further references on Thomas Wijck see Thieme-Becker, 1996-97, 36: 324-25; Houbraken, 1718-21, 2: 16-17; Blankert, 1978; Steland, 1989: 215-47.

¹⁶ Thomas Wijck, *The Alchemist #1*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.05. Oil on panel, 18 1/2" x 15 1/2". Provenance: Eddleman Collection. Wijck's paintings entitled "The Alchemist" have been numbered for the sake of clarity. As the painter dated his work only rarely, it is difficult to ascertain the chronology of his output.

curvature is echoed in the fall of the fabric suspended from the roof, the strangely curved doorway, the two elegant arched windows and in the dimensions of the room itself. Together, the curved lines of the arch, floor, staircase, doorway and alcove form a distinct spiral, terminating at the centre of the composition. This coil unifies the otherwise disparate aspects of the scene, providing a harmony absent in depictions of the alchemist's unruly, conflicting workshop. Furthermore, the vertical wall, at which the spiral ends, divides the painting into two exactly equal halves, fortifying its symmetry. The artist places special emphasis on both the core of the spiral and the vertical divide by juxtaposing the bright bisecting central line of the wall with the darkened, gloomy recesses. The balance within the painting reflects the equilibrium in the subject. Wijck depicts the harmonious synchronism of poles: practice and theory, private and public, light and dark, image and text, macrocosm and microcosm. In composition, style, tone, palette and subject, *The Alchemist #1* is typical of countless Thomas Wijck paintings, reproduced time and again with little variation.¹⁷

Such paintings evoke the equilibrium that lies at the heart of both alchemical and Netherlandish domestic philosophy. While *The Alchemist #1* illustrates esoteric alchemy in its depiction of study, it also presents a 'living' manifestation of alchemical ideology. The greed, haste and egocentricity which characterize the alchemists of van Ostade, Heerschop and Brakenburgh are absent in the portrayal of the scholar. Instead, the chymist's workspace conveys Christian humility, patience and duty, in addition to a strong Dutch work ethic. Capturing the spiritual and intellectual mood of esoteric alchemy, Wijck's *Alchemist #1* exactly embodies the artistic tradition of the chymical scholar. A quintessentially male arena, *The Alchemist #1* reflects the individual masculine enterprise advocated by both Dutch moral handbooks and alchemical treatises.

Occasionally, however, these prescribed visions of quiet male solitude are compromised by an incongruous female element. Chapter I of this thesis exposes the female as an unwelcome force in a male sphere. Conversely, in genre paintings of the chymical marriage, male enterprise is not disturbed but complemented by the presence of the female.¹⁸ As icons of domestic harmony, stock female characters in genre paintings of the chymical marriage compound the atmosphere of scholarly devotion through their signification of duty and virtue. Having outlined the tradition of the isolated scholar, the remainder of this chapter examines

¹⁷ Examples of these paintings include Thomas Wijck, *The Alchemist #2*, date unknown, Chemical Heritage Foundation, Philadelphia 00.01.261; Thomas Wijck, *The Alchemist in his Studio*, date unknown, Chemical Heritage Foundation, Philadelphia 00.01.254; Thomas Wijck, *The Scholar*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.03.

¹⁸ The attendance of the female assistant on such scenes will be discussed at length in the fourth chapter of this study.

the insertion of the wife and mother into the chymical sphere, opening with a discussion of the domestic cook.

The Cook

2.0

Often incorporated into scenes of domestic docility, diligence and feminine virtue, the dutiful preparation of meals is a common motif of Netherlandish genre art. However, despite the significance of *opus mulierum* or ‘women’s work’ for the Great Work and the inclusion of women in alchemical emblemata, the figure of the female cook is unusual in paintings of the alchemist’s workshop. While the final chapter of this thesis examines the female assistant in the chymical laboratory, the first part of this chapter identifies the mother-cook within the context of her own kitchen. Analysing a painting by Thomas Wijck, this section explores the portrayal of women preparing meals. In addition, this section also addresses the significance of ‘child’s play’ within the context of alchemical philosophy and early modern Netherlandish culture. In particular, this analysis focuses on the alignment of child’s play with women’s work within the painting and considers its alchemical significance.

2.1 Cookery and *Opus Mulierum*

As a preface to an analysis of Wijck’s work, the definition and import of women’s work within the context of the *opus* demands clarification. The term *opus mulierum* commonly refers to the second stage of the *opus*, *solve et coagula*, whereby the matter of the Stone is cleansed and purified. Aligned in art and theory with domestic cooking and laundering, these processes are specifically characterized as women’s work. While the socially gendered nature of these day-to-day household practices justifies an association between the *solve et coagula* process and the feminine, alchemists proposed alternative explanations for this gendered categorization. The work involved in this phase of the *opus* was deemed both too “sordid” and too “easy” for the male alchemist, thus rendering it women’s work.¹⁹ Within this context, the term ‘women’s work’ is interchangeable with ‘child’s play’, a term which will be further examined in relation to Wijck’s painting.²⁰

¹⁹ Arthur Dee cites Attaman, in his *Fasciculus chemicus*, “And this Preparation, a first work he [Attaman] calleth a Sordid labour and adjudges it not worthy a learned man, therefore not unfitly said to be the work of Women”. Arthur Dee, *Fasciculus chemicus* (Paris, 1631): 38. Cited in Abraham, 2001: 220.

²⁰ See section 2.3 of the present chapter.

The alchemical emblematic iconography of women's work is an increasingly popular subject for present day criticism,²¹ with debates centring predominantly on imagery contained within the *Splendor Solis* and Michael Maier's *Atalanta Fugiens*.²² Maier's Emblem XXII (Fig. 23), which depicts a pregnant woman tending a kitchen stove, is a primary source for discussions of gender and alchemy.²³ The motto and epigram which accompany the emblem are quoted often by commentators of alchemical symbology:

Plumbo habito candido fac opus mulierum, hoc est, COQUE

Quisquis amas facili multum praestare labore,
Saturni in faciem (quae nigra) spargenives:
Et dabitur tibi matertes albissima plumbi,
Post quod, foemineum nil nisi restat opus.
Tum coque, ceu mulier, quae collocat ignibus ollas,
Fac sed ut propriis Truta liquescat aquis.²⁴

The iconographical and literary elements of this emblem are analysed by M.E. Warlick in her chapter, 'The Domestic Alchemist: Women as Housewives in Alchemical Emblems', a study of housewifely tasks in alchemical emblems and the gendering of alchemical operations. Tracing the recurrence of women's work in *Atalanta Fugiens*, she summarizes the gender delineation at the core of emblematic iconography:

The gendered polarity of alchemical philosophy and imagery is well known, with many substances and operations divided into masculine or feminine spheres. Linking back to the classical polarization that men are dry and fiery and women moist and cool, Maier's text is filled with such observations.²⁵

Writing within this framework, Warlick proceeds to equate women cooking, especially over pots and cauldrons, with the pervasive female principle inherent to all alchemical processes, theories and philosophies. Significantly for this chapter, Warlick also identifies a special relationship in alchemical art between women and the plant realm.²⁶ While 'The Domestic

²¹ For example, Archer, 1999: 5.v-5.ix; Warlick, 2002; Warlick, 1998.

²² Trismosin, 1582 and Maier, 1618.

²³ Emblem XXII, Maier, 1618: 97. Engraved by Theodor de Bry.

²⁴ Maier, 1618: 97: "When you have the white lead, then do women's work, that is, cook! / All you who want to achieve much while doing little, / Should direct yourselves to Satan's black face / And you will receive the whitest material of lead; / After this, nothing remains but women's work. / Next, cook, like a woman, who collects pots for the fire, / But take care that the fish dissolves in its own water."

²⁵ Warlick, 1998: 30.

²⁶ The action of peeling vegetables in Thomas Wijck's painting has a particular resonance for this reason.

Alchemist' examines previously overlooked manuscripts, the originality of Warlick's study lies in her discussion of women in paintings of the alchemist's laboratory. Stopping short of transferring her interpretative technique of alchemical emblems to genre paintings, Warlick notes:

In the later paintings, the alchemist and his assistants are often placed close to a fire or furnace in the foreground, while the woman of the household is almost always relegated to the side or background where she performs activities appropriate to her domestic place, such as cooking or tending children.²⁷

This observation is grounded, presumably, in paintings by artists such as Teniers and his followers, which tend to feature women only amongst a predominantly male cast of characters. Appearing invariably in the far-off depths of the painting, often breast-feeding, watching children or, more commonly, disappearing out of the door, these women meld silently into the faceless multitude of male assistants, friends and general hangers-on. However, the marginalized females of which Warlick writes occur, almost exclusively, in paintings of the chrysopoeian workshop, rather than in paintings of alchemical study. Wijck's mainly contemporaneous paintings of the chymical scholar undermine Warlick's assumption that women are consistently relegated to the margins of alchemical scenes. In contrast to the paintings of Teniers and his imitators, Wijck's *Alchemist #3* (Fig. 24) draws especial attention to women and women's work.²⁸ In this painting it is the alchemist, a small figure in the background with his distillation pushed to the side, who plays a minor role to the leading lady.

2.2 The Alchemist and the Cook

Encapsulating the day-to-day reality of women's work, Wijck's *Alchemist #3* recalls the glum-faced feminine labour of Maier's emblem, while incorporating the quintessentially male sphere of intelligentsia. A dichotomous vision of the Dutch household, the painting also alludes, in the manner of alchemical emblemata, to the interdependency of the male and female.

Head bent and eyes lowered, Wijck's ermine-trimmed and bereted chymist is an alchemical and academic paragon, working within the far depths of the composition. His expression too distant to read and character too faint to judge, this colourless, featureless figure is defined

²⁷ Warlick, 1998: 27.

²⁸ Thomas Wijck, *The Alchemist #3*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.06. Oil on panel, 19 5/8" x 15 1/2". Provenance: Eddleman Collection. For a discussion of this painting see Principe and DeWitt, 2002: 22-23.

purely by the robes of his trade and the contents of his compact study. The large, splayed volume on his desk is turned invitingly towards the viewer. This alcove is a place of quiet learning and intellectual endeavour. Theory usurps practice, as the chymical furnace, a mere kitchen stove, is ousted, along with obligatory retort and alembic, to the very fringes of the scene. Precious apparatus are relegated to what is essentially a kitchen counter. But this is a space ruled by poise and a sense of belonging. Concentric arcs, which terminate, significantly, in a globe at the centre of the composition, create a prevailing air of fluidity and harmony. Compounding this aura, a powerful linear symmetry and reiteration lend the work structural balance.

Thus far, Wijck's *Alchemist #3* might seem indistinguishable from the painting of the same name discussed in the first section of this chapter. However, in this version the artist diverges from the standard model to produce a distinctly unorthodox image. Perched on a squat stool, a dour but youthful mother prepares vegetables, sharing a compositional plane with her son. Dressed in subdued tones and a work apron, this matriarch is the epitome of modesty and duty. In the middle of chopping vegetables, the mother glances distractedly to the oblivious daughter, who plays quietly on the floor nearby. This is the domestic sphere to which she fully belongs and of which she is mistress. The dominant Corinthian column which cleaves the picture divides the work neatly into two distinct areas: the male and the female. As with both the Heerschop and van Ostade paintings discussed in the opening chapter, the parental figures occupy different spaces, located in separate rooms with independent lighting. There is no interaction between the lone male and the mother with children; as the man looks to his papers, the woman looks to her household duties. Although they labour under the same roof, the roles which the couple fulfil produce a sense of polarity: female-male, domestic-academic, private-public. Yet, this is a scene in which opposition engenders not a sense of conflict, but rather one of familial contentment.

A balance of Dutch affluence and Christian humility enforces this impression of contentment. Although the kitchen table is laden with a pewter pitcher and large loaf, the turnips that litter the flagstoned floor emblematically suggest humility.²⁹ But it is the act of preparing vegetables that is charged with meaning in this context. De Jongh has noted that artists have used depictions of women peeling turnips or apples to portray diligence, and the inclusion of

²⁹ The connotations of the turnip in Dutch painting are discussed in Westermann, 2004: 102, 109. Therein, she analyses Govert Flinck's *Marcus Curius Dentatus Preferring Turnips to Gold*, a painting produced for the Amsterdam town hall. It is worth recounting here Vondel's poem displayed below the painting [Westermann's translation]: "Securely Rome may sleep in the burgomasters' care / As Marcus Curius paid the offered gold no heed / Contenting himself with simple turnip fare / Thus is the city built, by temperance and loyal deed". Westermann, 2004: 99.

such imagery in Wijck's painting supports this reading.³⁰ Franits describes Gabriel Metsu's pendants *A Woman Peeling Apples* and *Woman with a Glass and Jug* as illustrating "male convictions about proper and improper female roles and behaviour",³¹ while Franklin Robinson perceives them as "two entirely different personalities, even ways of life – the life of pleasure and that of domesticity".³² The portrayal of the mother peeling turnips in *The Alchemist #3* emphasizes the polarization of the domestic and the intellectual in Dutch society, as well as the broader alchemical principle of perfect opposition. As the chymist is the idealized scholar, channelling God's will and striving for metallurgical and inner perfection, so too is his wife an exemplar of Calvinist diligence, labouring towards the spiritual and societal betterment of her family.

Key to this impression of domestic bliss, and indeed to the success of the peeling motif, is the mimetic behaviour of the children. As the young son in Richard Brakenburgh's *An Alchemist's Workshop with Children Playing* (Fig. 12) imitates the foolish actions of his puffer father, so too the children in Wijck's *Alchemist #3* conscientiously emulate their parents. As Principe and DeWitt note, the "little daughter diligently imitates the good example of her mother with a pot and knife of her own".³³ The daughter's playful study of her mother's chores is depicted in countless genre paintings of the period, particularly in scenes of the fruit and vegetable peeler. Pieter de Hooch's *A Woman Peeling Apples* (Fig. 25) epitomizes this sub-genre, portraying a mother peeling fruit, as her little girl looks on.³⁴ The genteel lady's luxurious attire is impaired by the presence of a no-nonsense apron. This worthy show of domestic labour sets a pedagogical example for the elegant daughter standing dutifully by her mother's side.³⁵ The scene is characterized by the domestic serenity peculiar to the theme of mother and daughter preparing food. As a parallel reading of *A Woman Peeling Apples* and *The Alchemist #3* suggests, this particular connotation of domestic virtue transcends societal boundaries of age, class and wealth, embracing the entire female sex under the banner of Womanly Duty.

³⁰ De Jongh and Luijten, 1997: 370. See also Franits, 1995: 91-92.

³¹ Franits, 1995: 92.

³² Robinson, 1974: 25.

³³ Principe and DeWitt, 2002: 23.

³⁴ Pieter de Hooch, *A Woman Peeling Apples*, c.1663, The Wallace Collection, London P23. Oil on (relined) canvas, 67.1 cm x 54.7 cm. Provenance: Hertford House inventory 1870; Perier Sale, Christie's, 5 May 1848, by 4th Marquess of Hertford. The Wallace Collection catalogue states that this painting was "perhaps partly intended as an example of domestic virtue", Ingamells, 1992: 167. In this particular painting the virtuousness is emphasized by the child holding a piece of fruit, a symbol of a good moral upbringing. See Franits, 1995: 129.

³⁵ Writing of a similar painting by Maes, Schama remarks that, "the preparation of food – peeling vegetables like Maes' parsnips – could supply similar kinds of instruction in household virtue". Schama, 1991: 559.

Equally important to Wijck's scene is his careful depiction of the alchemist's son. Obediently delivering a vessel to his mother, the boy is not emasculated by this fundamentally female arena. Instead, wearing a cap and a worker's apron, and standing tall, the son performs his role as assistant to his parent. As the central character in the composition, this slight figure represents the future chymist.

2.3 *Ludus Puerorum*

The study of children in Netherlandish painting has intensified over the past decade, with strides made towards a better understanding of the fictionalized 'reality' of genre art. The gender delineation that Wijck's painting ostensibly promotes reflects a wider cultural belief, and one which is inevitably expounded within the pages of Jacob Cats' *Houwelyck*.³⁶ As Schama remarks:

The frontispiece for Cats' *Moeder* is the perfect evocation of domestic harmony, with each member of the family content in his or her allotted role. But equally obviously the parental role models are separated by gender.

Both Franits and Schama explore gender demarcation in the visual arts in their studies of the Dutch family, with especial attention given to the depiction of children. Interestingly, the historians employ the same poem 'Kinder-Spel' [Children's Play] through which to evaluate the Netherlandish attitude towards offspring. In 'Kinder-Spel', Cats explores the essential differences between boys and girls:

Siet hoe de mensch sijn eygen aert
Oock inde kint-sheyt openbaert!
Het meysje speelt met poppe-goet,
Het knechtje toont een hooger moet;
Het meysje doet de wiege gaen,
Het knechtje laet den trommel slaen;
Het meysje speelt met kleyn beslach
Dat tot de keucken dienen mach;
Het knechtje met een swacke lans
Na wijse van de rouwe mans.³⁷

³⁶ For an exposition on the unparalleled influence of this text on Dutch society see Franits, 1995: 5-9.

³⁷ Cats, 1625: preface, sig. I iiii. Translation: "Look how human nature / Is betrayed even in childhood! / The girl plays with dolls / The boy shows greater courage / The girl rocks the cradle / The boy bangs the drum / The girl plays with batter / That will help her in the kitchen / The boy plays with a toy lance / Just like the grown-up men."

The binary characteristics of children, as laid down by Cats, neatly encapsulate both Dutch and alchemical philosophies of opposition. His litany of male/female characteristics is composed not to illuminate the peculiarities of the playground, but rather to elucidate the universal polarities of “human nature”. Here in Wijck’s *Alchemist #3* is the personification of this philosophy. The domesticated daughter and dutiful son perform the roles bestowed upon them by nature and encouraged by nurture. The understated depiction of demarcated gender roles from infancy through to adulthood lends Wijck’s *Alchemist #3* a powerful sense of innate order and stability. This is a home in which regimented social gendering submits to a more subtle, but equally binaristic system of domestic government.

While the twin concepts of nature and nurture described by Wijck’s painting are key to the efficacy of the internal household and external society, the combination has a peculiarly alchemical resonance. The Aristotelian premise that “three things are needed to achieve learning: nature, teaching, and practice; but all will be fruitless unless practice follows nature and teaching” might equally be applied to the rearing of children as to the search for the Philosophers’ Stone.³⁸ Jan A. Emmens applied this summation of Aristotle to a triptych by Gerrit Dou, interpreting the tripartite family unit, mother, father and children, as the embodiment of ancient philosophy. In the same way, Wijck’s painting uses the model of the family to illustrate the prioritized components of alchemical theory: nature, teaching and practice. The importance of nature to alchemical study was stressed in countless treatises, and is neatly illustrated by the early sixteenth-century painting by Jehan Perréal in which Nature advises “an aimlessly wandering alchemist”, “You will never attain knowledge of anything if you come not to my forge”.³⁹ In emphasizing the importance of nature and nurture to the upbringing of children, Wijck enforces the same values in an alchemical context, in which practice must exist alongside theory, learning alongside nature, the esoteric alongside the exoteric.

But the depiction of child’s play, especially within the context of women’s work conveys connotations which transcend a pure Dutch genre context. *Ludus puerorum* [child’s play] and *opus mulierum* [women’s work] are frequently equated in alchemical philosophy to describe the process of *solve et coagula*. While the terms have been traced to the fourteenth-century ‘Opus Mulierum et Ludus Puerorum’, which was first published in *De Alchimia Opuscula*

³⁸ Emmens, 1969: 30-40, 34. Throughout the centuries alchemists interpreted and represented the works of Aristotle in an alchemical context. Despite the centrality of Aristotle to the alchemical tradition, none of his works addresses alchemy in any form.

³⁹ Jehan Perréal, *Les remonstrances de Nature à l'alchimiste errant*, 1516. Reproduced in Roob, 2001: 504.

Complura Veterum Philosophorum in 1550,⁴⁰ they occur in the earlier *Turba Philosophorum*, which probably dates from the twelfth century.⁴¹ Almost certainly originating from an Arabic or classical source, this text was instrumental in the formation of key alchemical philosophies. Widely broadcast by early modern tracts, the alliance of child's play and women's work is a fundamental, and potentially ancient, alchemical concept. Although references associating women's work with child's play surface as late as the twentieth century, they are particularly common in early modern texts. "Ars nostra est ludus puerorum cum labor mulierum" [Our art is children's play with women's work] is reported to have appeared on the wall of John Dee's house in Prague in 1584.⁴² Similarly, Artephius wrote of the second stage of the alchemical process, "it is indeed a work so short and easy that it may as well be called a woman's work and the play of children".⁴³ Most famously, however, the *Splendor Solis* depicts "Children at Play" in Plate XX, in which a crowd of playing children are significantly accompanied by a watchful woman.⁴⁴ Wijck's neat and subtle amalgamation of these twin paradigms contributes further to the painting's prevailing air of harmony. Conveying both a domestic and esoteric idealism, *The Alchemist #3* diversely exploits the individual components of the family in illustration of familial perfection.

2.4

A signifier of domestic virtue and maternal nurture, the motif of the mother and daughter peeling vegetables occurs time and again in art of the Golden Age. However, Wijck's *Alchemist #3* is not a typical painting about domesticity, representing instead an instalment in an ever-expanding series of chymical scholarly scenes. While it would be injudicious not to recognize the overtones of virtue imbued in the image of the mother preparing a meal, it would be equally remiss to not explore the possible alchemical connotations of the scene. As one of the most prolific painters of chymical arenas, it is unlikely that Wijck failed to recognize the implication of cookery and women's work to alchemy. As such, Wijck's vision of an alchemist's kitchen offers an extraordinary and transmutational contribution to *opus mulierum* iconography. By combining the maternal cook with playful children, Wijck, perhaps unconsciously, invests in an ancient iconographical tradition at the heart of Western alchemy.

⁴⁰ Cyriacus, 1550, cited in Archer, 1999: 5.vi.

⁴¹ Gratarolus, 1896.

⁴² Casaubon, 1659: 212.

⁴³ Artephius, *The Secret Book of Artephius* (1612; Largs, 1991): 32. Cited in Abraham, 2001: 220.

⁴⁴ The plate bears the inscription "wherefore is the Art compared to the play of children, who, when they play turn undermost that which before was uppermost". Trismosin, 1582: 39.

The Seamstress

3.0

The seamstress, in her many guises, was the emblem of choice for the many Dutch moralists keen to propagate the myth of womanly perfection. The appurtenances of sewing illustrate points of female virtue in countless moral handbooks, and the seamstress herself was a favourite subject for genre artists of the Golden Age. Extolling the virtues of female duty, Netherlandish genre scenes swarm with icons of stitching, lace-making, spinning, embroidery and needlework. A wealth of research in recent years has analysed the emblematic quality of domestic textile work with some interesting conclusions.⁴⁵ While textile work has been recognized as an erotic metaphor, its dominant symbolic power lay in its potent connotations of diligence, domesticity and prudence. Since established criticism already provides a comprehensive portrait of the symbolic powers of textile work in paintings, this section will refer to, rather than develop, the discussion of the standard motifs of sewing, spinning and lace-making. Instead, this second part examines this image of domesticity in terms of the balance it affords paintings of the chymical marriage.

Unlike cooks and cookery, needlework has no alchemical significance, literary, ideological or iconographical. It is intriguing, then, that Wijck includes the image of the domestic textile worker in three distinctive alchemical paintings: *An Alchemist in his Study with a Woman Making Lace* (Fig. 26),⁴⁶ *The Alchemist #4* (Fig. 27)⁴⁷ and *An Alchemist at Work with a Mother by a Cradle* (Fig. 28).⁴⁸ Incorporating the motif of the scholar, these paintings depict the harmonious chymical marriage in a vision of an alchemical and domestic idyll.

3.1 The Art of Making Lace

Comprised primarily of autumnal hues, *An Alchemist in his Study with a Woman Making Lace* is a tonally harmonious picture, constructed to convey a sense of balance and symmetry.

⁴⁵ The research in this area has been extensive. See Franits, 1995: 21-36, 62, 80, 130-38, 172, 181; de Jongh and Luijten, 1997: 270-71; de Jongh, 2000: 33, 36, 87; Stone-Ferrier, 1985: 84-95.

⁴⁶ Thomas Wijck, *An Alchemist in his Study with a Woman Making Lace*, date unknown, Chemical Heritage Foundation, Philadelphia 00.01.208. Oil on panel, 18 1/4" x 15". Provenance: Fisher Collection; gift of Fisher Scientific International.

⁴⁷ Thomas Wijck, *The Alchemist #4*, date unknown, Rijksmuseum, Amsterdam SK-A-489. Oil on panel, 43 cm x 37.5 cm. Signed. Provenance: Rijksmuseum acquisition, 1870.

⁴⁸ Thomas Wijck, *An Alchemist at Work with a Mother by a Cradle*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.35. Oil on panel, 47 cm x 31 cm. Provenance: Eddleman Collection.

Surrounded by books and jars and scraps of paper, the archetypal Wijck scholar is perched predictably at a raised and cluttered desk next to the only windows in the room. He is set, in dark ermine and cloth cap, in the mid-ground, disappearing into the black curtain behind and the depths of the chambers beyond. The detailed patterning of the intricate windowpanes is particularly finely executed, placing special emphasis on the juxtaposition of the internal and the external, the private and the public. In contrast to this scholar, a woman sits comfortably and distinctly between the mid and foregrounds, in the lower right-hand corner of the painting. Leaning her elbow on the broad lace-maker nestled in her lap, the woman's head is propped up by a supporting hand, her other hand busy with the art of lace-making. Her face, half caught in light, is bent studiously towards this meticulous, painstaking work. The arresting white of her cap, collar and sleeves elevates her otherwise sombre clothing. An incongruous figure, this domestic icon refuses to fade into the background.

The arch at the top of the painting, as in Wijck's other works, creates a sense of the viewers' intrusion onto a private world; we spy on its oblivious inhabitants. This private arena is lent a powerful sense of scale and depth by the steady lineal progression of horizontal rafters. The curtain and a series of parallel lines, specifically in the desk, curtain rail, counter-top and the far off mantel reinforce this impression of depth. At the innermost core of the scene lies unknown darkness. This clever construction creates a sense not simply of a room or even a house, but of an unexplored world, a realm to which the viewer does not belong. As with Wijck's other portraits of alchemical scholarship, the practical, chrysopoeian element of this arena is forced to one side. In the murky left foreground, a furnace fuels at least one distillation process; unusually, a framed portrait painting is set prominently behind the distillation. While the subject of the portrait is unclear, it suggests that the alchemist has wealth enough to commission his own picture.

As precedent dictated, the male and female characters in the scene occupy entirely separate spaces. Completely removed from one another, they are both utterly absorbed in their individual gender-based duties: chymistry and lace-making. With heads inclined downwards, both figures are turned, not towards each other, but towards the unnoticed viewer. Yet despite their seeming isolation, there is a peculiar antithetical dynamism in their relationship. The hunched physical form of the chymist is mirrored exactly in the shape of his wife. Both are seated, with heads inclined in concentration, the shape of their clothing, specifically with the collar and cap, is also identical. As the male is cast in darkness, his wife is swathed in light. Since the chymist is located beside the window, this lighting is clearly intentional. These protagonists are subtle reinventions of each other. In a quintessentially Dutch fashion, the couple paradoxically comprise a simultaneously idealized and pragmatic portrait of husband

and wife. These seemingly independent characterizations are, ironically, the personification of marital interdependency. Enveloped by the protective arch at the top of the canvas, the spouses play supporting roles to each other within an encompassing space. Working on entirely separate tasks, the couple operate diametrically within the same sphere towards a shared ambition, that is the prosperity, joy and virtue of the Dutch home. And indeed, this is a prosperous home; the ornate window panes, the portraiture adorning the wall and the generous dimensions of the room all indicate that this is a household of some considerable income. This is not the home of an untrained puffer, but rather the surroundings of a thriving adept. As the financial security is implied in the industrious figure of the father, the stability and domestic success of the household is implied in the quiet lace-maker.

Caspar Netscher's *The Lace-Maker* (Fig. 29) has been used time and again to illustrate the emblematic quality of lace-making in Dutch genre art.⁴⁹ Executed in 1662, this Dutch painting features a young, married woman making lace in a Dutch interior. In his analysis of this painting, Franits notes:

Her activity of lace-making also indicates, if not celebrates, her industriousness and virtue. The woman is completely absorbed in this task, as her intensely focussed gaze suggests. She is also turned at a slight angle toward the wall, a position that effectively eliminates any interaction between subject and viewer. Pose, expression, and attire combine here to offer a compelling construction of ideal femininity and domesticity.⁵⁰

While this is an accurate précis of this specific painting, art historians in their persistent adherence to Netscher's representation of lace-making tend not to mention the generic quality of this work. While the woman in this painting is unusually turned towards the wall, her solitary positioning is indicative of a much wider trend in genre art, also evident in *An Alchemist in his Study with a Woman Making Lace*. In order to accentuate the sense of virtuous industry, lace-makers in genre paintings are almost invariably depicted with their eyes on their work, away from those of the viewers and other characters in the frame.⁵¹ Lace-making women are often portrayed in quiet, empty rooms, away from the family and the

⁴⁹ Caspar Netscher, *The Lace-Maker*, 1662, The Wallace Collection, London P237. Oil on (relined) canvas, 33 cm x 27 cm. Signed: *C. Netscher 1662*. Provenance: Hertford House inventory, 1870; Dorchester House inventory 1842; 3rd Marquess of Hertford, 1804; Diederick van Leyden, Amsterdam; probably P.C. van Leyden, 1780; Johan Pompe van Meerdervoort; possibly Jacob Vallensis, Delft inventory 1725. For discussions of this painting see Westermann, 2004: 125; Franits, 1995: 76-80; Franits, 2004: 108-09; de Jongh, 2000: 194-96.

⁵⁰ Franits, 1995: 76.

⁵¹ Paintings in which lace-makers eyes are not on their work usually serve as lessons in the dangers of distraction and fickleness. See, for example, Pieter van Slingelandt, *Woman Offering a Cockerel*, 1672, Dresden, Staatliche Kunstsammlungen, Gemäldegalerie.

bustle of the household; when closeted with others, lace-makers stubbornly ignore their company. Remarkably, this convention is even maintained in depictions of women teaching lace-making to children.⁵² Furthermore, Franits observes that “the young woman in Netscher’s painting wears sober, simple clothing of a type that would have met the approval of any moralist”.⁵³ Although Netscher’s colourful character does not necessarily reflect such sobriety, the statement accurately describes the lace-makers typical of genre painting. Wijck’s lace-maker is an archetypal motif of genre painting; she is drably dressed in monochrome, self-contained and focused only on her lace. Incorporated into countless genre paintings to convey an idealized domestic vision, the lace-maker within the context of *An Alchemist in his Study with a Woman Making Lace* personifies the order and industry intrinsic to the success of both the Dutch home and the alchemical sphere.

As the lace-maker is most often portrayed as the sole subject of the painting, within her own space, *An Alchemist in his Study with a Woman Making Lace* is particularly interesting. As van Ostade and Heerschop employ the emblem of the mother cleaning her baby to suggest the immorality and futility of the puffer’s dedication to transmutation, so Wijck exploits the emblem of the lace-maker to enhance the atmosphere of tranquillity and virtue in the study of a true adept. Appearing in numerous emblem books, including Jacob Cats’ *Houwelyck* (Fig. 30), the lace-maker was a widely recognized symbol in seventeenth-century iconography.⁵⁴ Specifically a symbol of diligence and dedication, the lace-maker is more generally a sign of domestic, feminine and, of course, Christian virtue. Within the environs of the chymical workshop, these connotations have special resonance. Alchemical treatises throughout the centuries emphasized the importance of faith, commitment and industry in the working and spiritual life of the adept. An inexpressibly complex, intricate and finely balanced process, the *magnum opus* demanded the absolute spiritual and temporal devotion of the alchemist. Within this context, lace-making iconography provides a visual manifestation of the diligence and dedication necessary for the realization of the elixir.

In addition, the inclusion of the dutiful and obedient wife represented the Christian partnership which contemporary philosophy proposed should form the foundation of alchemical pursuits.⁵⁵ This principle of marital partnership shared the same ideological basis as that which promoted scholarship and meditation over the frenzied, greed-driven

⁵² See, for example, Quiringh van Brekelenkam, *Woman Teaching Girls to Make Lace*, 1654, Richard Green Galleries, London. Oil on panel, 73.6 cm x 86.3 cm.

⁵³ Franits, 1995: 76.

⁵⁴ Design after Adriaen van de Venne, *Maeghde-Wapen* [Maiden’s Coat of Arms], engraving for Cats, 1625, frontispiece illustration.

⁵⁵ For more on the adept and the Christian marriage see Harkness, 1997: 247-62.

experimentation of puffers. Through the inclusion of the lace-maker, a stock topos of genre painting, Wijck enhances the tranquillity and stability of a scene already instilled with a powerful sense of abnegation and dedication. Although the lace-maker has no direct alchemical significance, Wijck's scholarly arena enjoys a widely recognized sign of endorsement through the presence of the quiet textile worker. Furthermore, providing a gendered counterweight to an otherwise highly masculinized arena, this emblem of femininity evokes a vision of a profoundly balanced alchemical world.

3.2 The Rijksmuseum *Alchemist*

In a second painting by Thomas Wijck an alchemist's wife is pictured towards the back of her husband's study. Held by the Rijksmuseum, *The Alchemist #4* (Fig. 27) survives in excellent condition, affording unparalleled insight into the technique and style of the Haarlem painter. Tonally harmonious, the painting is executed with meticulous detail from a primarily ochre palette. In this highly orthodox composition, the scholarly alchemist is located towards the left of the frame, at an elevated desk beside Wijck's idiosyncratic latticed window. Decked in the ermine-lined robes and black flaccid beret of his profession, he lightly plies a quill. Surrounded by the usual signifiers of the study, this is clearly another of Wijck's alchemical theoreticians, who values his library of books over the various alembics which hang tidily on the surrounding walls. The scholar, however, is not alone, sharing company with his small family. Bearing a copper bowl and with apron tied about his middle, the eldest son interrupts the alchemist in his study. Momentarily disrupted, the father looks down to his young assistant who attentively awaits instruction. Engaging intimately eye to eye, these characters are the most detailed components of the painting. The exceptional detail of their faces, in particular, places special emphasis on the father-son relationship. The light which floods through the nearby window catches the forehead of the little boy and also the white of his eye, a detail which enhances the impression of wide-eyed innocence. The pink flush of his cheeks and lips further accentuates the fresh vigour of the boy's youth. Standing tall, patiently bidding his father's wishes, the boy is a model of childhood virtue. As *The Alchemist #3* portrays instructive child's play, *The Alchemist #4* depicts the graduation of boy to apprentice, as he advances from the female domestic arena to the masculine workplace. The son abandons the maternal protection of the background, coming to the fore alongside his father. Still relegated to the back quarters of the room, a smaller child crouches at a basket beside the mother, his face hidden from the viewer. This maternal, domestic region is separate from the masculine study. Although the characters all occupy the same room, there is distinct segregation between the male and the female zones, with no reconciling dialogue. Removed from her husband and the light of the window, the alchemist's wife sits quietly in the back

quarters, diligently stitching white fabric. A picture of feminine modesty, she is dressed discreetly in a dark tunic, with the predictable white collar and white cap. Yet despite their segregation, the husband and wife again profess an intimate marital bond. An echo of her marital counterpart, the wife is also momentarily disrupted in her toil; her gaze falls, like her husband's, downwards and to the right, towards some out of frame distraction.⁵⁶ The woman's hands also mimic those of her husband, clutching an invisible needle in her right and the cloth in her left. The similarity with which the spouses handle the tokens of their trade alludes to a shared diligence and unconscious synchronicity. As in *An Alchemist in his Study with a Woman Making Lace*, the husband and wife in the Rijksmuseum's *Alchemist* comprise physically separate and isolated entities and yet represent subtle reinventions of one another. Paragons of their respective spheres, the couple embody perfectly the exemplars of seventeenth-century moral handbooks.

The wife's occupation of sewing had special significance to the early modern spectator. Besides proficiency in cooking, cleaning and childcare, the seventeenth-century wife required basic needlework skills in order to tend the precious garments of the family wardrobe. The necessity of needlework to the roles of mother and wife is elucidated in innumerable seventeenth-century texts directed at the betterment of young maidens, their mothers and even their grandmothers:

[...] de Dochters moeten sy leeren wat dat tot huyshouden behoort
 hoe sy in aller ootmoedigheyd hare mannen (als God haer tot het houwelyck roept)
 sullen onderdanigh syn
 en life hebben
 hoe sy met de kinderen moeten ommegeen
 hoe sy haer huysgesin moeten regeeren
 wat het sy van kopen
 van naeyen
 spinnen
 hoe sy reyn en vlytigh moeten syn
 en diesgelycke dinghen die tot vrouwen berop behooren.⁵⁷

⁵⁶ The conventions governing the very specific emblem of the lace-maker are not shared by the more familiar image of the needle-worker. Therefore, while diverted lace-makers may illustrate the dangers of distraction, the same is not usually true of generic needle-workers.

⁵⁷ J. de Swaef, *De geestelycke queeckerye van de jonge planten des Heeren* (1621; Middelburg 1740): 312. Cited in Franits, 1995: 205. Translation: "Daughters must be taught to keep house, / How to behave in a humble way – despite their arrogance – with their husbands (when God calls them to marriage), / How to love, / How to deal with children, / How to rule her household, / How to do shopping, / How to sew, / How to spin, / How to be clean and industrious, / And all those things that are part of a woman's job."

This extract is typical in its prioritization of needlework in the litany of domestic duties demanded of housewives and potential brides by moral handbooks. Like countless others, this text is levelled primarily at maidens, to whom needlework “was crucial for their future offices as housewives”.⁵⁸

Yet, the Rijksmuseum’s *Alchemist* exploits more than the everyday familiarity of needlework. Needlework, in all guises and within all types of Netherlandish painting, is potentially charged with emblematic meaning. Wayne Franits’ definitive study, *Paragons of Virtue*, examines numerous examples of literature and painting which utilize the metaphor of needlework to expound feminine virtues. He observes that “the connection between needlework and the virtue of diligence was stressed at every possible occasion”, and further summarizes, “needlework, as we have seen repeatedly, conveys a gamut of praiseworthy associations, among them virtue, diligence, housewifery”.⁵⁹ As his work clearly implies, the image of the housewifely seamstress embodies the quintessence of female virtue and duty. In view of its context, therefore, the needlework motif of the Rijksmuseum’s *Alchemist* confirms the painting’s overall sense of gender and domestic harmony.

3.3 *An Alchemist At Work With A Mother By A Cradle*

An Alchemist at Work with a Mother by a Cradle is the third of Wijck’s paintings to incorporate the seamstress into an alchemical genre scene. An addition to his chymical scholar series, this painting deviates from Wijck’s standard compositional form. Blanketed with tonally similar browns, blue-greys and ochres, the painting on first viewing delivers a sense of uniform composure. This chromatic homogeneity lends the scene an atmosphere of mundane, daily life, a mood compounded by the lifelike gloom created by the room’s insufficient natural light. Although the painting depicts a familiar setting in the alchemist’s domestic workshop and a recognizable character in the chymical scholar, the compositional elements are arranged in a surprising fashion. Within a voluminous room, beneath the stock sweeping arch, four figures are frozen in a glimpse of their everyday lives. Mother and baby, father and son are pictured, not simply in their workplace, but in their home.

Embracing convention, Wijck effectively segregates the family into two separate gendered scenes. However, subverting expectation, the chymist is unusually located in the lower right corner of the panel, unequivocally positioned in the foreground. He is dressed typically, in a black cap and fur-trimmed robe, with a white collar providing definition to a bearded face.

⁵⁸ Franits, 1995: 25.

⁵⁹ Franits, 1995: 17, 80.

This chymist is undoubtedly a scholar; the presence of the desk, globe and scrappy ephemera, combined with the lack of furnace, asserts the theoretical over the practical, the esoteric over the exoteric. However, while the chymist is seated at a desk in keeping with all Wijck's alchemists, his head does not incline to quiet study. Rather, the sharp eyes of the alchemist alight upon a young, oblivious assistant, who pours a quantity of black liquid from a large glass vessel into an impressively sized mortar. The keenly observed helper, who is little more than a boy, is probably the alchemist's son. Clad in coarse work clothing, the short, stocky figure is hunched in labour, and his expression betrays marked concentration. Amidst earthenware pots, chemical jars, and distilling vessels, the homochromatic youth melds seamlessly into his chymical environment.

In contrast to this vision of male industry sits a woman with customary white cloth cap and collar. Located at the back of the workshop and in the background of the painting, the alchemist's wife sews silently next to a baby's crib. In the manner of Heerschop and van Ostade, Wijck again utilizes independent lighting to distinguish this scene as physically, as well as psychologically, distinct. This practice, which recurs throughout Wijck's alchemical work, succeeds in establishing oppositional male and female, scholastic and domestic zones, while encouraging an emblematic interpretation of the arrangement. The wife occupies the left margin of the painting, removed from, and in opposition to, her husband who is forced towards the right. The sunlight, which streams dramatically through the two partially veiled back windows, irradiates this lonely figure, catching the top of her cap, face and left shoulder. Despite the flood of light, her facial features remain indistinguishable, with only a vague impression of lowered eyelids and pale complexion. The woman's head is tilted towards her lap, in which rests a swathe of white fabric that is worked diligently with a busy needle. Beside this ideal of quiet domesticity stands a robust hooded cradle, which bears a sleeping baby. Although the cradle is located deep within the frame, its occupant remains discernible. With eyes shut, a sleepy face is turned towards its mother.

This, then, is a painting of an alchemist's family: mother, father, son and baby. Yet this work is distinctly uncharacteristic of Wijck's alchemical paintings. The most significant departure is the structural imbalance of the composition. All four characters occupy the lower third of the painting, with the remaining canvas depicting empty, dull walls and ceilings. This is a highly unorthodox arrangement for Wijck; when his ceilings remain unadorned they are usually enlivened either by dramatic shadows or by stark colour variation. Forcing all four characters into the lower third of the scene creates an impression of over-population which consequently precludes the possibility of solitary scholarly meditation. This sense of congestion is magnified by an uncharacteristic lack of natural light; a rarity in Wijck's work,

murkiness and gloom beset this family with unprecedented force. These departures from the standard Wijck model have a single accumulative effect. The animated characterizations of family members, combined with the clutter and lack of dramatic lighting, instil a sense of the everyday. With a special emphasis on the family grouping and shared work environments, this painting presents an alternative alchemical vision to the staple depictions of almost hagiographical meditation. This work, then, represents Wijck's artistic divergence from the idealistic to the ordinary, reducing the alchemical paragon to a plain, working man. This unembellished portrait of the alchemist as scholar, father and husband is enhanced by the inclusion of his wife, whose presence acts as a powerful reinforcement to the mood of normality. Pertaining to the lives of women throughout the Netherlands, the alchemist's wife is portrayed beside a cradle and engaged with needlework. Yet while this alignment is peculiarly resonant of seventeenth-century life, its symbolic quality transcends its humble milieu.

Wijck's depiction of the seamstress represents a common refinement of the needlework emblem. This arrangement of seamstress and cradle represents an independent composite icon with its own connotations. One of the many contemporary paintings to assimilate this is Gerrit Dou's *Young Mother* (Fig. 31).⁶⁰ Widely celebrated for its skilful illustration of female virtue, *The Young Mother* presents an affluent Dutch housewife sewing next to a cradle.⁶¹ The painting is teeming with stock symbols of feminine virtue derived directly from the leaves of emblemata: the pristine cabbage represents moral purity, the redundant lantern and discarded shoe suggest a dutiful attachment to the home, the birdcage and broom symbolize domesticity, the decorative cherub implies, in this case, marital bliss, while the fish here intimates virtue. The emblematic components of this painting are exhaustive and collectively produce a compelling portrait of feminine virtue. The central motif, that is the seamstress and cradle, serves as the embodiment of all these peripheral signifiers and forms the foundation to a scene occupied entirely by domestic virtue. The strength of this image emanates from its hybrid nature: by combining the emblematic seamstress with the emblematic mother, Dou creates a symbol of unique power. Like the seamstress, the mother and cradle occur in countless scenes of everyday life to convey a sense of domestic and familial harmony. Key to maternal iconography, the cradle is frequently fused with other symbols to fortify a painting's sense of feminine virtue. Often depicted in conjunction with the breastfeeding mother, the cradle also regularly features with the images of women peeling fruit and vegetables

⁶⁰ Gerrit Dou, *The Young Mother*, 1658, Royal Cabinet of Paintings, Mauritshuis, The Hague. Oil on panel, 73.5 cm x 55.5 cm (arched top). Signed: *GDov 1658*. Provenance: Mauritshuis, 1821; King William I, The Hague 1815; Louvre, Paris 1795-1815; William V, The Hague, 1763-95.

⁶¹ Literature on this painting is extensive and includes Slive, 1995: 102; Sumowski, 1994: 3597; van de Loeff and Groen, 1993: 98-103; Franits, 1995: 16, 84; Franits, 1987: 63; Broos, 1987: 111-18.

discussed in the first section of this chapter.⁶² This hybrid emblem of ‘mother seamstress’ is used throughout seventeenth-century genre painting to create the uncompromising atmosphere of domestic bliss and maternal duty exemplified by Dou’s *Young Mother*.⁶³

3.4

Needlework iconography in *An Alchemist at Work with a Mother by a Cradle* has various effects. Quite apart from its symbolic connotations, the hybrid emblem of domesticity subtly draws the chymical scholar away from the egocentric, male-dominated laboratories of paintings by artists such as Teniers. Thrust firmly into the confines of the home, the scholar is presented as both responsible father to his son and conscientious husband to his wife. In constructing this testament to ‘accountable’ alchemy, Wijck reconciles the theoretical chymical marriage with everyday Dutch life, subverting the alchemical fantasy into a day-to-day reality of drudgery and monotony. The presence of the needleworker and cradle within the frame confirms the painting’s overall sense of virtue and duty, and by extension reinforces Wijck’s unambiguously positive portrayal of alchemy. In *An Alchemist in his Study with a Woman Making Lace*, the Rijksmuseum’s *Alchemist* and *An Alchemist at Work with a Mother by a Cradle*, stock emblems of domestic virtue serve as endorsements to both their alchemical and familial contexts. Emblems of needlework and lace-making are among the most powerful signifiers of female virtue. By using these particular emblems, Wijck places the female and the feminine firmly within the traditionally male sphere of the alchemical workshop. Thus infusing the female field of domesticity with the male sphere of philosophical academia, Wijck transforms his gendered portrayal of the chymical scholar into one of balanced partnership.

The Teacher

4.0

This, the third and final section of this chapter turns to the depiction of the maternal teacher alongside the paternal scholar. Moving away from the oeuvre of Thomas Wijck, this shorter

⁶² There are numerous examples of women breastfeeding next to cradles, many of which feature in *Paragons of Virtue*. For an example of a woman peeling fruit beside a cradle, see Pieter de Hooch, *A Woman and a Serving Girl with Fish*, c.1670-75, Rotterdam, Museum Boymans-van Beuningen.

⁶³ For example, this amalgam topos occurs in Nicholas Maes, *The Naughty Drummer*, c.1656-57, Lugano, Thyssen-Bornemisza Collection; Pieter van Slingelandt, *Mother Disciplining her Children*, date unknown, location unknown. Reproduced Franits, 1995: 138; Gerard ter Borch, *Seamstress by a Cradle*, date unknown, Private Collection. Reproduced Franits, 1995: 79.

segment examines Gerrit Dou's *Schoolmaster* (Fig. 32).⁶⁴ While the female and juvenile characters in this work are peripheral, the painting makes a valuable contribution to discussions of the feminine and the familial in paintings of the scholar.

While currently catalogued with the Chemical Heritage Foundation under the title *The Alchemist*, Dou's painting is not overtly alchemical and for this reason this thesis ascribes a new title to the work. Indeed, aside from the Foundation's evocative title, there is little even remotely chymical about this scene.⁶⁵ There is no furnace, no distillation apparatus, no obviously alchemical treatises and no dangling reptiles. It seems, then, that this work fails to fit the qualifying criteria outlined in the introduction. However, Dou's *Schoolmaster* is included here for several reasons. Although the title may be a modern misnomer, this painting possesses many of the gender conventions evident in Wijck's chymical work. The balance of female domesticity with male scholarship is not common in Netherlandish painting and is, therefore, worthy of further investigation. Furthermore, a defining quality of this project is its comprehensive scope; this thesis aims to illustrate specific themes and motifs of gender through a wholly inclusive investigation. As such, this painting represents an important postscript for this chapter. Additionally, this painting significantly illustrates some key artistic conventions regarding female readership which will be developed further in Chapter IV. Conscious then of its uncertain status, the following section explores *The Schoolmaster* as a painting of scholarship.

4.1 Gerrit Dou's *Schoolmaster*

As the first member of the faction known as the Leiden 'fine' painters, it is not surprising that Gerrit Dou is the subject of extensive criticism.⁶⁶ Born to a Leiden glazier in 1613, Dou initially trained in his father's trade, appearing in the glazier guild's records in 1625 and 1627. However, by 1628 Dou was studying painting under Rembrandt van Rijn, leaving three years later to significant critical acclaim. A founder member of Leiden's Guild of St. Luke, Dou also served as an ensign in the local militia company, a position which reflects his elevated

⁶⁴ Gerrit Dou, *The Schoolmaster*, 1672, Chemical Heritage Foundation, Philadelphia 00.03.34. Oil on panel, 43 cm x 32 cm. Provenance: Eddleman Collection.

⁶⁵ It is unknown at what stage Dou's painting acquired its title. However, according to Marjorie Gapp of the Chemical Heritage Foundation, "Ronnie Baer in her May 1990 dissertation, *The Paintings of Gerrit Dou* for the Department of Fine Arts NYU, cites a similar painting as 'The Pen Sharpener' and mentions that the theme of this painting was taken up by Dou's student, Frans van Mieris. In a 1913 book, *Klassiker Der Kunst in Gesamtausgaben*, Stuttgart und Berlin, Deutsche Verlags-Anstalt, a similar painting is titled *The Old School Master*. In the Sotheby's sale 1991 our painting is called 'The Alchemist'. Probably it had a different title at some point. When it changed and who changed it is not known, though it is likely to have been a dealer." (Email received 29 November 2005).

⁶⁶ For a comprehensive bibliography of Gerrit Dou, see Thieme-Becker, 1996-97, 9: 503-05.

social status. By the 1660s, Gerrit Dou was a painter of international fame, possessing a reputation which helped him accumulate pupils like Frans van Mieris, Godfried Schalcken and Quiringh van Brekelenkam. Achieving the praise of fellow artists, Dou also attained wealth through his meticulously detailed and idiosyncratic portrayals of people and their trades. A painter of hermits, scholars, astrologers, university men, physicians and dentists, Dou developed through the course of his career an unwavering affection for scholarship. In common with many Leiden-based painters, Dou's work betrays the influence of the prominent and vibrant university. Many of his paintings, in the vein of *The Schoolmaster*, feature learning and book reading as serious and noble occupations.

As with so much of Dou's work, the primary character is positioned in the centre foreground, leaning out of a large arched stone surround. Neither a window nor a niche, this compositional device is purely functional, offering a barrier between the world of the viewer and that of the illusory academic. In contrast to Wijck, Dou does not coax his audience into a suspension of disbelief, but rather denies open and democratic dialogue between perceiver and perceived. Instead, in the manner of a playwright, Dou sets his stage beneath a proscenium arch, inviting his audience to enjoy an acknowledged fiction. The dominantly engraved figures beneath the arch, MDCLXXII, contributes to its sense of artifice and helpfully provides a date for the painting. Centre-stage appears the protagonist; a striking and unusual character, the man is clearly a scholar. Bedecked in opulent and colourful fabrics, the character is pictured preparing a quill for writing. A red cloth cap sits atop his balding head, while his upper torso is draped in a lush green robe with gold detail. Through tiny pince-nez, the ostensible scholar focuses keenly on the point of the quill and the blade that cuts it. The small neat white beard, thinning grey hair and intent peering suggest an aged wisdom. An open document and hourglass rest on the stone ledge, with most of the sand remaining optimistically in the upper half of the glass. A birdcage, a favourite motif for Dou and alchemical painters in general, hangs on the wall to the left of the scholar. The single book, which lies open on the sloping desk, provides final confirmation of an academic arena. As a portrait of scholarly endeavour, this painting shares little with its Wijckian counterparts; in style, composition and tone, their work is highly dissimilar. Yet, both artists convey a respect for the intellectual and philosophical; Dou's space is controlled and calm, a place for measured meditation and study. The generous hourglass and the scholar's focus on the most trivial of tasks suggest prudence and humility, while the single tome and simple, clean desk imply discipline and method.

This is not however a scene of scholarly solitude. Through the stone arch, beyond the sweeping curtain, lies a small grouping of people deep in the left background. Seated at a

sturdy wooden table are four figures, all of whom appear to be female. Although ambiguity encircles the indistinct gathering, an impression of domestic schooling presides. The tallest of these figures, the mother, sits in the middle of the row, with a child either side; opposite her, and with her back to the viewer, is a final daughter. A fifth individual, another child, is positioned away from the family, descending via unseen stairs into the room. Although it is difficult to discern detail in the family grouping, the girls appear to be learning literacy under the supervision of their mother. The smallest child, the figure furthest left, is learning to read; with her eyes lowered, the infant traces the words on the page with a steady finger. Despite initial impressions of male solitude, *The Schoolmaster* is, in fact, crowded with unidentified, and predominantly female, figures. Guided by an unidentified matriarch and located in the far recesses, the young female grouping has no interaction with the male lead. Instead, an ideological partition emerges between the male scholar of the foreground and the female grouping of the back. This division raises ambiguity regarding the roles of the two adult figures in the scene. While the male is marooned in the foreground, bereft of immediate context, the female is framed in a clear social situation. Enclosed by a circle of little students, the matriarch clearly assumes the role of teacher.

At that time, the Northern Netherlands within both a national and European context enjoyed especially high literacy levels, with basic education, at least to some degree, crossing class and gender boundaries.⁶⁷ While writing was a comparatively elitist skill, reading was taught widely in the Northern provincial states to both girls and boys through affordable, subsidized Reformed schooling. But while education typically occurred in external teaching establishments, literacy and learning was also encouraged in the home. As Schama asserts, “the proper place for such instruction was the family home”.⁶⁸ Although there are comparatively few paintings which document the maternal teacher and the child reader, Caspar Netscher’s *Maternal Instruction* (Fig. 33), held at the National Gallery, London, aptly illustrates the genus.⁶⁹ This painting, like that of Dou, illustrates a purely female relationship, in the bond of the mother teacher and the daughter pupil. The three characters, one woman and two children, are logically identified by the National Gallery as mother, daughter and son. In an affluent background setting, the matriarch, draped in ermine-trim, teaches her well-groomed daughter to read, while her son kneels by a chair playing with a puppy. A gender chasm divides the painting, with the son and daughter’s backs turned to one another, and the

⁶⁷ For more on the reasons behind this and literacy in general in the seventeenth-century Netherlands see Israel, 1998: 686-90.

⁶⁸ Schama, 1991: 558.

⁶⁹ Caspar Netscher, *Maternal Instruction* [Full title: *A Lady Teaching a Child to Read, and a Child Playing with a Dog (La Maîtresse d'école)*], 1670s, National Gallery, London NG844. Oil on oak, 45.1 cm x 37 cm. Provenance: bought with the Peel collection, 1871.

mother physically aligned with the girl. Distracted, the boy looks up from his play with impish eyes to engage the viewer. Kneeling on the floor, among the debris of play, this small figure is a picture of childish mischief. The daughter embodies the antithesis of her brother's light-heartedness. Standing erect, the young girl with neat curls and tidy dress trains her eyes conscientiously on the book in front of her, her tiny finger following the words as she reads. Head bent, her slight figure echoes that of the chymical scholar. With her mother by her side, the daughter dedicates her time to academic virtue, while her brother fritters away the hours on feckless play. Once again, the ancient Aristotelian philosophy that "three things are needed to achieve learning: nature, teaching, and practice" is embodied in a scene of female duty.⁷⁰ This time, however, it is the presence of the mother-teacher, daughter-pupil that lends the work moral affirmation. The importance of learning, in both a domestic and academic context, is emphasized through the contrast of dutiful daughter and playful son. Nevertheless, a quiet threat underpins this scene of domestic virtue. The gravity of boy's conduct is emphasised though the inclusion of Rubens' *Brazen Serpent* on the wall beyond. Portraying a story from the Old Testament, this painting depicts Moses saving a crowd of wretched, writhing sinners from a plague of fiery serpents, a just punishment for their ungodly ways. The juxtaposition of childish flippancy against such agony highlights the importance of personal responsibility and proper child-rearing to the perceptive early modern viewer.

Yet, the gender delineation evident in the work of both Dou and Netscher is not typical of paintings of parental tutelage. More common by far are compositions that reflect the paternal bond, with the father schooling the son in the written word. *Family Group* (Fig.34), attributed to Michiel Nouts, neatly encapsulates the conventional vision of gender roles.⁷¹ This family portrait is segregated into two halves, with the female family members on one side and the males on the other. Significantly, the female section is characterized by icons of play and feminine virtue: a rattle, a doll and two cherries. Conversely, the paraphernalia of writing signifies the male space: a book, paper, inkwells, and quills. The young son holds the book in his hand, and the gesture from his father implies a tutor-pupil relationship. Typical of countless portraits and genre paintings, Nouts' *Family Group* illustrates the customary gendering of learning in art. Departure from this standard, in both the work of Dou and Netscher, is therefore of some import.

In their study of seventeenth-century genre prints, de Jongh and Luijten note that:

⁷⁰ Emmens, 1969: 34.

⁷¹ Michiel Nouts, attributed, *Family Group*, c.1655, National Gallery, London NG1699. Oil on canvas, 178 cm x 235 cm. Provenance: the left half presented to National Gallery by Charles Fairfax Murray, 1900; the right half bought, 1910.

Depictions of children or near-adults reading may have conjured up associations with diligence. Wallerant Vaillant, the master of the mezzotint, was fond of depicting boys diligently drawing or reading.⁷²

Undoubtedly, boyhood diligence is often indicated in genre painting through the presence of books and through the act of reading. However, de Jongh and Luijten do not discuss the depiction of girls. Research carried out in this thesis, conversely, has found that the meaning of books and the act of reading in seventeenth-century genre painting is to a greater degree dependant on the gender of the reader. Bookishness, book learning and books themselves in portraits or in genre depictions of men often signify academic prowess and, by extension, personal success.⁷³ However, even within traditional portraits of non-scholarly men, books and literary paraphernalia denote intelligence and accomplishment. This association between the book and personal achievement is clearly illustrated in Gerrit Dou's *Self-Portrait*, in which one hand rests on a large splayed tome, while the other clasps a palette and brushes.⁷⁴ This, like so many portraits of prominent men, includes other tokens of learning, which contextually symbolize personal triumph.⁷⁵

Conversely, the generic book has a limited role to play in paintings of women. Instead, portraits of maidens frequently include a prominent devotional, domestic or moral handbook or, more commonly, the Bible. For example, Gerrit Dou's *Old Woman Reading* portrays the close study of a book identified as a Catholic lectionary, opened to Luke, Chapter 19.⁷⁶ Similarly, Gerrit Dou's *Portrait of a Young Woman* depicts a maiden turning the leaves of a songbook, with a Bible lying close by.⁷⁷ Other examples of specific title placements are numerous in seventeenth-century paintings of women. Identifiable titles usually allude to female achievements permitted and, in many cases, defined by the strict confines of their specified pedagogical literature. Furthermore, books in female portraits seem not to allude to intellect in the manner of male portraits, but rather denote an *inclination* to learn. Among the

⁷² De Jongh and Luijten, 1997: 305.

⁷³ Consider, for example, Thomas Wijck, *The Alchemist #3*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.06; Thomas Wijck, *The Alchemist*, date unknown, Chemical Heritage Foundation, Philadelphia 00.01.261; Thomas Wijck, *The Alchemist #1*, date unknown, Chemical Heritage Foundation 00.03.05; in addition to Hendrick Heerschop, *An Alchemist and his Assistant*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.14; Follower of Dou, *An Alchemist in his Laboratory*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.12.

⁷⁴ Gerrit Dou, *Self Portrait*, c.1665, Private Collection, Boston. Reproduced Baer et al., 2000: 123.

⁷⁵ In this case, it is a globe and violin. Many portraits celebrate the success of their subject through the inclusion of other objects, most commonly, the map, skull, quills and paper, all of which have academic significance.

⁷⁶ Rotermund, 1957: 123-50.

⁷⁷ Gerrit Dou, *Portrait of a Young Woman*, date unknown, Private Collection. Reproduced Franits, 1995: 20.

numerous emblems of female virtue which litter the illustrated preface page to 'Maeghde-Wapen' (Fig. 30) are open books. The inscription 'Leer-sucht' [readiness to learn] lies in the lower left corner of the printed page, close to the small pile of books. In proclaiming the virtue of the female willingness to learn, Cats is essentially celebrating the wifely qualities of docility and compliance. Within the context of Netscher's *Maternal Instruction*, therefore, the daughter serves not as an academic model to her brother, but rather as an edifying embodiment of the broader principles of docility, duty and piety. Once again, these female qualities give further moral validation to the primary scene of scholarship, aligning academic values with those of the early modern Dutch household.

4.2

A highly unusual depiction of scholarship, Gerrit Dou's *Schoolmaster* nonetheless adheres to many of the compositional arrangements evident in the alchemical work of Thomas Wijck. With the scholar close by in the foreground and the family far away in the back, the work is effectively divided into two distinct, gendered arenas. There is no acknowledgement between the two spheres, which operate independently. This sense of isolation is enhanced by Dou's method of lighting the two regions individually, a technique which in other alchemical paintings encourages an emblematic reading. As with Wijck's work, *The Schoolmaster* expresses the harmony of the household in the portrayal of precise gender ideals. As the male occupies the role of diligent and devoted scholar, so too, the female fulfils her prescribed role as the virtuous and instructive mother. This balance of female domesticity and male scholarship typifies Netherlandish paintings of the chymical scholar and alludes not only to the harmony of the home, but also to the equilibrium integral to the chymical marriage. Yet while the female faction of the family occupies itself with learning, their activity shares little with the male scholarship of the foreground. Instead, Dou, like Wijck, exploits female conduct emblematically. Maternal tutoring and female book learning delivers a sense not of scholarship, but of the specifically female 'Leer-sucht' identified by Cats and explored by Netscher. Communicating connotations of female docility, this female grouping effectively lends further moral sanction to the foreground scene of male scholarship.

5 Conclusion

The beautifully illustrated sixteenth-century treatise the *Splendor Solis* holds perhaps the most famous and finely executed representation of the chymical marriage in existence.⁷⁸

Historically attributed to the mythic Salomon Trismosin, this illuminated manuscript contains twenty-two elaborate images which describe the alchemical sequence in traditional symbolic terms. The illustration of the chymical marriage (Fig. 35), which portrays the meeting of the Solar King and Lunar Queen, alludes to the strict set of binarisms on which alchemical theory is based.⁷⁹ The Red King and White Queen are depicted standing, respectively, atop flaming fire and a watery sphere. Rising above the Female lies a Moon and above the Male, a Sun. As the King and Queen partake of silent dialogue, so too the celestial bodies share an unspoken communiqué. The intricate emblematic quality of the composition effects a sense of completion through antithetical construct.

The *Splendor Solis* is archetypal in its depiction of this essentially symbiotic marriage of opposition. Dominated primarily by the pervasive presence of the Red King and White Queen, the chymical marriage celebrates the idiosyncratic and binaristic perfection of two polar opposites: Sol and Luna. The Dutch scholar and domestic paragon embody the same idealized, gendered characteristics represented by the *Splendor Solis*' alchemical sovereigns. In the numerous portraits of the chymical scholar the representation of the male paradigm remains constant. A distinctly formulaic representation, the chymical student in seventeenth-century genre art personifies the masculine sphere of natural philosophy and alludes to a peculiarly male attainment. Occurring in countless genre paintings with a remarkable lack of variation, the characterization of the scholar embodies the spiritual equilibrium inherent to esoteric alchemy. As this chapter shows, the unchanging male ideal is occasionally coupled with an analogous female paragon. Wayne Franits' *Paragons of Virtue* compellingly illustrates how the early modern Dutch conception of female perfection was intrinsically related to domesticity. Using the premise of Franits' work, this chapter has explored the depiction of three domestic characterizations within the context of the alchemical workshop and the Dutch home. An analysis of the Cook, Seamstress and Teacher in these paintings furthers understanding of the complex nature of the iconographical chymical marriage. While these domestic paragons allude to the extraordinary reinvention and perpetuation of the White Queen of alchemical emblemata, they also signify the feminization of the historical workshop. Deborah E. Harkness writes that in the sixteenth and seventeenth centuries, natural

⁷⁸ Trismosin, 1582.

⁷⁹ Plate IV, Trismosin, *Splendor Solis*, 1582, London, British Library, Harley MS 3469, fol.10^r.

philosophy “was not a world without women, but among women”.⁸⁰ She continues to describe the relocation of alchemical learning and practice from the male crucibles of the university and monastery to the female sphere of the home, stating “when examining the household as a site of knowledge, we must not forget that the early modern household was, first and last, domestic and feminine space”.⁸¹ Genre paintings of the chymical marriage testify to this relocation and to the participation of the female within the alchemical workshop. Furthermore, in genre paintings of the chymical scholar and domestic paragon, we witness the inadvertent transmutation of the Red King and White Queen in a wholly unexpected stage of a purely iconographical *opus alchymicum*.

⁸⁰ Harkness, 1997: 249.

⁸¹ Harkness, 1997: 262.

CHAPTER III

PISKIJKEN AND PISSE-PROPHETS: EMBLEMATIC WOMEN IN PAINTINGS OF THE CHYMICAL-UROSCOPIST'S WORKSHOP.

Addressing the philosophies of esoteric and exoteric alchemy and exploring the conflicts contained therein, this thesis has thus far confined itself to the chrysopoeian workshop and scholar's study. By contrast, Chapter III focuses on an equally critical branch of chymistry in its analysis of iatrochemical paintings. Although 'iatrochemistry' more accurately describes the harnessing of chymistry within a medical capacity, academic circles today commonly apply the term to paintings which possess signs of both chymistry and medicine.¹ Fundamental to this thesis' emerging definition of chymistry, 'iatrochemistry' in this chapter broadly describes the evolving chemical state of medicine during the seventeenth century.

In the early modern period, the breadth of iatrochemical painting was vast. Surviving works depict a myriad of medical procedures and products, from gory surgeries to routine dentistry. This chapter, however, specifically examines the uroscopist of the chymical workshop. Ranging from fraudulent quacks to university-trained physicians, early modern uroscopists were medical practitioners of mixed ability and repute. To a certain extent, all health workers of this era employed the patient's urine as an important diagnostic tool; whereas water-doctors or *piskijken* would use urine alone to determine a diagnosis, respectable physicians would employ uroscopy only in conjunction with other medical methods. Appearing under various guises and in numerous settings, uroscopists were a popular subject for Netherlandish genre painters. Undoubtedly, these characters occur most often within a non-chymical context, typically surfacing as visiting physicians in the domestic sickroom.² However, whether chymical or non-chymical, these paintings are united by their exceptional depiction of women: when the uroscopist is accompanied by a patient, it is almost always a woman. In its survey of almost one hundred such paintings, this project has not discovered a single, unambiguous depiction of a male patient in a seventeenth-century genre scene of chymical-uroscopy. Instead, representations of the chymical workshop consistently portray a focal female character standing alongside a male chymist inspecting a vial of urine.

¹ See, for example, Principe and DeWitt, 2002: 27-28.

² On the visiting doctor and the extent of Netherlandish health care during this period see Huisman, 1989: 63-83; Huisman, 1992; Huisman, 1997: 69-100; Huisman and Santing, 1997: 11-22; Huisman, 1999: 359-75.

Complementing established research on the female in the sickroom, this chapter seeks to expound the chymical and iconological significance of women in the uroscopist's workshop.

The contention of this chapter is twofold: firstly, that the focal female in such genre paintings is a gynaecological symbol with overtones of pregnancy, which constitutes an emblem within the alchemical tradition. Secondly, this chapter argues that the evolution of one such symbol signifies the devolution of traditional chymical art and its governing conventions. Like Chapters I and II, this study of uroscopic genre painting is tripartite. The first section serves as an extended introduction to medicine and uroscopy in the Netherlands, and its manifestation in seventeenth-century art; the ambiguity surrounding uroscopy in the seventeenth century requires comprehensive explication to facilitate appreciation of further critical content. In a survey of the chymical genre painters Egbert van Heemskerck the Younger and Mattheus van Helmont, the subsequent section seeks to clarify the symbolic significance of the female patient in both a chymical and non-chymical context. The final section expounds the complexity of female fertility symbols through an analysis of the work of Gerard Thomas and Balthasar van den Bossche. Locating these images within the iconographical chymical tradition of reiteration and reference, this section also charts the decline of chymistry and uroscopy in paintings of the early eighteenth century.

Iatrochemistry: a Medicinal Alchemy

1.0

With its genesis in the alchemies of antiquity, iatrochemistry predates, by some considerable margin, the chemical revolution of Paracelsus and his successors. Integral to the ancient alchemical philosophies of India and China, iatrochemistry centred originally on the appropriation of the elixir, an agent which would promote longevity and potentially enable immortality.³ Taoist and Hatha-Yogic thought identified the prolongation of physical life and the perfection of spiritual life as key alchemical aims alongside the transmutational goals characteristic of traditional Western alchemy.⁴ An iatrochemical emphasis in Western alchemy, however, arrived only in the late twelfth century, with the work of chemical analysts at the University of Padua. Producing numerous documentary texts, this group of physicians

³ For more on the nature of Chinese and Indian chymistry see Eliade, 1979: 109-26; White, 1997; Debus, 1965: 23; Taylor, 1951: 68-75; Holmyard, 1957: 31-40; Yü and Needham, 1959: 57-117.

⁴ For further references on chemically prepared medicines and their associated texts in the seventeenth century see Debus, 2002a: 19-25.

sought to determine the medicinal properties of mineral waters. These twelfth-century efforts engendered a generation of Italian chymists who meticulously recorded their chemical experimentations in widely broadcast tracts.⁵ As techniques of chemical analysis spread throughout Europe, chemical medicine and the prolongation of life re-emerged as alchemical ambitions. By the mid-thirteenth century, Roger Bacon, amongst others, had resurrected the ancient alliance of medicine and alchemy in literature regarding both esoteric philosophies and tangible pharmaceuticals.⁶ These iatrochemists, who also included Arnald of Villanova and, later, John Rupescissa, generally explored the curative powers of metal and mineral distillates alongside recognized herbal remedies. By the mid-sixteenth century iatrochemists and their diverse medical theories were broadly accepted within the parameters of traditional medicine. For the most part, then, proponents of chemical medicine were often Galenists, whose theories complemented, rather than contradicted, established medical thought.

The cordial relationship between iatrochemistry and Galenic medicine, however, was not to last. With the propagation of Paracelsian theory in the sixteenth century, medicine and chymistry changed fundamentally and irrevocably. In the early sixteenth century, Philippus Aureolus Theophrastus Bombastus von Hohenheim, or Paracelsus, launched a violent assault against medical orthodoxy.⁷ Born in Einsiedeln, Switzerland in 1493, the maverick chemical philosopher and physician fiercely denounced the traditional herbal and humoral medicine of the ancients, publicly burning the works of Avicenna while employed with the University of Basel.⁸ Claiming that his shoebuckles were more learned than Galen and Avicenna, Paracelsus perceived an inherent incompatibility between iatrochemistry and traditional medicine.⁹ Arguing that Galen, Avicenna and Aristotle were ignorant of true philosophy, Paracelsus suggested that lessons of nature should be learnt through fresh observation.¹⁰ He rejected the ancient belief that disease was caused through an internal imbalance of the four humours and instead sought external, and specifically environmental, explanations. In direct response to the heathen ancients, Paracelsian theory relied significantly on the Holy

⁵ For more on these texts and the subject of water analysis see Debus, 2002a: 14; Debus, 1962: 41-61; Park, 1985.

⁶ For Bacon's iatrochemical perspective see Bacon, 1859: 538-42.

⁷ On Paracelsus and chymical medicine see Grell ed., 1998; Pagel, 1958; Pagel, 1986; Debus, 2002b; Debus, 2002a; Debus, 1987; Debus, 1972: 185-99; Debus, 1974: 235-59; Debus, 1976: 307-17; Debus, 1973: 85-99.

⁸ For more on Paracelsus' rejection of the ancients see Pagel, 1958: 58-59.

⁹ Goodrick-Clarke, 1999: 74.

¹⁰ Galenic medicine subscribes to a complex of opposites, to which the Aristotelian elemental principles earth, water, air and fire are inherent. The condition of the mind and body is dictated by the balance of Galenic qualities expressed through the corporal manifestation of the four humours: yellow bile, blood, phlegm and black bile. Bound inextricably to these Aristotelian principles are the four seasons, four ages of Man and the emotional temperament of an individual. For a summary of Galenic medicine during the early modern period see Lindemann, 1999: 67-70.

Scriptures and unequivocally condemned the Galenic dependence on logic and mathematics. Like several of his iatrochemical predecessors, Paracelsus emphasized mineral and metallurgical remedies in place of conventional herbal curatives. Yet while chemical medicine was pivotal to its ascendancy, Paracelsian theory far transcended pharmaceuticals. Drawing upon astrology, alchemy, metallurgy, folk medicine, Hermeticism, Gnosticism and Christianity, Paracelsus proposed a unique, if incoherent, chemical vision of the universe.¹¹ This chemical world view, which was based fundamentally on the macrocosm-microcosm model, aligned the entire cosmology to chemical components.¹² Developing the alchemical theories of Islamic texts, Paracelsus advanced a tripartite system of salt, sulphur and mercury, to which the Divine Trinity was inherent. Expelling all remnants of Galenic medicine, this pioneering chemical visionary reduced the universe and its entire content to absolute chemical terms.

Antagonistic and eccentric by nature, Paracelsus did not attract a multitude of followers during his lifetime. Indeed, it was only after his death in 1541 that his general philosophies gained any significant credence. In the third quarter of the sixteenth century, the erratic and often unintelligible writings of the Swiss insurgent were restructured and synthesized by a new generation of Paracelsians, who appropriated his legacy in a struggle to undermine medical orthodoxy. As the publication of Paracelsian literature accelerated in the latter half of the sixteenth century, argument between the establishment and the new iatrochemists inevitably escalated.¹³ By the seventeenth century, however, chemical philosophy was firmly entrenched within the medical hierarchy. Despite the diverse response to Paracelsian concepts, Northern European medical institutions were predominantly reconciled to chemical remedies and selected iatrochemical theories by the earliest years of the century.¹⁴ These iatrochemical advances were consolidated and then transformed by the Flemish chymist Jean Baptista van Helmont.

Born in Brussels in 1579, van Helmont turned to medicine only after disillusionment with his study of philosophy and, later, law. Influenced deeply by the chemical philosophies of Paracelsus and his followers, the physician understood chemistry as the key to understanding medicine and nature. Rejecting the ancients, van Helmont nonetheless broke from the

¹¹ See Paracelsus, 1565.

¹² The macrocosm-microcosm theory also has its roots in Chinese alchemy. See Needham, 1954, 5: Part V 68-70, 116-22, 136, 244.

¹³ Debus, 2002a: 128; for a list of Paracelsian texts published during this period see Sudhoff, 2000.

¹⁴ The simplicity of this synopsis obviously belies the complexity of the historical prelude that shaped the medical climate of the Golden Age. However, as this chapter is limited to a single aspect of traditional and new chemical medicine, the author refers the reader to the comprehensive works already published in this quarter.

established Paracelsian mould, vehemently slating concepts integral to earlier iatrochemical philosophies. He rejected the inherency of the Paracelsian *tria prima* and interpreted the macrocosm-microcosm only in terms of a metaphor. While a practising and reportedly successful chrysopoeian, the contribution of van Helmont to the development of modern chemistry was considerable. Interested in the development of instruments, specific gravity and the existence of gases, the revolutionary chymist recognized that matter could neither be created nor destroyed. He also realized that gases were distinct from atmospheric air. In a quest to “destroy the whole natural Phylosophy of the Antients, and to make new the Doctrines of the Schooles of natural Phylosophy”, van Helmont placed unparalleled emphasis on observational and experimental methodologies.¹⁵ His procedures relied considerably on quantification, an approach adopted rarely by chymists at that time. Van Helmont also advocated the application of chemical principles to the preparation of medicines; understanding digestion in terms of chemical reactions, he recommended alkalis to counteract the acidity of the digestive juices. The posthumous publication of *Ortus Medicinae* in 1648 galvanized chemical philosophy, demanding a universal review of all medical and chymical thought. Propelling iatrochemistry to a position of authority within academic and medical establishments, van Helmont heralded a new age of chemical philosophy.¹⁶

Yet while iatrochemistry undoubtedly increased in stature and significance in Europe during the seventeenth century, the field of medicine was not subject to overt fragmentation.¹⁷ As more reconciliatory iatrochemists gradually infiltrated the chairs of important universities, Galenic and iatrochemical medicines seem to have reached equilibrium. The period, as Debus remarks, “was one of synthesis; perhaps as many syntheses existed as there were authors”.¹⁸

1.1 Medicine in genre painting

Netherlandish paintings of the seventeenth century clearly portray the synthesis of which Debus writes. Depicting an amalgamation of Galenic, Helmontian, Paracelsian and traditional chymical theory, these paintings allude to the evolving state of medicine and the changing priorities of chymistry. By the mid-seventeenth century, Paracelsians and Helmontians had shifted the emphasis of alchemy from chrysopoeia to iatrochemistry, from

¹⁵ Van Helmont, 1966: 6.

¹⁶ For more on van Helmont and Helmontian philosophy see Pagel, 2002; Newman and Principe, 2002: 56-91.

¹⁷ For a more detailed summary of the assimilation of iatrochemistry and Galenic medicine see Lindemann, 1999: 66-91. For further studies on the medical climate in the seventeenth-century Netherlands see Marland and Pelling eds., 1996; Knoeff, 2002; Cook, 1994.

¹⁸ Debus, 2002a: 537.

gold to medicine. Consequently, chymical scholars and chrysopoeians across Europe increasingly supplemented their income by formulating pharmaceuticals and mineral-based restorations. It is likely, then, that while allusions to transmutation saturate the seventeenth-century canvas, depictions of lucrative iatrochemistry more closely reflect the daily operations of the Netherlandish workshop. Representing a fusion of medical theories, these scenes often depict Galenic texts, for example, alongside complex chymical apparatus.¹⁹ With a heavy dependence on stock motifs and topoi, medical-chymical genre paintings are often very formulaic. Chiefly pharmacological in nature, paintings illustrate respectable apothecary shops, physicians' offices, quack vendors and generic iatrochemical workshops.²⁰ Often these scenes simply contain pharmaceutical signifiers, like the blue and white apothecary pots evidenced in most of the paintings discussed in this thesis. Others, however, are more explicit in subject, depicting, often graphically, the torturous labours of barber-surgeons, foot-surgeons, dentists and tooth-pullers. But perhaps the most enduring symbols of iatrochemistry in genre painting are the hanging reptiles and fish which adorn so many laboratories in Netherlandish genre scenes. While noting that "little distinction was made in the seventeenth century between the physician and the alchemist", Jane P. Davidson considers these signature creatures important as alchemical ingredients for "recipes and in the preparation of medicines".²¹

This chapter, however, is specific in its examination of iatrochemical painting. In uncovering iatrochemistry's most compelling portraits of women, it explores the significance of the female in paintings of uroscopy in the chymical workshop.

¹⁹ Paintings which include overt symbols of both iatrochemistry and Galenic medicine include Gerard Thomas, *A Physician Examining a Urine Flask #2*, date unknown, Wellcome Library, London 45026i (a prominent text is clearly labelled "Libri Galeni de Medicine", while key chymical apparatus and operations are evident in the background); A follower of Gerard Thomas, *A Physician Examining a Urine-Flask*, date unknown, Wellcome Library, London 584860i (on the table lies a book inscribed "Libe[r] Hipocr", while chymical equipment is evident around the workshop); Gerard Thomas, *A Physician Examining a Urine Flask #1*, date unknown, Wellcome Library, London 47322i (this painting includes a book of Hippocrates alongside identifiable chymical apparatus and a tooth-puller in the background).

²⁰ For example, Gerrit Dou, *The Quack*, 1652, Museum Boijmans van Beuningen, Rotterdam; Mattheus van Helmont, *An Alchemist at Work*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.36; After Adriaen van Ostade, *Physician Examining a Urine Flask*, date unknown, Wellcome Library, London 47456i.

²¹ While this reading is contentious, it aptly intimates the indissoluble nature of the medical and chymical worlds of the seventeenth century. Davidson, 1987: 74-75. Others interpret the hanging animals as emblems of esoteric philosophy. For a discussion of this motif see http://www.levity.com/alchemy/r_july98.html (accessed 10 November 2005).

1.2 Uroscopy v. Urinalysis

Bearing special connotations for Galenists, Paracelsians, Helmontians, traditional iatrochemists and chrysopoeians, urine was an issue of some importance in the seventeenth century. Within a medical context, the significance of urine depended much upon the theoretical perspective of the physician. Countless early modern Netherlandish genre paintings depict a physician or chymist examining a vial of liquid within an apothecary's or chymical workshop. Several of these are most likely non-iatric, simply portraying the scientific scrutiny of chemical distillates. Others, however, allude unequivocally to the ancient art and science of uroscopy. Uroscopy, the principal diagnostic tool of Galenic medicine, involved the analysis of urine thorough sensory assessment: colour, taste, smell, texture and content. Urinary colour wheels and charts, exemplified by a 1506 folio held by the Wellcome Library (Fig. 36), were utilized by European physicians throughout the Middle Ages and early modern period to ascertain physiological condition.²² Frequently employed as the sole means of diagnosis, uroscopy had suffered a partial loss of credibility by the seventeenth century. The exact extent of this decline has generated exhaustive academic debate. Both Eddy de Jongh and Peter Sutton suggest that "water-doctors" were widely perceived as charlatans by the seventeenth century.²³ Undoubtedly, the status of uroscopy was damaged by the increasing popularity of Paracelsian and chemical medicine. Rejecting conventional observational uroscopy, Paracelsus pioneered urinalysis, or the chemical examination of urine.²⁴ Believing sensory examination of urine futile, the early Paracelsians proposed instead the chemical dissection, or distillation, of a sample. The residue of the distillation identified both the type of disease and its location in the body, while its weight determined the presence of toxins and salt levels. Van Helmont contributed further to the field of urinalysis by advocating a quantitative approach to diagnosis, related to the specific gravity of urine.²⁵ This rise in urinalysis inevitably occasioned a decline in traditional uroscopy.

This decline is signalled by numerous European texts which allude to the fallibility of uroscopy.²⁶ The frontispiece of one Netherlandish medical text (Fig. 37) explicitly expresses the inadequacy of the technique in a scene which depicts the interment of deceased patients

²² 'Columns of urine flasks' in Ulrich Pinder, *Epiphaniae Medicorum*, 1506, London, Wellcome Library, Fol. A2^r, L0013700.

²³ Rijksmuseum, 1976; Sutton, 1982-83: 22.

²⁴ See Debus, 2002a: 59; Pagel, 1958: 189-94; Pagel, 1962: 19-20.

²⁵ See van Helmont, 1966: 64; Pagel, 2002: 55; Debus, 2002a: 110, 327-28; Debus, 1965: 157-58; Pagel, 1958: 189-200.

²⁶ Among numerous others, these include Hart, 1623 and Brian, 1637.

following unsuccessful uroscopies.²⁷ The motley assortment of healers who performed uroscopies accounts, in part, for its dubious reputation. While the traditional analysis of urine was advocated by university-trained physicians, it was also practised by all manner of unqualified individuals, including fraudulent urine-scryers, astrologers and wise women. The resulting diversity in qualification certainly justified the ambiguous status of the procedure in many European quarters. Criticism was further levelled against the inevitable vulgarity of the procedure. Not surprisingly, the solemn examination of urine and faeces was a favourite subject for Netherlandish satirists in both art and literature.²⁸ Satirical and scatological prints of *piskijken* proved popular in the early modern period and were usually designed to ridicule the conceit of the medical elite, the incompetence of the amateur or the guile of the swindler.²⁹ In its analysis of *Trouble Comes to the Alchemist*, Chapter I of this thesis introduces a satirist's scatological depiction of the uroscopist's study, in which the comic potential of the subject is exploited with triumphant relish. Although *Trouble Comes to the Alchemist* is a highly idiosyncratic work, it encapsulates the essence of the seventeenth-century satire in its sharp contempt for negligent and fraudulent uroscopists.

Although this ridicule intensified with the rise of chemical medicine, it has been convincingly argued that uroscopy maintained some respectability in Europe throughout the early modern period and into the Enlightenment.³⁰ As the paintings of this present chapter show, comedy is by no means a generic feature of uroscopic art, with many artists clearly conveying reverence towards their subject. Laurinda Dixon, in her research on pre-Enlightenment art and medicine, argues persuasively that uroscopy retained validity within both the medical establishment and the wider public throughout the seventeenth century. She asserts that,

Untrained amateur 'piss prophets' abounded, and their fees were lower than those of legitimate physicians. As a result, critics questioned the effectiveness of uroscopy when done incorrectly or by untrained practitioners. But the physicians in Dutch paintings often wear academic apparel, advertising their membership in the guild of physicians and their possession of a university degree. These doctors would have viewed uroscopy as an effective diagnostic tool dating from earliest antiquity.³¹

²⁷ Stephen Blankaart, *Anatomia practica rationalis* (Amsterdam, c.1688), Wellcome Library, London, frontispiece L0005251.

²⁸ Refer to Chapter I of this thesis for an introduction to uroscopy in paintings of the chymical workshop and an outline of the role of satire in specific depictions of alchemy and medicine.

²⁹ Such prints may be exemplified by the seventeenth-century 'Le Bassin' reprinted in Dixon, 1995: 78.

³⁰ See Lindemann, 1999: 68.

³¹ Dixon, 1995: 76.

Dixon's research, which extensively reviews paintings of physicians within the patient's home, supports the assertion that uroscopy was respected at least in some quarters during the early modern period.³²

The uroscopist's attendance in the female sickroom is meticulously documented and analysed in Dixon's study of *furor uterinus* in paintings of the 'doctor's visit' or 'lovesick maiden'. However, in contrast to Dixon's research which uncovers male intrusion into female space, this chapter explores female violation of a male domain: the chymical workshop.

1.3 Urine: an Agent of Transmutation

The depiction of the uroscopist in the chymical workshop differs fundamentally from that of the sickroom. While the strict conventions governing scenes of the sickroom are obviously absent from the chymical workshop, the subject of urine has particular resonance within a chymical landscape.

The correlations between human waste and alchemy are introduced by Chapter I of this thesis. Urine is mentioned recurrently in alchemical literature as a metaphorical and sometimes literal ingredient to processes and recipes. "Children's Piss", alluded to in the opening chapter, occupies an important, but singular role within a much broader alchemical vocabulary of urine. An ingredient in numerous marginal or supplementary operations, urine was also considered by many chymists a crucial component in the manufacture of the Philosophers' Stone.³³ While comprising numerous roles in exoteric procedures, urine occupies a unique position in alchemical lore. Immortalized by Joseph Wright of Derby's *The Alchymist, in Search of the Philosopher's Stone, Discovers Phosphorus, and Prays for the Successful Conclusion of his Operation* (Fig. 38),³⁴ the tale of Hennig Brandt's discovery of phosphorus in 1669 famously involves the putrefaction of vats of urine in a futile quest for chrysopoeian riches.³⁵

³² Conversely, her work also illustrates that satire and farce were sometimes fundamental to genre representations of uroscopists, such as those by Jan Steen. For more on the artist's comic intent in the depiction of doctors see Gudlaugsson, 1975; Meige, 1900: 187-90.

³³ Sir George Ripley was among those who used urine in their initial chrysopoeian experimentations, Ashmole ed., 1967: 190.

³⁴ Joseph Wright, *The Alchymist, in Search of the Philosopher's Stone, Discovers Phosphorus, and Prays for the Successful Conclusion of his Operation*, 1771, Derby Museum and Art Gallery. Oil on canvas, 127 cm x 101.6 cm. Provenance: sold at Christie's on 6 May 1801, as Lot 62 under the title "The Alchymist in his Laboratory with Assistants" for £80.17.0.

³⁵ For a recent retelling of this tale see Emsley, 2000: 4-20.

1.4 Urine and Female Fertility

But while urine might potentially have chymical connotations within seventeenth-century genre paintings, its association with female fertility is of primary significance to this chapter. The study of female urine has distinct connotations of fertility and sexuality in Netherlandish genre painting. While art historians have traditionally interpreted the uroscopy of ailing women in genre paintings as indicative of pregnancy, critics of the past decade have identified specific gynaecological ailments implicit in scenes of the ‘doctor’s visit’.³⁶ It is clear from this most recent research that women in seventeenth-century genre paintings of uroscopy are generally symptomatic of womb-based “female diseases”, rather than “general diseases” which could afflict both sexes.³⁷

Female fertility, like gender, represents a critical component of chymical symbology. Thus far, this thesis has explored the transmutation of the chymical marriage and Philosophical Child from traditional manuscript emblemata into icons of genre art. Iconographically and textually, however, female fertility far transcends this familial nucleus. For generations of Western adepts the womb symbolized the germinal alembic, appearing in countless ancient and modern manuscripts to illustrate practical apparatus and processes. Claiming a part within the symbolic narrative of the alchemical family, the “spagyric uterus” is the alembic in which the Stone is forged and is also an emblem of the *albedo* stage.³⁸ From Artephius to Geber, the womb is evoked by chymical authors to convey, yet contain, the secrets of the *opus alchymicum*.³⁹ Breaching the confines of the laboratory, chymical womb iconography was appropriated by artists and writers across early modern Europe, proving a public recognition of chymistry’s gynaecological vocabulary.⁴⁰

1.5

Primarily examining works held by the Wellcome Library, London and the Chemical Heritage Foundation, Philadelphia, this chapter reviews and evaluates the patterns governing the depiction of female patients in a combined uroscopic and chymical context. While some

³⁶ Literature on the use of uroscopy in diagnosing pregnancy in genre painting is extensive. See, for example, Sutton, 1982-83: 24; Rijksmuseum, 1976: 135; Bedaux, 1975-76: 17; Nauman, 1981: 99; and for female diseases and uroscopy in genre art see Dixon, 1995: 79.

³⁷ For the definitive study of womb disorders in paintings of the female patient see Dixon, 1995. See also King et al., 1993; King, 2004.

³⁸ Paracelsus, 1924: 285.

³⁹ For further references on womb imagery in alchemical art and literature see Abraham, 2001: 219.

⁴⁰ Numerous literary examples include Donne’s ‘Comparison’ which refers to the “limbeck’s warm womb” and ‘Love’s Alchemy’ which describes the alembic as the “pregnant pot”, Donne, 2000: 62, 113. Jonson also aligns the alembic with “a wench with child”, Jonson, 1995: 81 [II.ii.8-9].

ambiguity may persist, a scene of uroscopy may be distinguished by several factors. Crucially, uroscopy is implied by the inspection of a 'urinal'; this rounded glass vessel is typically held aloft, towards a light source, by a male character in the apparel of physician, chymist or quack.⁴¹ The presence of a female patient or servant in outdoor dress often denotes transportation of urine from patient to chymist. This is usually confirmed by the presence of a distinctive urine carrier, a cylindrical, straw basket, which often appears on the arm of the servant or patient (Fig. 39).⁴² The following section introduces the subject of female fertility in paintings of the chymical-uroscopist and explores female emblems in relation to their uroscopic and chymical context.

Female Fertility: *Als ik my niet verzind is deze Meid met Kind*

2.0

Paintings of the uroscopist outside the sickroom are, thus far, neglected by research. In *Transmutations: Alchemy in Art*, Lawrence M. Principe and Lloyd DeWitt introduce the subject of uroscopy in the chymical laboratory with a brief précis of Balthasar van den Bossche's *Iatrochemist*.⁴³ William Schupbach analyses a painting of a possible iatrochemical uroscopist in an equally concise article for the Wellcome Institute Newsletter.⁴⁴ Excluding incidental and essentially inconsequential references to the theme, these two contributions constitute the core of research in this area. Yet, despite this critical void, the general field of uroscopy in art remains cluttered by fallacies, with confusion arising around the female diseases diagnosed through uroscopy. Therefore, although this section is concerned primarily with the theme of pregnancy, the following clarifies the broader female medical issues surrounding the depiction of uroscopy.

In recent years the study of uroscopic art and literature has been marred by an underlying problem of terminology. Greensickness, lovesickness, uterine hysteria, erotic melancholy,

⁴¹ Urinals were also often used in alchemical experiments. One recipe for creating the elixir states "take Vitriol, calcine it into ashes, then beat them into most subtle powder; put them in an Urinal, and pour thereto Virgins Milk to cover them, stop the Urinal with a Linnen cloth, and let it stand eight dayes". Colson, 1668: 45.

⁴² This straw case appears in almost all the paintings discussed in this chapter. Its use is illustrated by a fifteenth-century German woodcut which depicts the physician examining a urine flask and the maidservant with the carrier. 'Physician examining urine fask, the woman who has brought it standing by, holding fask basket' in Anon., *Herbarius zu Teutsch* (Mainz, 1485), Wellcome Library, London M0017048/00.

⁴³ Principe and DeWitt, 2002: 27.

⁴⁴ Schupbach, 2003: 6-8.

vapours and chlorosis are terms applied freely but defined rarely. The greatest semantic obstacle to modern research lies in the confusion of lovesickness with pregnancy, a misapprehension propagated persistently by current-day scholars.⁴⁵ Known to the Dutch as *soetepijn*, *minipijn* or *minnekoorts*, lovesickness was a condition of fluid definition. Its symptoms included sunken eyes, pale complexion, fainting, palpitations, melancholy, poor appetite, racing pulse, listlessness and lethargy, and was largely believed to be engendered by enflamed sexual passions or by ‘unnatural’ abstinence. Medical theorists variously identified the origin of the malady in the impact of the wandering womb on other organs or in the womb’s exhalation of poisonous vapours.⁴⁶ Although the early modern condition bears some relation to the current day term ‘lovesick’, lovesickness to a seventeenth-century university-trained physician was, unquestionably, a tangible disease to be treated and cured. While the condition is complicated by a lack of contemporary medical consensus, the association of lovesickness with pregnancy cannot be justified. Indeed, considered even by its most vague definition, lovesickness precludes the possibility of conception. In her study of the female sickroom, Dixon, unlike many critics, shrewdly avoids the problems of terminology by using *furor uterinus* and *hysterico passio* as blanket terms to describe “all organic disorders of the uterus described by early physicians”.⁴⁷ These expressions are used to distinguish early modern gynaecological disorders from both the pregnant state and from a modern day interpretation of the word ‘lovesick’. As specific ailments do not play a central role in this chapter, the collective term *furor uterinus* will suffice here to describe the manifold conditions which signify a disordered, but childless, womb.

Used to diagnose both pregnancy and *furor uterinus*, uroscopy is common in paintings of the female sickroom. In her argument that paintings of the ‘lovesick maiden’ generally depict sufferers of *furor uterinus*, Dixon discusses the colouration of urine in early modern female patients. She notes that “although a watery texture and color were symptomatic of the earlier stages of *furor uterinus*, urine tended to be thick and red in the latter stages, signifying too long concoction within the body”.⁴⁸ Exploring the medical significance of urine, Dixon does not suggest that uroscopy alone indicates *furor uterinus*, but carefully locates the condition through a combination of different pictorial signifiers. But while *Perilous Chastity* is persuasive in its contention, its scope does not encompass extensive discussion of more conventional interpretations. Unsurprisingly, many of these paintings, with their associations

⁴⁵ These texts include Brown, 1999: 29; Slive, 1995: 167.

⁴⁶ For more on the definition of lovesickness, its symptoms and causes, see van Beverwyck, 1644: 453-68; Bedaux, 1975-76: 17-42; Ferrand, 1990: 113-22; Wack, 1990.

⁴⁷ Dixon, 1995: 15.

⁴⁸ Dixon, 1995: 79.

of eroticism and fertility, are traditionally recognized as scenes of pregnancy.⁴⁹ While Dixon successfully counters this argument in conventional images of the 'lovesick maiden', ambiguity persists about paintings which contain few, if any, of the *furor uterinus* symptoms outlined by *Perilous Chastity*. Examining uroscopy in the chymical workshop, the following section identifies specific connotations of pregnancy in the characterization of the female patient.⁵⁰ In particular, this part explores the emblematic significance of the weeping woman in paintings of the uroscopist's workshop and introduces the homunculus as a dual symbol of quintessentially male and, paradoxically, female achievement.

2.1 The Weeping Woman

A Physician-Alchemist Examining a Urine Flask (Fig. 40), attributed to a follower of David Teniers, is a highly evocative portrayal of a uroscopist in a chymical setting.⁵¹ In the style of Mattheus van Helmont, the painting depicts a familiarly murky workshop executed with a homogeneously muddy palette. Split into two distinct areas by a vertical partition wall, the background, located towards the left of the scene, occupies over a third of the painting, with the foreground positioned in the middle and right. The background depicts the dim, far-off recesses of a rambling workshop, shielded from the chymist in the foreground. Although centuries of accumulated dirt renders this area largely indistinct, three assistants remain distinguishable within a self-contained scene; they appear busy about a furnace, operating various distillations. Superficially, the foreground is an immediately recognizable setting: its distinctive litter of gnarled branches, wisps of straw and paper is reminiscent of van Helmont's alchemical interiors. Isolated from his workers, a chymist sits at a broad, rounded furnace. In place of burning coals, the dormant oven stores piles of books, which spill carelessly onto the unkempt floor. With hands held aloft, the chymist examines a vial of urine against an unseen light. His outstretched arms, covered in a startling vermilion, stand out spectacularly against the general gloom. The rest of his dress, a leather work-apron, dark cap and pants, melds seamlessly into the murky setting. With his neck twisted to the side, he gazes upon the sample, eyes widened and mouth agape. This dynamic figure contrasts

⁴⁹ For example see Sutton et al., 1984: 300, 313; Gudlaugsson, 1975; Sutton et al., 2003: 165-66.

⁵⁰ While this chapter disagrees with some of Dixon's findings, it is important to acknowledge that Dixon's comprehensive research proving the correlation between uroscopy and female sexuality is invaluable and fundamental to this present study.

⁵¹ A Follower of David Teniers (Mattheus van Helmont?), *A Physician-Alchemist Examining a Urine Flask*, date unknown, Wellcome Library, London 44733i. Oil on canvas, 41.1 cm x 57.3 cm. Provenance: with the Wellcome collection by 1913 ('Handbook of the Historical Medical Museum', London: 1913, probably no. 105 "The urologist"). Despite this attribution, the painter of this work is not known, although William Schupbach of the Wellcome Trust now credits Mattheus van Helmont with authorship. However, as this identity has not yet been officially recognized by the Wellcome Library this chapter, for clarity, maintains its given authorship.

significantly with the conventional chymists of genre painting who huddle tightly over weighty tomes and smoking crucibles. Within the frame, the chymist's bodily animation contrasts also with the quiet stillness of the space, and in particular with the silent figure, cast in darkness, behind him. Obscured by shadow, a woman stands apparently weeping, a black cloth held to her eyes with her left hand. While the seated male chymist is turned to the left of the canvas, the erect female is turned towards the right, conforming to the pattern of male-female opposition characteristic of chymical genre painting. Clothed in a white cap and collar, this emotional female character is incongruous in this professional, male realm. In stark contrast to the wide-eyed and open male face of the chymist, this female visage is closed, half hidden behind a swathe of fabric. Her head is tilted down and her visible eye is shut; she is the embodiment of female distress. Although *furor uterinus* could potentially explain the condition of the patient, perhaps a more obvious diagnosis is that of illegitimate pregnancy. The expressly female anguish, in addition to the scrutiny of the sample, undoubtedly contains connotations of unwanted pregnancy. This theme of fertility is echoed in the uniquely bulbous furnace breast, and the similarly womb-like stills, which are prominently located and precisely executed throughout the painting.⁵²

A very similar configuration occurs in a painting held by the San Diego Museum of Art.⁵³ *An Alchemist* (Fig. 41), which this thesis attributes to Mattheus van Helmont, replicates almost exactly the weeping female figure of *A Physician-Alchemist Examining a Urine Flask*.⁵⁴ A prolific painter of alchemical genre scenes, Mattheus van Helmont belonged to an extended family of Netherlandish artists.⁵⁵ Son of a master painter, van Helmont was born in Antwerp in 1623, and registered with the Antwerp Guild of St. Luke in 1645. In 1649 he married

⁵² Warlick, in particular, has acknowledged the "anthropomorphic function" of furnaces in alchemical imagery and philosophy, writing that "a comparison between a woman's body and a furnace can be seen in an early eighteenth-century engraving from Urban Hjärne's *Actorum chymicorum holmiensium* published in Stockholm, 1712". She further observes that the alchemist's "careful control of the furnace's heat, in effect, simulates a pregnancy". Warlick, 2002: 188.

⁵³ Mattheus van Helmont (formerly attributed to David Ryckaert), *An Alchemist*, c.1640, San Diego Museum of Art, California. Oil on canvas, 22 7/16" x 26 1/8". Provenance: gift of Mrs Henry A. Everett 1932: 094.

⁵⁴ This thesis considers San Diego's attribution of this work to David Ryckaert inaccurate. Overall this painting shares little stylistically or compositionally with the alchemical work of Ryckaert. Although the characterization of the balding alchemist with a bushy grey beard recalls Ryckaert's alchemists, it, like the rest of the scene, has much more in common with the work of Mattheus van Helmont. The repetition of key Helmontian topoi (straw, distinctive chair and idiosyncratic earthenware pot) gives further weight to this thesis' attribution of *An Alchemist* to Mattheus van Helmont. In her study of David Teniers, Jane P. Davidson analyses this painting and attributes it to Teniers. In her discussion of the work, Davidson states that "Teniers painted several other *Alchemists* in which he used the motif of the weeping wife", Davidson, 1980: 42. She adds in the footnotes "only two other instances are known in which David the Younger used this motif", Davidson, 1980: 127. In the course of extensive research, this thesis has been unable to identify any paintings by Teniers which include this motif. In correspondence with this author, Davidson has been unable to provide evidence in support of her assertion.

⁵⁵ For a biography of van Helmont see Thieme-Becker, 1996-97, 16: 353.

Margaretha Verstockt, and in 1674 the family moved to Brussels, where van Helmont joined the Guild of Painters. Fathering four children, the artist probably tutored his two painter sons, Jan and Gaspard. Stylistically his paintings recall the work of David Teniers the Younger and Adriaen Brouwer, while his subjects focus predominantly on the professions of alchemists, physicians and craftsmen. Although van Helmont's alchemical landscape is often characterized by idiosyncratic wisps of straw, along with the frequent reduplication of recognizable pots, pans, books and furniture, his scenes are relatively diverse in composition.

In *An Alchemist* a male uroscopist and female patient occupy the foreground, while the background teems with assistants attending chymical operations. The aging alchemist emulates the animation of his chymical counterpart in *A Physician-Alchemist Examining a Urine Flask*. Once again, his arms outstretched, the chymist examines a urinal as his sobbing, flushed patient waits desperately nearby. Like *A Physician-Alchemist Examining a Urine Flask*, *An Alchemist* has the central triangular formation typical of van Helmont's alchemical scenes.⁵⁶ Characteristically, the chymist is located in the centre of the canvas and represents the pinnacle of a structural triangle. The mounds of chymical debris, which originate in the lower corners of the painting, envelop the eponymous figure, forming the remainder of the compositional triangle. In nearly all of these paintings, this formula unequivocally denotes the protagonist role of alchemist. In both *A Physician-Alchemist Examining a Urine Flask* and *An Alchemist*, however, the apex is extended by the presence of the weeping female, who stands over the seated alchemist. Ostensibly, then, these paintings advance a new protagonist. Although the uroscopist, with long, grey beard and fur-trimmed robes is distinct from the alchemist in *A Physician-Alchemist Examining a Urine Flask*, the female figure is almost identical. Standing in the same position and dressed in the same sombre garb, the weeping woman in *An Alchemist* echoes her counterpart; her open eyes are the sole difference. An interesting addition to this painting is the inclusion of a dog which lies prominently under the chymist's chair. This is an unusual feature in alchemical genre painting and might encourage the identification of pregnancy in the portrayal of the weeping woman. In *Questions of Meaning*, Eddy de Jongh explores the emblematic signification of dogs in genre art. Isolating the lascivious meaning of the dog, he writes that "dogs are very common in the work of Jan Steen, especially in his depictions of dissipation and pregnant girls".⁵⁷

⁵⁶ For example, this triangular compositional device is evident in Mattheus van Helmont, *The Alchemist*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.02; Mattheus van Helmont, *A Savant in his Cabinet*, 167-, The Wellcome Library, London 45123i; Mattheus van Helmont, *Interior with an Alchemist Seated in Centre*, 16--, The Wellcome Library, London 45102i.

⁵⁷ De Jongh, 2002: 37. While, of course, the inclusion of a dog in *An Alchemist* does not confirm the pregnancy of the weeping female, it does contribute to the prevailing air of female sexuality in the painting.

A similar intrusion of female distress into a chymical space occurs again in Egbert van Heemskerck the Younger's *Man Examining a Urine Flask* (Fig. 42).⁵⁸ Born in Haarlem in 1634/35, Egbert van Heemskerck was an unusually distinctive painter of chymical scenes, having produced numerous paintings and etchings of chymists, physicians and barber-surgeons.⁵⁹ Probably trained under Pieter de Grebber, Heemskerck lived in Haarlem between 1653 and 1655, before embarking for Italy. On his return, the painter and draughtsman lived mainly in Amsterdam, but is recorded living near to The Hague in 1663 and in Weesp in 1667. A nomadic personality, Heemskerck travelled Europe and eventually settled in England in 1674, spending most of his time in Oxford and London. His subjects are typical of contemporary genre painting and include witchcraft, the Temptation of St. Anthony and Brouweresque scenes of peasant drinkers. The artist's depictions of Quaker meetings in England constitute his most original work. Egbert van Heemskerck died in London in 1704, leaving a painter-actor son of the same name. *Man Examining a Urine Flask* is typical of the Heemskerck style. Like many of his chymical scenes, this painting includes his signature creatures hanging hideously from the rafters. These Teniersian animals, which are characteristic of chymical paintings, are especially grotesque in Heemskerck's oeuvre, possessing particularly bulging eyes and monstrous mouths. Curiously, his creatures are often non-aquatic and non-reptilian, such as bats, and are, at times, entirely fantastic. This characterization extends to his human depictions, which, through jutting chin and protruding nose, afford a sense of caricature. Unimpeded by tradition, Heemskerck's work contains more female characters than most chymical genre paintings. This accounts, in part, for the focal female in *Man Examining a Urine Flask*.⁶⁰ Characteristic of Heemskerck's chymical work, this vibrant painting depicts a central male uroscopist with a female patient in a large workspace cluttered with pharmaceutical pots. The chymist is seated predictably at a desk, on which rests a large splayed book. Atop his angular, scowling face, sits a red, ermine-trimmed cap, which contrasts with his otherwise sombre attire. With his right hand he holds a urine flask towards a latticed window, and with his left he grasps the wrist of a young lady in an effort to read her pulse. As in *A Physician-Alchemist Examining a Urine Flask*, the male turns his back to the female, emphatically compounding the sense of gender segregation. The

⁵⁸ Egbert van Heemskerck, *Man Examining a Urine Flask*, date unknown, Wellcome Library, London 44713i. Oil on canvas, 63.5 cm x 76 cm. There were three successive generations of painters in the van Heemskerck family, each named Egbert. Sharing similar styles these three painters are often confused by critics. For clarification, these painters are Egbert van Heemskerck I or the Elder (1610-80), Egbert van Heemskerck II or the Younger (1634/35-1704) and Egbert van Heemskerck III (1700-44). Although the Wellcome Library is unsure which van Heemskerck painted *Man Examining a Urine Flask* this thesis attributes it to Egbert van Heemskerck II, due to its resemblance to his other chymical paintings held by the Chemical Heritage Foundation, Philadelphia.

⁵⁹ For more on the life and works of Heemskerck see Thieme-Becker, 1996-97, 16: 226.

⁶⁰ A survey of Heemskerck's work held by the Wellcome Library reveals an abnormally high proportion of central female characters in his blood-letting and physician scenes.

slight female figure, however, is the focal feature of the composition. With pale complexion, long bright red skirts and three-pointed hat, she is certainly an unusual ingredient in a chymical genre picture.⁶¹ With her head tilted down, she raises her blue apron to her face, notably again with her left hand, echoing the gesture of anguish in *A Physician-Alchemist Examining a Urine Flask*. To the right of the frame, a diminutive apprentice, using bellows to fan a distillation, engages the viewer with a slightly mischievous look. Behind the boy, an old man with both a staff and walking stick descends a short flight of steps. These peripheral characters, alongside the grotesque beasts dangling from the rafters, contribute to an air of unreality.

The same grouping is evident in two paintings by Godfried Schalcken, *Visit to the Doctor* (Fig. 43)⁶² and *Doctor's Visit* (Fig. 44).⁶³ Serving apprenticeships under Samuel van Hoogstraten and Gerrit Dou, Schalcken spent the first three years of his career in Leiden, returning to his native Dordrecht in 1665.⁶⁴ Much of his early work, which includes both *Visit to the Doctor* and *Doctor's Visit*, betrays the influence of Dou and the Leiden 'fine painters'. Inspired by Dou's devotion to academic subjects, the artist produced various visions of physicians, imitating the style and form of his second master. While these earlier years reveal an interest in the small-scale genre painting of his tutors, they also uncover a dedication to history painting. As his career evolved, Schalcken enjoyed international success, accumulating significant wealth and fame. A celebrated portraitist to the court at Windsor, Schalcken spent from 1692 to 1697 in England. Returning to the Netherlands, he settled in The Hague and died in 1706. In *Visit to the Doctor*, Schalcken reproduces the same kind of characterization manifest in *A Physician-Alchemist Examining a Urine Flask*, *An Alchemist* and *Man Examining a Urine Flask*. Facing an open window at the left of the frame, the fancifully attired seated physician holds aloft a flask of reddish urine. Behind him, a standing lady is turned in the opposite direction, dabbing an eye with an apron held, again, in her left hand. Although Dixon suggests that the lady is a sufferer of *furor uterinus*, the characterization meets few of the conditions outlined by *Perilous Chastity's* extensive research. The critic's conclusion rests primarily on the fact that the woman's left arm is raised to her breast, a gesture which might equally indicate distress.⁶⁵ However, in *Doctor's*

⁶¹ Due to the difference in style and its general compositional incongruity, this thesis suggests the patient's three-pointed hat to be a later addition.

⁶² Godfried Schalcken, *Visit to the Doctor*, 1669, Private Collection, Germany, on loan to Wallraf-Richartz-Museum, Cologne. Oil on panel, 13 3/8" x 11 3/8". Signed and dated: 1669 G Schalken.

⁶³ Godfried Schalcken, *Doctor's Visit*, c.1660-70, Royal Cabinet of Paintings, Mauritshuis, The Hague 161. Oil on panel, 35 cm x 28.5 cm. Signed: G. Schalken.

⁶⁴ For a comprehensive biography of Schalcken see Thieme-Becker, 1996-97, 29: 569-71.

⁶⁵ Another commentator suggests a possible correlation between the reddish urine and lovesickness, but also proposes pregnancy as the patient's potential condition. Sutton, 1984: 300.

Visit, a comparable painting examined by *Perilous Chastity*, Dixon conversely recognizes unwanted pregnancy in an analogous depiction of left-handed female anguish. In her description, she states:

The painting shows an otherwise healthy girl weeping at a doctor's office. She is accompanied by her angry father (or aged husband), and an impish little boy who makes a lewd hand gesture. The urine flask held aloft by the physician reveals the hazy image of an infant floating within it, confirming pregnancy as the cause of the woman's distress.⁶⁶

Yet, while identifying the ailment, she continues, "for the most part, the subject of pregnancy outside of marriage was rare. Its depiction in art would have been viewed by most people as offensive, even shocking".⁶⁷ Many historians, however, disagree; the sheer quantity of paintings, for example, portraying merry whores frolicking with clients surely undermines Dixon's assertion of Dutch sexual sensibilities in art.⁶⁸ Serving as visual sermons, subjects such as drunken pre- and extra-marital sex simultaneously indulged male fantasy while properly outraging Calvinist sensibilities.⁶⁹ Although illegitimate birth in the Dutch Republic was undoubtedly stigmatized, it is clear, even from Dixon's research, that pre-marital pregnancy was periodically the subject of genre painting.⁷⁰

As this thesis has thus far illustrated, women routinely represent a specifically 'female' quality in paintings of the chymical workshop. *A Physician-Alchemist Examining a Urine Flask*, *An Alchemist*, *Man Examining a Urine Flask*, *Visit to the Doctor* and *Doctor's Visit* are typical of countless paintings which sustain an allusion of gynaecology simply through the

⁶⁶ Dixon, 1995: 144-45.

⁶⁷ Dixon, 1995: 145. Earlier in the text, Dixon argues that it is unlikely "that the scandal of unwed motherhood would have been publicly memorialized in so many paintings, even in the relatively progressive Netherlands", Dixon, 1995: 7. This statement has already attracted some criticism. See Pelling, 1997: 85.

⁶⁸ Consider, for example, Jan Steen, *Couple in a Bedroom*, c.1668-70, Museum Bredius, The Hague; Hendrick Pot, *A Brothel Scene*, 1630, National Gallery, London; Judith Leyster, *The Proposition*, 1621, Mauritshuis, The Hague; Dirck van Baburen, *The Procureess*, 1622, Museum of Fine Arts, Boston. Recent criticism explores the boundaries of sexual sensibility in seventeenth-century genre art. Simon Schama, for example, also describes the "emphatic" eroticism of Steen's paintings of prostitutes in 'Housewives and Hussies: Homeliness and Worldliness' in *Embarrassment of Riches*, and contrasts the explicitness of Dutch genre art with the modesty of emblem books, Schama, 1991: 375-480. For more on the seventeenth-century "threshold of shame" see also de Jongh, 1968-69: 22-74; Nevitt, 2003: 1-20, 106-11. See, in particular, Fegan, 2000: 109-35.

⁶⁹ This duality of 'moralistic' paintings is explored to some extent by Eric Jan Sluijter in his analysis of Joachim Wtewael's seductive *Diana and Actaeon*, 1612. Sluijter, 1985: 61-72.

⁷⁰ Both H. Rodney Nevitt Jr. and Paul Vandebroek call attention to the sixteenth- and seventeenth-century images of peasant weddings that ridicule the pregnant bride, Nevitt, 2003: 231; Vandebroek, 1984: 79-124. For more on the status of illegitimate birth in early modern Netherlands see Nevitt, 2003: 6-7, 162-63; Ozment, 1985: 14-15. For discussion of the lost painting by Jan Steen of a uroscopist and female patient bearing the inscription, "Als ik my niet verzind is deze Meid met Kind" [Unless I am mistaken, this girl is with child], see de Groot, 1907-28.

assimilation of a female patient. However, the weeping women in these paintings do not signify *furor uterinus*. Indeed, these characterizations have little in common with the iconographical lovesick maiden. All the weeping women stand, while Dixon has observed that sufferers of *furor uterinus* are depicted “propped up in a chair or languishing in bed”.⁷¹ Most often, these lovesick women are clearly incapacitated, unable to leave their chambers. The weeping women examined in this chapter, by contrast, are certainly fit enough to venture into the chymical workshop. They are also simply, and typically drably, dressed, unlike the “well-dressed” casualty of *furor uterinus* who is “usually bundled under several layers of coverlets or is wearing a fur-trimmed jacket colored bright green or blue, or most often, a warm shade of peach or rose”.⁷² Similarly, *furor uterinus* victims are always “pale and listless”, a trait plainly absent in van Helmont’s and Schalcken’s portrayals of their distinctly flushed patients.⁷³

Failing to fit the criteria for *furor uterinus*, the weeping women of chymical paintings are neither dressed nor positioned as traditional ‘lovesick maidens’. Indeed, the erect and, therefore, physically able women in *A Physician-Alchemist Examining a Urine Flask*, *An Alchemist* and *Man Examining a Urine Flask* do not show any appearance of ill health. It is the contention of this chapter, therefore, that this motif of the weeping woman is in fact emblematic of illicit pregnancy. The diagnosis of pregnancy, rather than *furor uterinus*, has special significance within a chymical context.⁷⁴ The gestating female, as the previous section suggests, is a symbol central to chymical philosophy, describing the incubation of the Philosophers’ Stone or ‘Philosophical Child’. In her analysis of alchemical fertility emblems, Warlick observes, “alchemical texts make frequent references to the conception and growth of this child as paralleling natural processes of pregnancy and birth as they have been understood since classical times”.⁷⁵ Identifying images of female fertility in literature and iconography, Warlick expounds the significance of the pregnant woman in alchemical symbology in a brief analysis of *Atalanta Fugiens*’ Emblem XXII (Fig. 23). Introduced in the previous chapter, this illustration has generated exhaustive academic debate. Depicting a pregnant woman tending a fire, the emblem expresses the *albedo* stage of the *opus*. Warlick notes that “her pregnancy again mirrors the incubation that takes place in the vessel to form the Philosopher’s Stone”.⁷⁶ Interestingly, in her study of the emblem, Jayne Archer recognizes the significance of Maier’s “Women’s Work” not simply in the performance of housewifely duties, but in the

⁷¹ Dixon, 1995: 1.

⁷² Dixon, 1995: 1.

⁷³ Dixon, 1995: 1.

⁷⁴ For more on the parallels implicit to paintings of chymistry and uroscopy see Wolf, 2001: 223.

⁷⁵ Warlick, 2002: 187.

⁷⁶ Warlick, 2002: 190.

necessarily female labour of gestating “the alchemical ‘foetus’”.⁷⁷ Undoubtedly then, the inclusion of the pregnant female in a chymical context has special resonance. Whereas the weeping female initially appears inconsistent with her male surroundings, alchemical philosophy offers specific congruity. Indeed, the occurrence of this fertility theme alongside female tears compounds the chymical allusion. Tears, which have several alchemical meanings, are evoked vividly in Sir George Ripley’s ‘Cantilena’. Here, the Queen, who is “great with child”, “bath’d herself with the Teares which she had shed”.⁷⁸ The resemblance of this image to those delineated by the later genre artists, affords the attendance of the weeping pregnant women even greater chymical significance. These accumulated references therefore confirm the paintings’ chymical space as one of generation.

2.2 The Homunculus

This theme of generation assumes auxiliary significance in *Doctor’s Visit*, as pregnancy is not necessarily the sole implication of the floating miniature. Although *Perilous Chastity* provides a conclusive and comprehensive analysis of *Doctor’s Visit*, Dixon’s interpretation of pregnancy rests principally on a single distinguishing feature: the hazy presence of a tiny human figure within the sample. Ironically, however, it is this precise inclusion which potentially fuels the ambiguity of such scenes. In the seventeenth century the homunculus, or miniature man, in a sample would undoubtedly have signified pregnancy, just as tiny dogs would indicate rabies.⁷⁹ But within a chymical context the presence of the homunculus transcends pure gynaecology. Throughout the early modern period, the mythologized homunculus was of immense alchemical significance.⁸⁰ A symbol of the Philosophers’ Stone, the homunculus, like the infant discussed in Chapter II, is an integral part of ancient alchemical lore. While it serves several functions on a purely metaphorical plane, the homunculus is, concurrently, a very literal component of exoteric alchemy. By the seventeenth century, the physical homunculus resonated as a specifically Paracelsian principle. In an archetypal grand gesture, Paracelsus claimed to have artificially created a little man in an alembic. The powerful, pseudo-maternal relationship between the homunculus and alchemist is described in the Paracelsian treatise *De Vita*: “a homunculus is generated like in all respects in body, blood, principal and inferior members to him from

⁷⁷ Archer, 1999: 5.xi.

⁷⁸ ‘Cantilena’ in *Incipit Tractatulus de phenice sive de Lapide philosophico*, London, British Library, Additional MS 11,388, Collection of Francis Thynne, (stanza 188). Cited in Abraham, 2001: 198.

⁷⁹ Sigerist, 1946: 136–43.

⁸⁰ For more on the alchemical homunculus see the work of William R. Newman, in particular Newman, 1999: 321–345; Newman, 2004: 164–236.

whom it issued".⁸¹ Fashioned in a flask from human seed, the homunculus represents an evolved humanity, improving on man, just as alchemical gold improves on natural gold. With higher intellectual powers and spiritual status, the diminutive figure in alchemical tradition represents the Christ child. As an alchemical concept, the homunculus had a remarkably wide recognition. European literature of the sixteenth century and beyond reveals broad lay appreciation of the subject. Famously, Shakespeare's Sonnet CXIV evokes the image of the chymical homunculus in a debate over truth and flattery:

Or whether shall I say mine eye saith truth,
And that your love taught it this alchemy,
To make of monsters, and things indigest
Such cherubins as your sweet self resemble.⁸²

Comprehension of the chymical concept was widespread and further literary expressions designed for the uninitiated include Goethe's *Faust*, in which the protagonist attempts to create a homunculus in a scene purportedly based on Paracelsus' *De Natura Rerum*.⁸³ Achieving such currency in the public imagination, the homunculus must surely have evoked the alchemical realm in the mind of a seventeenth-century viewer. *Sans mater*, the creation of the homunculus by the adept is a quintessentially male process, in which the mother is supplanted, even negated, by the father. A painting, then, which may be viewed initially as unambiguously feminine is transmuted into a wholly male vision.

The dichotomic nature of the chymical homunculus is encapsulated by a painting by David Ryckaert III.⁸⁴ David Ryckaert, whose life and works are introduced in greater detail in Chapter IV, was born in Antwerp in 1612.⁸⁵ Specializing in genre scenes, Ryckaert produced some of the most accomplished and unique chymical paintings of the seventeenth century. An unusually atmospheric work, *Scholar with Homunculus in Glass Vial* (Fig. 45) depicts a small space, possibly a physician's study or chymical workshop, and anticipates later eighteenth-century romanticized alchemical visions, such as Joseph Wright of Derby's celebrated *Alchymist in Search of the Philosopher's Stone Discovers Phosphorus*. A single candle, the solitary light source, rests on the chymist's desk, casting vast, menacing shadows onto the wall behind the two central figures. Dramatically illuminating a skull, globe and

⁸¹ Paracelsus, 1924: 334.

⁸² Shakespeare, Sonnet CXIV. Wells and Taylor ed., 1995: 765.

⁸³ Gray, 1952: 206-14.

⁸⁴ David Ryckaert, *Scholar with Homunculus in Glass Vial*, c.1649, on loan to Reiß-Museum der Stadt Mannheim. (Property of the Land Baden-Württemberg, loan of the Staatliche Kunsthalle Karlsruhe). Oil on panel, 59.1 cm x 78.8 cm. Provenance: Mannheim, Schloss, Großherzogliche Gemäldegalerie.

⁸⁵ As the work of David Ryckaert III forms the foundation of Chapter IV, an extended biography and introduction to his work can be found there. See Chapter IV: 156-58.

tipped pharmacy pot, the golden flame reveals a bereted, fur-trimmed chymist, to the side of whom stands an aged woman. Crouching in the lower right corner of the painting a young child inflates a bladder, in an emblematic expression of vanitas. Eyebrows arched and mouth agape, the chymist stares incredulously at the flask he holds in his left hand. The withered woman, with greying cap and apron, clasps her hands and lowers her head in a pose which mimics pious supplication. Together they gaze into the glass vial which clearly holds a tiny, skeletal, human figure.⁸⁶ Its arms outstretched towards the giant face of the chymist, the homunculus is an animated manikin with its head inclined towards his seeming creator. There is no indication here that the flask, as in *Doctor's Visit*, contains a urine sample. There is no young, ailing patient to suggest either pregnancy or illness and there is no evident flask basket to indicate the transportation of a sample. Instead, a highly sensationalized composition, *Scholar with Homunculus in Glass Vial* presents an alternative reading of the homunculus in a scene charged with chymical significance.⁸⁷ However, while the Paracelsian theme of the homunculus is certainly implicit in Ryckaert's work, the ambiguities of the scene raise, rather than resolve, issues of subject. The chymist's expression might equally express either horror at the discovery of pregnancy in an old woman or awe at having created the chymical homunculus.

2.3

In its survey of three similar paintings, this section has examined the uroscopist of the chymical workshop, exploring the potential transmutation of the traditional alchemical womb imagery into genre art. *A Physician-Alchemist Examining a Urine Flask, An Alchemist and Man Examining a Urine Flask* betray no evidence of the *furor uterinus* so common to paintings of the maiden's sickroom. Instead, the gynaecic symbology encompassed by any seventeenth-century portrayal of female uroscopy is here subtly manipulated towards a more exacting allusion. Powerfully compounded by the theme of generation at the core of chymical cultural tradition, these weeping women inevitably insinuate pregnancy. Imbued with a prevailing sense of female fertility, these paintings of the male iatrochemist and female patient feasibly maintain the ancient iconographical tradition of the alchemical family explored in Chapter II of this thesis. Potentially, then, the prevalent weeping woman of genre painting, then, is another complex reincarnation of the White Queen and Philosophical Child.

⁸⁶ The alchemical homunculus is sometimes depicted as a tiny skeleton in alchemical literature. See, for example Heinrich Khunrath's 'Treuhertzige Wahrungs-Vermahnung an alle wahre Alchymisten, sich vor den betrügerischen Arg-Chymisten zu hüten' which also describes the homunculus' predilection for velvet sleeping bags and chairs. Khunrath, 1708: 280-81. With thanks to Hereward Tilton.

⁸⁷ The small child in the lower right corner may be perceived as a traditional alchemical emblem of the Philosophers' Stone, thus reinforcing a potential chymical reading of the work.

In an exceptional mutation of the uroscopic theme, however, Ryckaert offers two conflicting gendered readings in his provision of the homunculus. The uniquely male vision describes awe-inspiring scientific and spiritual triumph in the depiction of wholly paternal propagation.⁸⁸ Conversely, the female vision expresses the natural triumph of the mother. Ryckaert's appropriation and manipulation of a theme already burdened with ambiguity typifies the methodologies of alchemical artists. In all these paintings, the intricate complexities and contradictions of alchemy are visually manifest in scenes of the chymical-uroscopist: little is explicit, yet so much is implied. In a unique expression of the elixir, Ryckaert's hermaphroditic and paradoxical vision of simultaneously male and female quintessence is a triumph of alchemical art and its essential mysticism. As the final chapter of this thesis suggests, the impact of Ryckaert's paintings depends not on explicit delineation of subject, but conversely on latent, embryonic insinuation of theme.

Uroscopic Emblemata in an Alchemical Tradition

3.0

Interpreting the female as a symbol of fertility, the preceding section illustrates the way in which artists depicting the iatrochemical workshop embraced the alchemical tradition of reiteration and reference. Resuming this train, the remainder of this chapter explores the development of a motif specific to uroscopic genre art. Reviewing the work of Gerard Thomas and Balthasar van den Bossche, this section uncovers the iconographical Red King and Blue Queen central to dozens of uroscopic-chymical genre paintings. Offering a potential source for this image, this study demonstrates how the governing conventions of ancient alchemical art forms are maintained within the context of seventeenth-century genre painting. In addition, this section traces the devolution of this motif and the gradual disintegration of its regulating conventions.

It is important to enter a cautionary note. Significant doubt lingers over the authorship of many of the paintings discussed in this segment. Both the Wellcome Library and the Chemical Heritage Foundation possess works attributed to Gerard Thomas and Balthasar van den Bossche. However, it is recognized by members of both institutions that this cataloguing is potentially incorrect. For the purposes of this thesis, works which have been signed will be

⁸⁸ For more on the connotations of male domination implicit in the concept of the homunculus see Newman, 1998: 218-20; Allen and Hubbs, 1980: 213.

acknowledged accordingly. Examples which have been accredited alternately to both Thomas and van den Bossche will be identified in line with the holder's current ascription.

Stylistically similar, Thomas and van den Bossche were both working towards the end of the seventeenth century and during the early years of the eighteenth. Born in Antwerp in 1663, Gerard Thomas was a pupil of Godfried Maes in 1680, registering with the Guild of St. Luke in 1688/89.⁸⁹ A genre and portrait painter of some repute, Thomas took as his subject the alchemist's laboratory and artist's studio. Interestingly, Thomas' leaning towards chymistry in his paintings has been attributed to the artist's own training in alchemy.⁹⁰ Also born in Antwerp, van den Bossche was one of Thomas' numerous pupils.⁹¹ After leaving his master's studio he travelled and worked in France before moving back to Antwerp in 1706. Like Thomas, van den Bossche specialized in genre painting, but he also produced historical scenes and portraits, along with an occasional miniature. Specializing in the portrayal of professions, van den Bossche imitated his master in subject as well as style, depicting chymists, doctors, and artists to acclaim. The remarkable similarity between the works of this master and pupil is widely acknowledged and the cause of extensive misattribution.

It is also important to note at this juncture that few paintings by Thomas and van den Bossche are dated. In this final part, three paintings by either the artists or their followers are used to trace the evolution of a gendered motif. While none of these paintings is officially dated, with the collaboration of external advisors, these three works have been placed confidently within a basic chronological order.

3.1 *Science*

Unsurprisingly, the reduplication of symbols, characters and themes is common in the paintings of Thomas and van den Bossche. While the artists borrow newly invented components from each other's work, like all alchemical genre artists they also draw from an established network of reference. Attributed alternately by the Chemical Heritage Foundation to either Thomas or van den Bossche, *Science* (Fig. 46) exemplifies the artists' general dependence on purloined elements.⁹² Significantly, this work illustrates the custom of duplicating entire scenes; representative of several paintings, *Science* is almost identical to

⁸⁹ For a comprehensive biography of Thomas see Thieme-Becker, 1996-97, 33: 62-63.

⁹⁰ Thieme-Becker, 1996-97, 33: 62.

⁹¹ For a biography of van den Bossche see Thieme-Becker, 1996-97, 4: 401.

⁹² In the style of Gerard Thomas, *Science*, late seventeenth century, Chemical Heritage Foundation, Philadelphia 00.01.265. Oil on canvas, mounted on board. 32" x 48". Provenance: gift of Fisher Scientific International; Sotheby's, London, 26 April 1929, lot 110; Lord Acton.

van den Bossche's *Physician in his Study* (Fig. 47)⁹³ and Thomas' *A Physician Examining a Urine Flask #1* (Fig. 48).⁹⁴ Specifically, *Science* and its companions represent the earliest inclusions of a gendered motif developed through this late seventeenth-century partnership. Recurring with significant frequency in the uroscopic-chymical paintings of Thomas and van den Bossche, the central, character-based motif of *Science* forms the basis for the following study.

This thesis contends that *Science* was produced in the late seventeenth century, probably around 1690. Including numerous Teniersian elements the painting was clearly executed post-1670. However, *Science* contains strong indications of a pre-1700 genesis. The background of the painting is unmistakably evocative of the seventeenth century. A traditional seventeenth-century scene, the workshop includes a host of auxiliary workers and apprentices, fuelling separate distillations and experiments. Typically, the room is segregated into different work areas. There are few female characters and, significantly, the overall appearance is one of mundane, everyday activity. Although the scene contains formulaic chymical motifs, they are arranged in an unobtrusive manner: the reptile dangling from the ceiling is essentially inconspicuous, while the head peeping through the wooden hatch is easy to miss. This quiet assimilation of motifs is typical of seventeenth-century genre painting. As this chapter will show, by the first decade of the eighteenth century, chymical genre paintings had become notably self-conscious. The subject developed an overt sentimentalism, which pastiched traditional chymical symbols in a manner completely absent from *Science*.

Perhaps the key indication that *Science* belongs to the seventeenth century is the configuration of the chymist. The structure of the scene adheres closely to a seventeenth-century convention which became less common into the eighteenth century. In its arrangement of the central characters, *Science* creates a clear triangular shape reminiscent of van Helmont's alchemical scenes. Like van Helmont's paintings, *Science* positions the chymist in the centre of the canvas, as the pinnacle of a structural triangle, which reaches from the two lower corners of the frame. The raised urinal extends the apex of the triangle, identifying the chymist as the protagonist. This construction became increasingly rare into the eighteenth century. Aside from the inclusion of the female patient, there is no possibility of subsidiary narrative; in the eighteenth century the chymist's workshop was frequently exploited as a vehicle for other, often nostalgic themes. Here, however, routine chymistry is the primary

⁹³ Balthasar van den Bossche, *Physician in his Study*, late seventeenth century, Wellcome Library, London 47325i. Oil on canvas, 86 cm x 120.5 cm.

⁹⁴ Gerard Thomas, *A Physician Examining a Urine Flask #1*, late seventeenth century, Wellcome Library, London 47322i. Oil on canvas, 69.5 cm x 87.6 cm. Signed: *G. Thomas*.

theme of the painting. In summary, therefore, *Science* is entirely characteristic of the final decades of the seventeenth century.

Depicting a landscape view of a thriving workshop, *Science* is reminiscent of countless seventeenth-century chymical genre paintings, but is principally evocative of David Teniers. This wholly familiar, formulaic scene is comprised almost entirely of 'borrowed' elements from earlier, mainly Teniersian, paintings. The two elongated animal skulls which adorn the wall towards the right of the frame occur in numerous works by Teniers and later chymical painters. *An Alchemist's Laboratory*⁹⁵ by a follower of Teniers includes the precise arrangement of portable furnace, distinctive detailed brick furnace and skulls, while Teniers' *Alchemist* features other individual compositional elements.⁹⁶ The dark-capped assistant with tan leather smock in the background of *Science* with the large pestle and mortar appears earlier in *An Alchemist's Laboratory* by a follower of David Teniers, as well as in Teniers' *Alchemist in his Workshop*⁹⁷ and again in Thomas' *Alchemist*.⁹⁸ The specific arrangement of the peeping head, Teniersian iguana and shelving in the upper quarter of the painting can be found originally in Thomas' *Alchemist*. The distinctive distillation of *Science* also recurs in this early group of paintings. In the lower left foreground is the combined apparatus of a cucurbit, alembic, portable balneum Marie and Moor's head.⁹⁹ While this arrangement of equipment, probably sourced from the work of David Teniers, appears in innumerable genre scenes, it recurs with especial regularity in paintings of the chymical-uroscopist. The exploitation of earlier efforts in the creation of iatrochemical scenes typifies the developmental processes central to chymical art. Regardless of its contrived, composite nature, *Science*, unlike many comparable paintings, improbably maintains cohesion, melding its disparate elements into a single, unified vision. Its most unlikely triumph, however, lies in the seamless absorption of its central motif, a gendered image which captures the essence of chymical symbology while adhering to an alchemical iconographical convention of reiteration and reference.

⁹⁵ Follower of David Teniers, *An Alchemist's Laboratory*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.18.

⁹⁶ David Teniers, *The Alchemist*, date unknown, Chemical Heritage Foundation, Philadelphia 00.01.286.

⁹⁷ David Teniers, *Alchemist in his Workshop*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.23.

⁹⁸ Gerard Thomas, *The Alchemist*, date unknown, Chemical Heritage Foundation, Philadelphia 00.01.283.

⁹⁹ The 'balneum Marie' or 'bain-marie' was reportedly invented by Maria the Jewess. Still used in kitchens today, the 'bain-marie' was essentially a double boiler, a vessel of hot water into which was placed a further receptacle. This process enabled the slow and gentle heating of liquids. The Moor's head was a curved vessel or lid used in the distilling process.

Featuring in several extant iatrochemical paintings, the centrepiece at the heart of the scene was exploited by artists far into the eighteenth century. Draped upon a table is a rich red and blue oriental carpet, a staple of Netherlandish genre scenes. Objects sitting on the rug include an inkwell with quills, scrolls and books, and a Galenic text propped open, resting against a terrestrial globe. On the ground close to the desk stands a large celestial globe, decorated ornately with a bear, scorpion and other constellations. The primary component of this motif, however, is the couple standing amongst this jumble of paraphernalia. Within the distinctly chymical context, a physician conducts a uroscopy, tilting a flask of urine towards the unseen light. His eyes raised to the red-tinted sample and his left hand held palm up, this white-haired chymist is a portrait of scholarly scrutiny. His is an unusually ostentatious figure: the bright red and blue of his scholarly robes and cap resonate powerfully with the equally vibrant carpet. The colourly intrusion of the carpet into the chymist's clothing compounds his dominance in the space, increasing his sense of authority. Beside the chymist stands a woman, probably the patient. Mirroring her male counterpart, she peers out from a thin, white cap to the sample held aloft. Reflecting the iatrochemist's expression of gravity, her mouth is turned downwards and her brows are gathered. From her arm hangs a flask basket and, as with many of these characterizations, her hands are folded in front of her waist. She wears a tawny-coloured dress, with lace detail collar. Tied about her middle is a distinctive blue apron; as the light catches the folds of the apron, it seems to illuminate a bulge, suggestive of a pregnant swollen belly. Finally, the characterization is completed by bright red cuffs and shoes, which correspond dynamically to the tonality of the chymist and carpet, compounding the cohesion of this complex composite scene. The mirroring of expression and position, together with the equivalence of stature and chromatic empathy, promotes an unusual atmosphere of equilibrium. The gender division emanating from portrayals of weeping women and detached uroscopists is here replaced with reconciliation and harmony.

This gendered motif of the red and blue uroscopist and patient occurs with some adaptation in two paintings held by the Chemical Heritage Foundation and at least six in the Wellcome Library.¹⁰⁰ Numerous others are held by museums and galleries, and in private collections around the world.¹⁰¹ The motif is frequently incorporated in its entirety with globes, Galenic or Hippocratic text and carpet arranged with precise adherence to the composition of *Science*. While the source of this popular doctor-patient motif cannot be traced with conviction in

¹⁰⁰ These paintings include Gerard Thomas, *A Physician Examining a Urine-Flask*, date unknown, Wellcome Library, London 44744i. Oil on canvas, 56.5 cm x 46.8 cm.

¹⁰¹ These include Gerard Thomas, *The Alchemist's Workshop*, date unknown, Galleria Varotto, Rome; After Gerard Dou, *Old Woman with a Doctor*, date unknown, Hermitage, St. Petersburg 889.

genre art, its remarkable resemblance to an immensely popular alchemical image offers an interesting theory as to its development.

3.2 The *Splendor Solis*

In its conclusion, Chapter II of this thesis introduces Plate IV of the beautifully illustrated sixteenth-century treatise the *Splendor Solis* (Fig. 35). Existing in various forms, the *Splendor Solis* contains probably the most beautiful of all alchemical illustrations.¹⁰² The earliest version, believed to date from 1532-35, is a finely wrought manuscript, consisting of twenty-two highly ornate plates.¹⁰³ Together these symbolically relate the elements and processes of the *magnum opus* in a typically cryptic manner. Eleven early copies of the *Splendor Solis* survive in various forms and languages, indicating the extent and variety of its production. Capturing the marriage of opposition, Plate IV depicts the meeting of the Solar King and Lunar Queen in the most finely executed representation of the chymical marriage in existence. This celebrated illustration offers a unique angle through which to understand the red and blue doctor-patient motif in the paintings of Thomas and van den Bossche.

The magnificent, majestic coupling presented by the *Splendor Solis* bears striking resemblance to the humble doctor-patient construct of genre painting. Taking *Science* as a model, the following analysis expounds the relationship between the red and blue doctor-patient motif and the Red Sol King and Blue Luna Queen of the famous Plate IV.

The most obvious parallel between the two couples is their positioning: the male and female in both compositions are situated centrally, with the woman on the left and the man on the right. In both configurations, the couples stand; they are not physically touching, but are turned inwardly towards one another. Although this physical arrangement is typical of emblematic alchemical art in manuscripts, it is surprisingly rare in early modern Netherlandish painting. This parallel in the physical positioning of the sexes extends to the individual portraits of the male and female. The Lunar Queen and *Science*'s female patient,

¹⁰² Berlin, Preussischer Kulturbesitz Staatliche Museen Kupferstichkabinett, MS 78 D 3 (1531-32); Nuernberg, Germanisches Nationalmuseum, MS 146766 (1550); Paris, Bibliotheque Nationale, MS German 113 (1577); London, British Library, Harley MS 3469 (1582); Switzerland, Private Collection (1582); Kassel, Landesbibliothek, MS 8vo Chym. 21 (1584-88); Berlin, Staatsbibliothek Preussischer Kulturbesitz, MS Germ. fol. 42 (c.1600); Amsterdam, Bibliotheca Philosophica Hermetica, MS 304 (seventeenth century). In addition three early copies exist without illustrations: Wolfenbüttel, Herzog Augustbibliothek, Cod. Guelf. 43 Aug. 4to. (1578); Leiden, University Library, Cod. Voss. Chym. Q.17. (1588-95); Prague, Archive Hradschin, MS 1663, O.19 (probably end of sixteenth century).
With thanks to Adam McLean.

¹⁰³ Trismosin, *Splendor Solis*, Berlin, Preussischer Kulturbesitz Staatliche Museen Kupferstichkabinett, MS 78 D 3 (1531-32).

for example, both appear pregnant, with bulging bellies. Crucially, the palette of red and blue employed in the seventeenth-century depiction of the patient and doctor is shared by the *Splendor Solis*. The red and blue robes of the Red King resonate powerfully with the garb of the physician, while the same idiosyncratic colours appear in the dress of the Queen and patient. These analogous features occur in every known coloured version of the *Splendor Solis* and in countless reconfigurations of the Thomas/van den Bossche doctor-patient motif. Thematically, of course, the two illustrations also share the fundamental allusion to fertility; as the uroscopy of the doctor and patient alludes to the generation of the child, so too the *conjunctio* of Sol and Luna alludes to the generation of the Philosophical Child. Thomas' interest in alchemy and the wide repute of the *Splendor Solis* in the seventeenth century certainly allows the conjecture that the genre motif evolved from this chymical source. Jacques van Lennep, having researched all surviving early versions, has commented on their wide appeal, contemporary popularity and longevity. Noting that Trismosin's work was "très réputée dès le XVI^e siècle",¹⁰⁴ Lennep suggests, "ce manuscrit, dès qu'il fut enluminé, jouit d'une très grande réputation, si l'on en juge par le nombre de ses copies jusqu'au XVIII^e siècle".¹⁰⁵ Considering the reputation of the text, Thomas' reputed role as an alchemist and the contemporary lay interest in alchemy, it is feasible that these genre artists drew directly from the *Splendor Solis*.

Although the *Splendor Solis* hypothesis is, of course, speculative, it is clear that the earliest genre incarnations of the motif are more emphatically chymical in construct than those of later eighteenth-century painting. Essentially, earlier manifestations, like that of *Science*, adhere to patterns of construction which reflect chymical traditions and philosophies; chromatic, formal and theoretical balances are consistently maintained in accordance with the ancient traditions of alchemical emblematic art. Naturally, this study recognizes the wider context of the doctor-patient ensemble and acknowledges that its conspicuous success undoubtedly derived primarily from its de Lairessian emotional content, narrative quality and combined sexual and moralistic subtext.¹⁰⁶ However, the significance of the image to this study lies principally in its mutation from and evolution within a chymical context; its fragmentation and eventual extinction uniquely chart the gradual demise of chymical painting and the formal constructs contained therein.

¹⁰⁴ Translation: "very famous as of the sixteenth century." Van Lennep, 1990: 111.

¹⁰⁵ Translation: "This manuscript, as soon as it was illuminated, enjoyed a great reputation, if one judges by the number of copies made up until the eighteenth century." Van Lennep, 1990: 111.

¹⁰⁶ Seventeenth-century Netherlandish theorist Gérard de Lairese locates artistic proficiency in the successful portrayal of multifaceted human emotion, de Lairese, 1707. In his article on de Lairese, Claus Kemmer intimates that scenes of sickroom uroscopy offer the genre artist a unique vehicle for the communication of such "driftige beweeginge" [intense emotions], Kemmer, 1998: 87-115.

The following section thus surveys the corruption of the doctor-patient image in paintings that reflect the changing sensibilities of the Netherlands.

3.3 *A Physician Examining A Urine Flask #2*

An early corruption of the gendered emblem occurs in a painting signed by Gerard Thomas. *A Physician Examining a Urine Flask #2* (Fig. 49) appears to have been produced on the cusp of the eighteenth century.¹⁰⁷ Neither strongly indicative of the seventeenth nor eighteenth century, this scene broadly conforms to seventeenth-century conventions of composition while incorporating motifs suggestive of the eighteenth. While *A Physician Examining a Urine Flask #2* contains many of the elements of *Science*, they are arranged in a less cohesive manner. The large furnace in the background is unusually marooned in the middle of the room; in seventeenth-century depictions of workshops, permanent furnaces are located against walls. Additionally, the Italianate column in the near-centre of the painting is atypical of seventeenth-century Southern Netherlandish chymical paintings. Likewise, the Roman bust included on the left fringes of the scene is also highly irregular. The integration of such alien components usually reflects an eighteenth-century disinterest in the boundaries established by the paintings of the previous century.

The insertion of additional focal female figures is also generally indicative of a later date. With an increased number of prominent people, the focus has shifted from the chymist to the relationships between the characters and their implicit dialogue. This modification reflects the narrative quality typical of later chymical paintings. Additionally, the structural precision of *Science* has been replaced by a more organic arrangement, which also anticipates the liberal approach of eighteenth-century chymical artists. Thomas' work, therefore, represents the origins of eighteenth-century romanticization, in which the pretence of 'everyday' life is abandoned completely. However, while *A Physician Examining a Urine Flask #2* includes select eighteenth-century signifiers, the overall scene maintains the allusion of the traditional seventeenth-century workshop: the dimensions, decoration and organization of the workshop are characteristic of the seventeenth century. Considering this amalgamation, this thesis suggests that *A Physician Examining a Urine Flask #2* was painted around 1700.

¹⁰⁷ Gerard Thomas, *A Physician Examining a Urine Flask #2*, c.1700, Wellcome Library, London 45026i. Oil on canvas, 68.4 cm x 85.5 cm. Signed: *G. Thomas. Fecit.* Provenance: formally accessioned into Wellcome collection 1 May 1947; Christie's stencil 257 DJ; Lord Ashbrooke's Collection 1 November 1847.

A Physician Examining a Urine Flask #2 portrays a key stage in the evolution of the doctor-patient motif, essentially representing the transition between seventeenth- and eighteenth-century perceptions of alchemy and uroscopy. In this example, all elements of the icon are retained, yet rearranged. The setting shares some similarity to *Science*, with numerous assistants labouring in the background towards various chymical endeavours. Two distinguishing features of the painting are a sculptured bust and a red-capped child assistant carrying a clay vessel in the lower right corner.¹⁰⁸ The critical difference between the paintings, however, is in the relocation and rearrangement of the key doctor-patient motif. Undermining the compositional conventions of the *Splendor Solis*, *A Physician Examining a Urine Flask #2* transfers the key male and female figures from a central to marginal position. The uroscopist is no longer standing, but is seated at a desk bearing the standard celestial globe, imported carpet, scroll and large Galenic tome. Raising the urine flask with his right hand and gesturing with his left, the upper body of Thomas' chymist replicates the protagonist in *Science*. However, this similarity extends only so far, as the bodily equilibrium evidenced in *Science* is replaced by awkward and asymmetric contortion. The uroscopist's torso is strikingly twisted, with his head and feet pointing in opposite directions; his red slippered feet and knees point towards the right of the frame, while his face cranes towards the left. Lingering in his shadow, the female patient is just within the chymist's eye-line. While the clasped hand gesture, hanging flask basket, frilly white collar and blue apron are elements typical of such characterization, much of the female figure has been transformed. As she stares towards the bulbous flask, her expression no longer conveys anxiety, but apparent passivity. Facing the open window, the light catches her apron, illuminating the same abdominal area emphasized in *Science* and the *Splendor Solis*. The bulge, however, is newly exaggerated; the clasped hands above the belly and profiled positioning reinforce the allusion of pregnancy.

While the defining elements of the original motif are preserved, their reorganization undermines the equilibrium inherent to *Science* and its replicas. Whereas in *Science* the focal arrangement of the doctor and patient reinforces the unity of the composition, their positioning in *A Physician Examining a Urine Flask #2* disrupts the balance of the entire painting. As the uroscopist is bodily opposed to the patient, so too is the patient newly repelled by the uroscopist. Where in *Science*, and indeed the *Splendor Solis*, the couple are habitually pulled towards each other, here both are inclined to polar directions, with the

¹⁰⁸ This vessel-bearing, red-capped child figure occurs in several reincarnations, for example, in Balthasar van den Bossche, *The Alchemist in his Workshop*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.29 and School of David Teniers, *Standing Alchemist in his Laboratory*, date unknown, Chemical Heritage Foundation, Philadelphia 00.01.266. The character also appears in both Thomas' and van den Bossche's non-chemical work.

patient gravitating towards the window. The innate equality of the original coupling is corrupted further through posture: as the male sits, the female stands and where he is in front, she is behind. This fundamentally unbalanced pair echoes the conflictive couplings of those discussed in Chapter I, rather than the symbolic gendered synthesis of the *Splendor Solis*. This division of the sexes is fortified by the introduction of a previously unseen figure. Standing behind the chymist is another woman, presumably the patient's chaperone or mother. Decked in sombre garb, this wizened woman wears a black hat and dark dress, fading somewhat into the background. An unremarkable and ostensibly minor figure, this additional female fatally disrupts the gender balance, confirming a new segregation and disorder operating within the modified motif.

Simultaneously, as the repositioning of these core characters interrupts their equilibrium, it also undermines the dramatic tension of the scene. As the emphasized belly intimates the subject, the presence of the additional character effectively removes any ambiguity surrounding the identity of the central female character, confirming the feminine positions of patient and chaperone. Imbued with mystery, seventeenth-century paintings of the chymical workshop traditionally reflect the shrouded sphere of the adept. By contrast, *A Physician Examining a Urine Flask #2* anticipates the eighteenth-century trend towards the explicit, in which mysticism is supplanted by transparency.

The adaptations to key imagery in *A Physician Examining a Urine Flask #2* signify dual advances in the public perception of alchemy and aesthetic taste. By the beginning of the eighteenth century, alchemy and its esoteric status had become somewhat embarrassing in the wake of new 'chemistry'.¹⁰⁹ Post-Paracelsian chemical medicine had spread across Europe, and by the turn of the century all prestigious medical faculties had chairs of chemistry.¹¹⁰ Leiden University incorporated chemistry into its syllabuses in 1669 and in the following decades its scholars published numerous texts on the subject. As new chemistry gained increasing credence into the eighteenth century, alchemy and Galenic medicine fell into its shadow. After 1700 the publication of alchemical literature in the Netherlands diminished, while Galenic texts evaporated entirely. Consequently, both alchemy and Galenic medicine appear infrequently in eighteenth-century art. Paintings which do emerge, however, tend to present alchemy and uroscopy as outmoded relics of a bygone age. Paralleling this decline was the degeneration of the conventions governing chymical genre painting. Adherence to the alchemical traditions diminished after 1700, as alchemy moved hesitantly from fact to fancy in the public imagination. Witnessing the terminal decline of emblematic chymical

¹⁰⁹ This evolution is discussed further in the conclusion of this thesis.

¹¹⁰ Debus, 1998: 79.

manuscript art, the eighteenth century also signalled the demise of chymical genre traditions. No longer interested in emblematic conventions and unfashionable crafts, the eighteenth-century art market was concerned primarily with narrative and character.

The subsequent, and final, stage in the development of this doctor-patient image is evident in countless paintings;¹¹¹ this study examines its progression into an ironically anti-chymical motif in a further painting entitled *A Physician Examining a Urine Flask #3* (Fig. 50).¹¹²

3.4 *A Physician Examining A Urine Flask #3*

A Physician Examining a Urine Flask #3 represents the absolute corruption of *Science's* doctor-patient motif. In the style of Gerard Thomas, this later painting recontextualizes the red-blue emblem, disrupting the gender equilibrium by unequivocally asserting the female over the male. Although the author and date of this work is unknown, this thesis locates its origin in the late first quarter of the eighteenth century.

In another broad view of the chymical workshop, assistants tend furnaces, while the iatrochemist performs a uroscopy. Recreated to an eighteenth-century taste, the original motif is barely recognizable in this painting. The only familiar element is the uroscopist, adorned with the customary red and blue robes, and sporting the addition of fur-trim. Indeed, the emblematic uroscopist deviates from the *Science* model only through the positioning of his left hand on a skull. This configuration is highly suggestive of the eighteenth century; very few earlier works would include such contrived and theatrical posturing. However, while the masculine element of the emblem remains constant, the female component has altered appreciably. Within the frame are not one, but four women: the patient, her daughter, possibly a chaperone and a maid. Swarming about the chymist, these women are dynamically animated, disrupting the motif's original stillness: the child waves a stick in her hand, the chaperone, caught in discussion, gesticulates and the maid seems to crane an eavesdropping ear towards her mistress. It is only the mistress, the patient, who keeps a static silence. But this is not the silent partner who appears in *Science*. Completely re-imagined, there are few remnants of her earlier incarnation. Although some of the empathetic colouring remains, the patient's clothing has transformed considerably: with hat and shawl, the female is bundled up in three heavy layers. The flask basket, which once hung on her arm, now hangs from a

¹¹¹ These include After Gerard Thomas, *A Physician-Virtuoso in his Cabinet, Examining a Flask of Urine Brought by a Lady*, early eighteenth century, Wellcome Library, London 45024i. Oil on canvas, 81 cm x 115.5 cm.

¹¹² In the style of Gerard Thomas, *A Physician Examining a Urine Flask #3*, c.1710-25, Wellcome Library, London 47323i. Oil on canvas, 62.7 cm x 81.5 cm.

nearby chair. The most significant development, however, is in the relationship between the patient and physician. As the iatrochemist gazes intently and seriously into the elevated sample, the patient undermines the dynamism of their original relationship by staring seemingly ambivalently into space, listening to her talkative chaperone.

Thus, the gender equilibrium of earlier paintings is replaced by male and female discord. The suspenseful silence implied by *Science* is here shattered by a chattering female servant. As the equilibrium breaks, so breaks the dramatic tension. All ambiguity is excised from the motif as the implicit is replaced by the explicit. The overt symbol of cupid suspended from the rafters replaces the cryptic reptile, unequivocally affirming the female protagonist as mother-to-be. The decline of both chymistry and traditional uroscopy hastened after the close of the seventeenth century. Concurrently, the established conventions of chymical genre art were increasingly abandoned as chymistry and uroscopy gradually lost credibility. *A Physician Examining a Urine Flask #3* testifies to the new sense of artistic freedom engendered by this inevitable waning and reflects an emerging romanticism of chymistry in art. Here the artist discards the conventional dirt floor of Teniers and van Helmont in favour of more impressive and fashionable eighteenth-century monochrome tiling. Similarly, a cat, dog and even a young girl prance charmingly about the workshop, figures which occur in earlier chymical paintings only occasionally and in isolation. Unlike its predecessor, *A Physician Examining a Urine Flask #3* dictates, rather than evokes, its narrative. Surrounded by not one, but four females the chymist and his male environs are emasculated. This mutation of a seventeenth-century motif subverts concepts inherent to the original: Sol and Luna are divorced in a quest for a fresh narrative.

3.5

In recent years art and chemical historians have argued that many painters, including Gerard Thomas, possessed firsthand knowledge of the chymical workshop. The accuracy with which Thomas, and other painters like Teniers, depict complex scientific operations and apparatus, suggests personal experience within a working laboratory. Historically, pictorial representation was instrumental in the development of chymistry and its philosophies, and many artists, genre and emblematic, developed a strong understanding of chymical symbology and its iconographical tradition. An interest in chymistry would certainly have uncovered the illuminated or woodcut plates of Europe's most popular illustrated alchemical text, and it is feasible, therefore, that the genesis of genre painting's doctor-patient motif lies in Plate IV of the *Splendor Solis*. There can be little doubt that the sequential corrosion of the doctor-patient motif represents the wider decline of chymistry and the consequential

loosening of its iconographical conventions in the eighteenth century. Moreover, it is little coincidence that the specific decline of chymical symbology parallels the slow degeneration of emblematicism in genre art throughout the course of the seventeenth century. In his description of the slowing didacticism of Netherlandish genre art, Lyckle de Vries might equally describe the shifting face of chymical art:

The gradual loss of understanding of the didactic intent in genre scenes and its possible causes – growing distance between the artist and collector and the massive production of art that bolstered the mindless repetition of traditional motifs – have been mentioned above. An essential third factor must be added to these two; namely, the practice of not explicitly indicating the interpretation of the scenes represented. Between 1550 and 1670 it became increasingly common to omit unequivocal keys for a didactic interpretation; more accurately, artists allowed collectors a greater freedom of interpretation.¹¹³

By the eighteenth century the boundaries imposed on generations of chymical artists were, to a large degree, lifted. Painters of chymical scenes no longer restricted their viewers to chymical interpretations. Relieved of gravity and convention, eighteenth-century paintings tendered new narratives without reference to or acknowledgment of their chymical heritage. The three main paintings examined by this section not only confirm the iconographical referencing at the heart of alchemical art, but uniquely plot its inevitable corruption. With the progression of modern ‘chemistry’, both uroscopy and chymistry suffered in reputation. While seventeenth-century genre art partially encapsulates a perspective on chymical lives, paintings like *A Physician Examining a Urine Flask #3* indisputably represent an irretrievable step towards the absolute fictionalization of the ancient art. In a fanciful vision of gender disorder, no remnants of chymical purism remain.

4.0 Conclusion

Since ancient times, chymists and chemists have been fascinated by bodily excretions. While human blood, sweat and tears are of immense significance to the *opus*, chymical philosophy is captivated completely by urine and faeces. Scatological images relating to the latrine emerge throughout chymical iconography, but it is pictures of the uroscopist that most succinctly capture the obsession with human waste.

¹¹³ De Vries, 1991: 220.

The uroscopist's workshop offers a unique example of chymistry's gendered iconographical tradition. In its exploration of the weeping woman motif, this study uncovers a fragmentary portrait of a heterogeneous gendered world, reflecting male dominance within a male domain. Female vulnerability is brutally exposed against a portrayal of absolute male government. Embodying the social disparity of the sexes, these paintings essentially reflect the exoteric practice of the seventeenth-century professional workshop. Existing on entirely separate planes, the chymist and his weeping patient are entirely alienated from one another. Conversely, Gerard Thomas, Balthasar van den Bossche and their followers present a partnership reflective of the chymical marriage, in which gender polarity is reconciled in an expression of universal homogeny. Whereas the emblem of the weeping woman subscribes to social convention in its expression of male authority, the doctor-patient motif evident in the work of Thomas and van den Bossche adheres compositionally to the sexual imagery of emblematic manuscript illustration, which predominantly alludes to greater equilibrium. In its excavation of emblematic traditions, this chapter identifies the weeping woman and doctor-patient motif as malleable constructs, the development of which parallels the very evolution of both Netherlandish genre art and chymical iconography.

CHAPTER IV

SOROR MYSTICA: FACTORING THE FEMALE WORKER, MAID OR MAGUS.

I am confident, Women would labour as much with Fire and Furnace, as Men; for they'l make good Cordials and Spirits; but whether they would find out the Philosopher's-Stone, I doubt; for our Sex is more apt to wast, than to make Gold: However, I would have them try, especially those that have the Means to spend; for, who knows but Women might be more happy in finding it out than Men [...].¹

Considering she constituted an integral component of chymical symbology, it is curious that the female occupied such a peripheral role in the affairs of the workshop. As this thesis has illustrated, women in alchemical paintings of the early modern period are continually confined to the gender roles determined by the values and conventions of the Dutch Republic. She is wife and mother incarnate, whose fertility is expressed in paintings of the uroscopist and whose homely diligence is implied in portraits of domestic virtue. She exists, therefore, as the private counter to the alchemist's open industry, a malleable signifier of marital harmony or marital disintegration. Paragon of virtue or harbinger of woe, the female is a barometer of the moral condition of the household. Despite occupying the same frame, it is clear that the male and female, in the paintings explored thus far, belong to separate, but interdependent, spheres: a self-contained symbol of domesticity, it seems that the wife simply has no business in the chymical workshop.

Yet, records even from ancient times relate an important tradition of female practitioners and philosophers, adepts who proved pivotal to the formation and development of Western and Eastern alchemy. Although there is little historical evidence of their existence, the female paragons of antiquity are among alchemy's most glorified figureheads. Lionized by male writers from Zosimos of Panopolis to Maier, women such as Maria the Jewess acquired a transcendent mythological status. These pseudo-historical women are rarely committed to canvas: a smattering of speculative prints is all that remains of these fantastic heroines of alchemy. But history also chronicles the existence of more commonplace female chymists, women whose dominance over the domestic stillroom engendered significant scientific innovation; women, also, whose duty to their husbands dictated their presence in the chymical workshop or court laboratory. There is little extant literary or pictorial evidence detailing this intriguing sisterhood of alchemists, yet the material that survives is powerfully compelling. In recent years, a handful of historians have sought to unveil the female domestic chymist

¹ Cavendish, 1668: 104.

and, in doing so, excavate her historical and cultural context. In the course of this investigation, the female chymical assistant has emerged as a possible subject for the seventeenth-century genre painter, with critics tentatively identifying the face of the female chymist in paintings and prints of the early modern period.

This final chapter investigates the remaining categorization of women in seventeenth-century paintings of the chymical workshop. Its focus is a curious characterization which, due to current academic debate, defies unequivocal classification. Suffice it to say then that this chapter examines the *ostensible* depiction of the female chymical worker. In its survey of work by David Ryckaert III and Thomas Wijck, this study questions the existence of the female chymical worker in genre painting and traces her potential evolution from alchemical treatises. As such, this chapter breaks new ground in charting the evolution of the female from her symbolic beginning in chymical emblemata to her figuration as a fully-formed, humanized chymist in Netherlandish genre art. Locating the female alchemist and assistant within a pictorial tradition, it analyses the historical and symbolic significance of women workers in the chymical setting. Maintaining the established configuration, this chapter is tripartite: the opening section introduces the female chymical worker and alchemist, tracing the development of her visual representation; the succeeding section introduces and evaluates the work of David Ryckaert, responding to, and refuting, recent critical claims that these paintings depict female alchemists; the final section examines the paintings of Thomas Wijck, uncovering the only incontrovertible representation of a female chymical worker in genre painting.

Thus far, established criticism and biographical knowledge of the artists discussed in this thesis are limited: Thomas Wijck, Gerard Thomas, Mattheus van Helmont, Egbert van Heemskerck, Balthasar van den Bossche, Hendrick Heerschop, Adriaen van de Venne, Richard Brakenburgh and Adriaen van Ostade are all artists about whom very little has been written and a relatively small amount is known. Similarly, although substantial research has been carried out on Gerrit Dou and Jan Steen, very little is dedicated to their alchemical work. Uniquely, this chapter benefits considerably from a modern work of criticism, Bernadette van Haute's *David III Ryckaert: A Seventeenth-Century Flemish Painter of Peasant Scenes*.² Comprising three parts, *David III Ryckaert* provides a biographical context for the artist and his work and establishes a critical catalogue of all his known paintings. Perhaps most useful to this study, van Haute addresses the issue of attribution and chronology as a primary aim of her research. This emphasis enables an accurate evaluation of the development of David

² Van Haute, 1999.

Ryckaert III as an alchemical painter. While van Haute's comprehensive research is indispensable to this chapter, her criticism of Ryckaert's alchemical oeuvre pays less attention to chymical history and symbology. It is the aim of this study then to restore these paintings to their original chymical context.

This chapter also builds on the work of M.E. Warlick, specifically 'Moon Sisters: Women and Alchemical Imagery' which appears in *The Golden Egg: Alchemy In Art and Literature*.³ Dedicating several paragraphs to Ryckaert's *Alchemist with his Wife in the Laboratory* and Bruegel's *Alchemist*, 'Moon Sisters', like this study, seeks to expound the identity of the central female figures. Yet, while pioneering and pivotal, 'Moon Sisters' is a brief study which aims to introduce a vast subject to a broad, lay audience. 'Moon Sisters' then forms a foundation for this chapter which expands and develops the debate on potential female chymists in genre painting.

The Female Alchemist: The Mythologized Monster

1.0

In 1995, when a pre-eminent expert on alchemy was questioned about female alchemists, he admitted that he "could not immediately call to mind more than three", all of whom were "more mythical figures than real individuals".⁴ In the ten years since, the study of female alchemists and the feminine principle has accelerated, with some efforts directed towards identifying historical female chymists and expounding their enveloping myths. Even now, however, research into what might be termed the 'non-abstract female' remains largely neglected by students of alchemy. As the histories of female chymists are cloaked in ambiguity, it is often impossible to ascertain actual experiences amongst the manifold fictions. Certainly the practice and, to some extent, the theory of alchemy was inherently anti-feminist, designed to oust the non-abstract female at every junction. Yet, the historical record attests to the existence of both female chymists and laboratory assistants since ancient times. Despite this, there is no shared 'history' of female alchemists. The female chrysopoeian, in medieval and early modern Europe, was an aberration, an exception which confirmed the rule. Her admittance to the chymical world suffered immeasurable obstacles. In addition to the anti-female doctrines of esoteric alchemy, the social constructs and institutions which enabled the practice of alchemy in Northern Europe during the medieval

³ Warlick, 2002.

⁴ McLean, July, 1995. <http://www.levity.com/alchemy/female.html> (accessed 10 November 2005).

and early modern period (gendered social paradigms, monastic societies, fraternal guilds and later schools and universities) were all normally intolerant of female workers. It is not surprising, then, that women discovered unconventional routes to the alchemical realm. In *Women Encounter Technology*, Sheila Rowbotham examines the entry of women into the scientific, and specifically, alchemical sphere. Rowbotham emphasizes the necessity of a nuanced view of history, demanding enquiry “into the actual social circumstances which have enabled women to enter the world of science and technology”.⁵ She further asserts that “it has not simply been an ideological struggle but a practical one”.⁶ Infinite variations in female experience diversified these practical struggles and also the channels through which women penetrated the chymical arena.

In order to contextualize a discussion of the female chymist in Netherlandish genre painting, the subsequent section explores in brief the variety of these channels in an introduction of key female chymists. This précis describes the principal figures of alchemical lore, from the glorified mythical Mothers of ancient alchemy to the unheralded domestic scientists of the early modern household. Following these histories, mythologized and otherwise, the ensuing sections expound the graphic representation of the female worker in alchemical treatises and early Netherlandish prints.

1.1 The Founding Mothers

Until the closing years of the twentieth century, there had been little critical interest in investigating the minutiae of women in the history of science, with efforts directed instead towards the discriminatory texture of historical methodology and theory.⁷ Recent historical research, however, has revealed that women were in fact fundamental to the formation and development of alchemy. In her Ph.D. thesis, Jayne Archer explores the physical association between the duties of the housewife and those of the alchemist, a relationship which has produced domestic chymists since antiquity.⁸ Research has traced the female chymist to about 1200 BC, identifying two female Sumerian chymists by name, Tapputi-Belatekallim and [...] -ninu.⁹ In her chapter detailing the scientific significance of women in the Mesopotamian cultures, Margaret Alic writes:

⁵ Rowbotham, 1995: 53.

⁶ Rowbotham, 1995: 53.

⁷ For references on feminist theory see the Introduction Part I: 12-15.

⁸ For more on this connection see Chapter 5 ‘The Opus Mulierum: The Housewife as Alchemist’ in Archer, 1999: 5.i-5.xlii and Hole, 1953: 70-71.

⁹ See Levy, 1955: 180-83; Levy, 1954: 373-75; Alic, 1986: 21; Rayner-Canham and Rayner-Canham, 2001: 1-2.

The perfume industry was very important in ancient Babylon since aromatic substances were used in medicine and religion as well as for cosmetics. The apparatus and recipes of perfumery were similar to those used in cooking. Women perfumers developed the techniques of distillation, extraction and sublimation [...].¹⁰

An early example of chymical industry, Babylonian perfumery relied largely upon female practitioners to conduct its chemical processes. This early practice eventually culminated in the female alchemists of Roman Alexandria. A celebrated stronghold of knowledge, Alexandria accommodated a large number of female practitioners during the first century BC. This sisterhood was critical to the Alexandrian industry of chymistry, thriving even amidst a wider decline of learning. Most significantly for this study, this period yields the Founding Mother of Alchemy, Maria the Jewess.¹¹ Early modern awareness of female chymistry began only with Roman Alexandria;¹² numerous extant medieval and early modern manuscripts refer, often extensively, to Maria and her works, with many purporting her authorship.¹³ Although none of her actual writing survives, a compelling account of Maria's work emerges through the detailed chronicles of later alchemists, notably those of Zosimos of Panopolis. Credited with the invention of the bain-marie and the three-armed still, the tribikos, Maria was a practical chymist, who also developed the kerotakis, a complex arrangement of apparatus. She remains a principal figure in the history of alchemy, embodying the mysticism which epitomizes the characterizations of all ancient female chymists. In Johann Daniel Mylius' *Opus Medio-Chymicum*, Maria is listed alongside four other ancient women chymists: Cleopatra Ægypti, Medera, 'Thaphuntia'¹⁴ and Euthica.¹⁵ Less is known about these four women, with their mythological reputations far transcending historical record. Yet despite their relative obscurity, these figures, particularly Cleopatra, are alluded to by early

¹⁰ Alic, 1986: 21.

¹¹ Maria the Jewess is identified through a variety of names, including Maria Hebraca, Mary the Jewess, Maria the Prophet and Maria the Sage. Occasionally assuming the name of Miriam the Prophetess, Maria was often confused by historians and commentators throughout the centuries with Miriam, the sister of Moses. Raphael Patai suggests that she lived in Alexandria during the early third century. Patai, 1982: 177-97.

¹² The Egyptian goddess Isis, evoked by numerous early modern texts, is of great significance to Western alchemical culture. While many chymical texts were ascribed to 'Isis' this thesis does not locate this abstract figure within the history of female chymistry, but rather within a context of alchemical symbology. See, for example, Emblem XLIV in Maier, 1617.

¹³ Many of these manuscripts are held by the British Library and include the seventeenth-century examples: *The Practice of Mary the Phrophetesse upon Alchemy*, London, British Library, Sloane MS 1451, fol. 25; Thomas Robson, *Hic incipit Mariae Phophetise de Elixer*, London, British Library, Sloane MS 1744, fol. 148-49; *The practice of Mary the Phrophetesse*, London, British Library, Sloane MS 3506, fol. 72.

¹⁴ Alternative spellings seemingly include Thapuntia, Paphnoutia, Paphnutia.

¹⁵ Mylius, 1618: 1.

modern alchemical literature.¹⁶ Cleopatra, although almost certainly not the royal Egyptian described by Mylius, is the best known of these figures, with an extant treatise and single-sheet papyrus document evincing her work.¹⁷ Possibly a contemporary of Maria, Cleopatra was a highly practical chymist, whose assorted accomplishments purportedly include the invention of a still. More profoundly, however, this Egyptian chymist powerfully evokes the imagery of procreation in her work, definitively situating reproductive symbolism at the core of alchemical literature. The next female chymist of historical significance surfaces in 300 AD.¹⁸ Friend or sister to the legendary Zosimos of Panopolis, Theosebeia possibly collaborated on *Cheirokmeta*, an encyclopaedic enterprise which relates the work of Maria and Cleopatra and vilifies another female chymist, 'Paphnoutia'.

From this point onwards, records of women in chymistry fall silent. While female philosophers, physicians, astronomers and mathematicians punctuate this dark period with a certain regularity, few named female chymists emerge over the ensuing millennium.¹⁹ It is only with the passage of a thousand years that a significant female chymist is resurrected by name. This chymist, however, is particularly important in the history of female practitioners, constituting one half of the mystical partnership *soror mystica, frater mysterium*. Wife to Nicolas Flamel, Pérenelle Flamel is the most celebrated of the modern female chymists. Several, often fantastic, accounts of the husband and wife partnership were produced during the early modern period, with reprints occurring throughout the centuries since.²⁰ Veiled in mystery, the story of Pérenelle, like those of Maria and Cleopatra before her, is, in part at least, legendary. In the late fourteenth century, Pérenelle Lethas married Nicolas Flamel in Paris and together they embarked on a quest for alchemical enlightenment, embodying the spiritual partnership of the chymical marriage. As *soror mystica*, Pérenelle personified the spiritual sister, the female half of an inextricable male/female quest for the Philosophers'

¹⁶ References include *Cleopatra. Ex Cleopatrae tractatu de ponderibus, et mensuris expositio ampla ad inveniendas facile singulas mensuras minae librae, conciae, drachmae et scrupuli*, sixteenth century, Turin, Biblioteca Nazionale, MS 92 (B-I-14).

¹⁷ For more on *Dialogue of Cleopatra and the Philosophers*, first or second century AD, see Taylor, 1951: 57-59; Linden, 2003: 44-45; Lindsay, 1970.

¹⁸ Indeed, it is partially from Theosebeia that knowledge of Maria and Cleopatra is derived.

¹⁹ The absence of named chymists, however, does not necessarily denote the sudden collapse of female chymistry. A lack of academic effort in uncovering historical female chymists partially explains the apparent vacuum. A further reason is proposed in an economic account of the early modern Netherlands: "The most natural things in a society are the ones that go unremarked and unrecorded. Thus, the presence of female labor is noted often in our sources [...] even though the details of women's employment relations remains unspoken." De Vries and van der Woude, 1997: 596. Despite the shortage of contemporary research, it is clear that women continued in their work as chymists, if only in their capacity as housewives. The nature of the operational household ensured that domesticity and chymistry remained entwined.

²⁰ The most notable of these is Flammel, 1624.

Stone.²¹ On attaining an epiphanal transmutation in 1382, Nicolas described the vital contribution of his wife to the Work:

I may speake it with truth, I haue made it three times, with the helpe of Perrenelle, who vnderstood it as well as I, because she helped mee in my operations, and without doubt, if shee would haue enterprised to haue done it alone, shee had attained to the end and perfection thereof.²²

This intimate relationship, which assimilates a working collaboration of equals, articulates the hallowed partnership of the *soror mystica, frater mysterium*.²³ Venerated by the chymical brethren, this alliance of equals is, however, rare in alchemical history and fails to reflect the difficulties faced by contemporaneous female chymists and those to follow.

The two centuries preceding the seventeenth were peppered with accounts of female chymists. These women were usually either aristocrats or wives of established chymists, most of whom failed to gain genuine acceptance from their male counterparts. During the fifteenth century, for example, Barbara of Celje, consort of Emperor Sigismund of Luxemburg, sought wealth from alchemical gold and was duly censured for her “woman’s subtilty”.²⁴ But while the most famous female chymists were criticized on the basis of gender, a minority of less obtrusive women seemingly enjoyed equality with their male counterparts. During the sixteenth century, for example, a chymical partnership in the mould of the Flamels emerged. In 1575, Anna Marie Zieglerin and her husband Heindrich Schombach were both executed at the behest of Duke Julius of Braunschweig-Wolfenbüttel for their fraudulent alchemical behaviour.²⁵ Contemporary archival evidence also reveals numerous other female chymists: Duchess Sibilla of Würtemberg (1564-1614); Salomena Scheinflugová, who worked in the laboratories of Wilhelm Rosenberg during the 1570s and 1580s;²⁶ and Mary Herbert, Countess of Pembroke (1561-1621), whose “genius lay as much

²¹ Modern understanding of the *soror mystica, frater mysterium* partnership is derived almost entirely from Carl Jung. It is vital to separate this relatively recent theorizing from the pre-Modern understanding of *soror mystica*. For a clear summary of Jung’s interpretation of the alchemical concept, see Stevens, 1999: 230, 242.

²² Flammel, 1624: 29-30.

²³ Other such partnerships potentially include Jane Leade and John Pordage, Zosimos and Theosebeia, Anna Marie Zieglerin and Heindrich Schombach, Rebecca and Thomas Vaughan, Isabella and Richard Ingalese and even Marie and Pierre Curie.

²⁴ John von Laaz, 1437, cited in Doberer, 1948: 79.

²⁵ Interestingly, Zieglerin, like Cleopatra, identified fertility and sexuality as the source of her quintessentially female alchemy. See Nummedal, 2001: 56-68.

²⁶ See Brezan, 1985.

towards chymistrie as poëtrie”.²⁷ But it was during the seventeenth century that the phenomenon of the female chymist exploded onto the cultural scene.

1.2 The Inheriting Daughters

The dawn of the seventeenth century heralded the rise of the scientific lady, a phenomenon which engendered some of the best, and worst, female chymists of modern times. In England and France, in particular, daughters of the aristocracy could legitimately play with the modern toys of science, alongside their needlework and watercolours.²⁸ Appropriating the guise of girlish amusement, the level of expertise attained by some was unprecedented. As Jayne Archer describes in her thesis, the elite women of English society developed a serious understanding of the chemical world within a domestic arena: the stillroom. The number of named chemists who emerged during this century was extensive and included Lady Anne Conway;²⁹ Maria Rant; Margaret Cavendish, the Duchess of Newcastle;³⁰ Lady Judith Barrington;³¹ the mother of Lucy Hutchinson;³² Anna Maria van Schurmann;³³ Marie Meurdrac; Marie le Jars de Gourney;³⁴ Queen Christina of Sweden;³⁵ Rebecca Vaughan;³⁶ Leona Constantia;³⁷ and Lady Margaret Cumberland.³⁸ The character and quality of these scholars varied enormously, with practical, skilled and influential figures like Marie Meurdrac emerging alongside eccentrics like Mad Madge, the Duchess of Newcastle. While there were some exceptions, these individuals were typically members of a privileged social elite, whose whims were generally indulged within the strict parameters of patriarchal authority. Rarely granted affiliation with the alchemical brotherhood or recognition as alchemists, exceptionally gifted, dedicated and learned women were ultimately and often loudly dismissed by the chymical elite as talented but essentially flawed hobbyists.³⁹ By the end of the seventeenth century, “Learned Ladies” were lampooned with relish by satirists all over Northern Europe.⁴⁰

²⁷ Aubrey, 1969: 89.

²⁸ For more on women and science in early modern England see Hunter and Hutton eds., 1997.

²⁹ Hutton, 2004: 239.

³⁰ Cavendish, 1668.

³¹ Clucas, 1993: 149.

³² Hutchinson, 1995: 13.

³³ De Baar ed., 1996.

³⁴ Rayner-Canham and Rayner-Canham, 2001: 8-9; Phillips, 1990: 52-56; Ilsley, 1963.

³⁵ Buckley, 2004: 282-84.

³⁶ Dickson, 2003: 129-42; Dickson, 1998: 34-46.

³⁷ “Leona Constantia”, whose *Sonnenblume der Weisen* was published in 1704, was possibly a pseudonym for Jane Leade.

³⁸ Archer, 1999.

³⁹ For more on Margaret Cavendish and other English women chymists see Archer, 1999; Hunter and Hutton eds., 1997.

⁴⁰ These satires include Wright, 1693 and Boileau-Despréaux, 1694.

For most medieval and early modern women, however, admission to the chymical sphere arrived via their chymist husbands and the household workshop. Unsurprisingly there is no data available on the employment structure of the medieval or early modern chymical workshop. Without guilds and with the secrets of the Philosophers' Stone at stake, the chymical workshop was, in all probability, a far more secretive arena than the cobbler's shop or local smithy. However, from the imperfect evidence offered by genre painting, earlier prints and literature, it is fair to assume that the chymical workshop adhered approximately to the structure of the household-based craft workshop.⁴¹ From the Middle Ages the household represented a unit of production in which all family members participated. The generational and gendered structure of this production unit is best described by Jan de Vries in his chapter 'Between Purchasing Power and the World of Goods', which asserts that, "these individuals did not possess equal power in household decision making, nor did they benefit or suffer equally from those decisions".⁴² Instead, "the male head of household disposes of the labour of his wife and children and projects his consumer preference onto the household".⁴³ But while the wife might have assumed a subordinate role in the craft workshop, she was an integral part of the business. Numerous travellers expressed their surprise at the proficiency and professionalism of Netherlandish wives: "[...] the women are as knowing therein as the Men, it doth incourage theris Husbands to hold on in their Trades to their dying days, knowing the capacity of their Wives to get their Estates, and carry on their Trades after their Deaths."⁴⁴ But it is unlikely that chymical wives were recognized as chymists themselves. They were, for the most part, workers not apprentices, fulfilling the role of subservient and diligent spouse. Increasingly evidence indicates that the work performed by women inside their own homes, regardless of financial payouts or economic benefits, was not regarded as 'work', but rather as 'duty'.⁴⁵ The Calvinist doctrine of marriage and contemporary conduct

⁴¹ Unfortunately, "the paucity of historical information available" on the female labour force remains the case. De Vries and van der Woude, 1997: 596. Most historical studies on "women's work" are highly demographically and geographically specific, and economically or statistically based. This restrictive methodological approach is justified by the massive disparity in demographical statistics and governing legislation even between cities located in the same province. It is not surprising then that data is lacking on the chymical workshop at any stage in European history. It is extraordinary, however, that the early modern craft workshop is also generally neglected by historians. This area demands the investment of long-term micro-historical research to yield significant results. The dearth of research is currently being addressed by the International Institute of Social History's ambitious project "Women's Work in the Northern Netherlands in the Early Modern Period". Still in its early stages, this project will eventually revolutionize the study of social history in the Netherlands, and will offer a comprehensive vision of the working lives of women in the early modern period. In the interim, however, the nature of the Netherlandish craft workshop in the early modern period can be gauged in essence, if not detail. The background offered by this chapter summarizes all currently available relevant information.

⁴² De Vries, 1993: 118.

⁴³ De Vries, 1993: 118.

⁴⁴ Child, 1694: 4.

⁴⁵ See, for example, Wiesner, 1994: 125. See also Clark, 1919: 200.

books decreed that a wife's duty was the constant support of her husband, in both recreation and work.⁴⁶ In a study which examines the nature and status of women's work in the early modern Netherlands, Merry E. Wiesner finds that:

Advice manuals and sermons by Protestant clergy, and later in the sixteenth century by Catholic clergy as well, all viewed whatever productive labor a woman did as simply part of her domestic role of being a helpmeet to her husband and an example to her children.⁴⁷

The disinclination to view female assistants as professionals in their own right was compounded by increased regulation to restrict the working practices of women, both within and without the home. By the seventeenth century, legislation had generally curbed the official involvement of women in the craft workshop and workplace across Northern Europe.⁴⁸ In light of the expectation of wifely 'duty' and curtailing legislation, it is unlikely that the helpmeet wife could attain the status of chymist, despite proficiency and practice in the workshop. It is more probable that, as with guild trades, the status and role of the female in the household workshop was defined only through her relationship to the male master.⁴⁹

1.3 Picturing the Secret Sorority

With reference to alchemical emblemata, this thesis has thus far illustrated the transmutation of women into reductive deified symbols. The White Queen and the personified *Alchimia* are pervasive and powerful images which purport a universal femininity which negates the individual and denies female complexity. Unsurprisingly then, humanized female chymists rarely appear in any form of art. An exceptional example, however, is Michael Maier's *Symbola aureae mensae duodecim nationum*,⁵⁰ a celebration of the "twelve Heroes" in "the Art of Chymistry", which contains an illustration of Maria the Jewess gesturing knowingly towards a typically cryptic arrangement of hillocks, clouds and flowers (Fig. 51).⁵¹ Bundled in layers of clothing, there is little to distinguish this solemn faced lady from any other. Pictured again on the frontispiece (Fig. 52), Maria, like many of the alchemists here featured,

⁴⁶ Cats, 1625: 51-52.

⁴⁷ Wiesner, 1994: 104.

⁴⁸ For more on the regulation of women's work in the Netherlands from the Middle Ages to the early modern period see Wiesner, 1994: 102-40; de Vries and van der Woude, 1997: 632-47; Howell, 1986: 1-94, 174-92; Hudson and Lee eds., 1990: 4-21; Mitchell ed., 1999: 242; Wiesner and Dicaprio eds., 2000: 197-206; Hanawalt ed., 1986: vii-xviii; Wiesner, 1986a: 94-113; Howell, 1986b: 198-216; Wiesner, 1986b: 191-205; Wiesner, 1998: 203-31.

⁴⁹ For more on women in the craft workshop, see de Vries and van der Woude, 1997; Pott-Buter, 1993: 35-67; Wiesner, 1994; Roper, 1991.

⁵⁰ Maier, 1617.

⁵¹ Emblem V, Maier, 1617. Reproduced in Klossowski de Rola, 1997: 110.

clasps a book, a symbol of her scholarly status.⁵² *Symbola aureae mensae duodecim nationum*, therefore, is an extraordinarily rare representation of female chymistry, not simply an acknowledgment, but a celebration.

Yet, *Symbola aureae mensae duodecim nationum* is anomalous, shedding the generic abstract female in favour of a specific, semi-historical woman. In both alchemical emblemata and genre painting, female workers who feature in relation to chymical processes cannot generally be identified as chymists. Images of female workers feature more commonly in illustrations of *opus mulierum* or “women’s work”, an alchemical concept introduced in Chapter II of this thesis. Depictions of *opus mulierum*, analysed notably by M.E. Warlick in her chapter ‘The Domestic Alchemist: Women as Housewives in Alchemical Emblems’, symbolize alchemical operations, usually through the gendered occupations of the laundress and cook. The most explicit of these include the laundresses of the *Splendor Solis* Plate XXI (Fig. 53),⁵³ the engravings of the cook (Fig. 23) and washerwoman (Fig. 54) in *Atalanta Fugiens*,⁵⁴ the two washerwomen from Johann Daniel Mylius’ *Philosophia reformata*,⁵⁵ the derivative woodcut depicting two laundresses in Salomon Trismosin’s *Aureum Vellus oder Guldin Schatz und Kunstammer*⁵⁶ and the engraving of a woman preparing chestnuts from Goossen van Vreeswijk’s *De Goude Son*.⁵⁷ While most undoubtedly refer to *opus mulierum* and exhibit women workers, these illustrations retain much of the symbolism of the White Queen and alchemical mythology. These industrious figures are, as Warlick suggests, “women as housewives”, domestic washers and cooks who bear little relation to either the ancient female alchemists or the domestic chymists of the early modern period.

The female chymical worker, then, is a rare breed indeed, occurring explicitly in just one printed source.⁵⁸ Revised and republished for over a century, the ‘mute book’ or *Mutus Liber* (Fig. 55)⁵⁹ has possibly generated more debate, both contemporaneous and current, than any other alchemical text.⁶⁰ First published in La Rochelle in 1677, the book consists only of enigmatic pictures which relate specific physical and spiritual alchemical processes.⁶¹ A

⁵² Frontispiece, Maier, 1617. Reproduced in Klossowski de Rola, 1997: 107.

⁵³ Plate XXI, *Splendor Solis*, 1582, London, British Library, Harley MS 3469, fol. 32^v.

⁵⁴ Emblem III, Maier, 1618: 21. Engraved by Theodor de Bry.

⁵⁵ Mylius, 1622. Engraved by Balthasar Schwan. Reproduced in Klossowski de Rola, 1997: 172.

⁵⁶ Trismosin, 1598.

⁵⁷ See Klossowski de Rola, 1997: 260-265.

⁵⁸ It is important to note, however, that Warlick has also identified the female worker in the drawings of a seventeenth-century text by Pietre Antonio Neri, *Alchima*, Glasgow, University Library, Ferguson MS 67. See Warlick, 1998: 30-32.

⁵⁹ Altus, 1677: 7.

⁶⁰ Altus, 1677. The author ‘Altus’ is believed to be Jacob Saulat or Sulat.

⁶¹ The most influential interpretations of the *Mutus Liber* are offered by Eugène Canseliet. See Canseliet ed., 1967; Canseliet, 1979.

series of fifteen plates, the *Mutus Liber* depicts the female in the laboratory in a uniquely overt fashion. The volume is astonishing in its representation of the female chymical worker, reflecting the gender harmony of both the chymical marriage and the mythologized *soror mystica*, *frater mysterium* partnership. While some of the images allude to the conventional metaphoric representation of gender, the sequences of the couple experimenting within the laboratory resonate with a powerful sense of the everyday. The fifteen plates have been the subject of intensive academic attention over the last thirty years, with focus falling primarily on their symbolic quality.⁶² While this aspect of the *Mutus Liber* is undeniably of great importance, its non-symbolic quality provides most interest to this chapter. For an alchemically symbolic text, which of course it is, the *Mutus Liber* is remarkably devoid of the standard insignia of lions, serpents, fountains, toads and birds. Instead, the plates incorporate images of familiarity and thus subvert expectation, ironically enhancing the mystique of the text. In at least thirty self-contained episodes, a man and woman appear to work side by side in complete equality, executing alchemical processes in a collaborative effort. This *soror mystica* and *frater mysterium* actively participate in each task, both in the workshop and in the field. Closely interacting, the couple are often physically connected and even appear to smile at one another. There is certainly an implication that the *Mutus Liber* expresses the reconciliation of the two equal and opposite forces described in Chapter II and that this couple, in fact, represent marital, as well as chymical harmony.

Despite its immense popularity and striking content, it is important to reiterate that the *Mutus Liber* is exceptional in its depiction of female workers. Indeed, it is difficult to locate, to any degree, a source for its remarkable reinterpretation of the male/female alchemical complex. Its late publication date within the context of alchemical emblematic art perhaps accounts for its innovative and relatively unrestrained refashioning of female iconography. For the most part, however, specific women chymists remained unpictured by alchemical texts and art; while male chymists were frequently re-imagined by painters, engravers and sculptors, the faces of women who transformed chemistry were largely forgotten. As women were contemporaneously ousted from fraternal hierarchies and dismissed by leading scientists of the modern period, so too were they excluded from the possibility of significant cultural remembrance. Nevertheless, while the female chymist and chymical worker are a rarity in serious alchemical works, the figures occur with some frequency in satirical and comical prints aimed at the public market. Indeed, it is within the most influential and widely disseminated alchemical print of the early modern period that lies the most uncompromising inclusion of the female chymical worker.

⁶² See, for example, Klossowski de Rola, 1997: 266-84; Canselier, 1967; van Lennep, 1985: 230-34; Roob, 2001: 376-91; McLean, 1991.

1.4 Bruegel's Alchemists?

Perhaps the best known works of alchemical art are the prints made from the drawing *The Alchemist* (Fig. 11) by Pieter Bruegel, c.1558.⁶³ These engravings form part of the foolish alchemist tradition and, despite their satirical tone, represent the earliest stage of chymical genre scenes. Here also rests the earliest categorical inclusion of a working woman within the workshop.

Introduced in Chapter I of this thesis, *The Alchemist* distributed by Hieronymus Cock epitomizes the satirical pictorial tradition of the foolish alchemist. Spanning at least three centuries, this genre encompasses the art of Bruegel the Elder, David Teniers and Pieter van der Borcht, among many other Northern European artists. *The Alchemist*, as Chapter I describes, depicts a shambolic kitchen in which three comical characters strive for gold while three hungry children play amongst the unhappily empty cupboards. To the left of the scene, the hook-nosed father sits at the spluttering furnace, dropping a large coin into a crucible, while another sizzles nearby in a hot pan. The wife, located in the centre of the painting, engages the viewer directly, dramatically indicating the emptiness of the family purse. In a final condemnation of the couple's idiocy, a gurning fool fans the coals of an upturned crucible. In the labyrinthine network of conflicting, structural lines which race from one side of the scene to another, there is a sole moment of intelligibility: in one corner of the frame, a separate scene of clarity and simplicity depicts the family heading to the poorhouse.

In its discussion of this chaotic picture, Chapter I notes that this couple comprise completely separate entities, the antithesis of the alchemical, and indeed Christian, marriage. This sense of disaffection is only accentuated when measured against the close partnership evident in the *Mutus Liber*. Yet, while their marital partnership is flawed, the couple clearly share a professional bond. The female is placed at the very heart of the bustling laboratory; by her feet have fallen a pair of bellows, abandoned beside a smouldering portable furnace. This is not simply a portrait of a neglectful mother, but of a potential alchemist. In the numerous discussions of this print only M.E. Warlick has articulated the potentially alchemical identity of this central figure, stating:

If we hold such scenes to be representations of at least a glimmer of truth, we can use them as a foundation for discussing the role of women as practicing alchemists. In Bruegel's print, the wife's central participation in the activities of this household

⁶³ See Chapter I: 56-59 for an introductory discussion of this print.

bears some examination, as it parallels the structures of the other types of domestic craft workshops in southern Germany in the sixteenth century.⁶⁴

The issue Warlick raises concerning the involvement of the wife in the craft workshop is an important one which has yet to be examined in relation to chymistry. Although, as discussed previously, little data exists on the Netherlandish chymical workshop, the evidence of the 'helpmeet' wife, domestic goddess and professional assistant, certainly allows for the possibility of a female chymical worker, if not female chymist. While clearly caricatured, Bruegel's wife represents an evolutionary stage from the women of emblematic art, who exist strictly within the plane of allegory and metaphor: she is, whether alchemist or assistant, a chymical worker, albeit an unsuccessful one.

1.5

In the corpus of alchemical art, Bruegel's *Alchemist* essentially heralds the transition of the female from the allegorical to the naturalistic, anticipating the later genre paintings of the chymical workshop. Yet, the alchemist's wife here is suffocated by satire; there is little depth in this characterization, as Bruegel, like so many alchemical artists, still reduces the female to a symbol, an instrument of male intent. Despite providing an unprecedented material source, Bruegel's *Alchemist* fails to anticipate the inscrutability and sophistication which characterizes all subsequent portrayals of female chymical workers in genre art. In its exploration of David Ryckaert III, the following section describes the restoration of female complexity within quintessentially ambiguous depictions of women workers.

David Ryckaert III

2.0

The rarity of the female chymist and chymical worker in generic alchemical art extends to genre painting. A survey of Teniers' countless chymical paintings does not reveal a single woman working at the flames of the furnace. This absence is wholly typical of chymical genre painting, with the number of potential female chymical workers amounting to less than a dozen. There is, however, a painter whose work radically contradicts this trend. Influenced heavily by David Teniers, David Ryckaert III's work is unlike that of any other alchemical painter. Although critics have, for centuries, acknowledged Ryckaert's talent for imitating the

⁶⁴ Warlick, 2002: 191.

work of his contemporaries, the artist's alchemical oeuvre is strikingly original. Within this corpus, six paintings depict a principal, focal female and potential alchemist. The female presence in these paintings is so powerful that the greater part of this chapter centres on the work of this artist. This section first examines the career of the artist and then addresses the six female characterizations within the context of the paintings, exploring the chymical possibilities of their conception.

While the life and works of David Ryckaert III are relatively well-documented, confusion clouded the identity of the artist for centuries. Ambiguity arose primarily from the proliferation of "David Ryckaerts" in the Antwerp Guild of St. Luke and the misinterpretation of archival sources by commentators and historians. In recent years, however, an accurate biography has been established by Bernadette van Haute.⁶⁵

David Ryckaert III, or David Ryckaert the Younger, was born in Antwerp in December 1612, son to David Ryckaert II and grandson to David Ryckaert I. It is probable that his grandfather, Ryckaert I, was not a painter as is often assumed, but a decorator of woodwork and sculpture.⁶⁶ Similarly, David Ryckaert II was probably not purely a landscape painter as so often reported, but was, more likely, a genre painter.⁶⁷ In her meticulous research into the Ryckaert family, van Haute traces the cultivation of these biographical distortions from as early as the seventeenth century. This confusion, propagated over several centuries, also extends to the life of David Ryckaert III. Apprenticed to his father, Ryckaert was admitted to Antwerp's Guild of St. Luke in 1636-37. Like his father, Ryckaert's specialism early in his career orientated towards peasant scenes. Naturally, Ryckaert's style resembled that of his father and master, resulting in countless misattributions.⁶⁸ The work of Ryckaert, however, betrays far more than the influence of his father, openly emulating the paintings of David Teniers and Adriaen Brouwer in both style and subject. His early pieces demonstrate the moralizing influence of Teniers in scenes which are dominated by instructive messages. By 1640, however, Ryckaert's dependence on established artists and conventions began to waver and with it the didactic quality of his work. It was at this time, during the 1640s, that Ryckaert's attention turned to alchemy. His marriage to Jacoba Pallemans in 1647 seems to have increased his output, perhaps reflecting growing financial concerns. It is clear from the archival research of Francine van Cauwenberghe-Janssens that at this stage Ryckaert was

⁶⁵ Van Haute, 1999.

⁶⁶ For discussion of the debate surrounding David Ryckaert I see van Haute, 1999: 7-8. See also von Manteuffel, 1915: 58-59.

⁶⁷ See van Haute, 1999: 8-10.

⁶⁸ Importantly, van Haute reminds the reader that prior to his registration to the Guild of St. Luke in 1636, David Ryckaert III "was not allowed to sign his works", van Haute, 1999: 14.

neither wealthy nor part of the social elite, earning well below the average for artists in Antwerp at the time.⁶⁹ His status is reflected in part by the relatively few pupils acquired over his career.

As his career progressed, however, Ryckaert, along with numerous other Flemish painters, enjoyed the favour of Archduke Leopold Wilhelm. This relationship, though far from exclusive, may have contributed to the surge in popularity of Ryckaert's work and possibly prompted the emergence of religion in his oeuvre. From 1650, his newly diversified work was in high demand, and it is possible that the painter collaborated with, or simply commissioned, external artists to relieve the mounting pressure. With a growing reputation, Ryckaert was elected dean of the Guild of St. Luke in 1651, an honour celebrated by the commissioning of a family portrait, which included his son David Ryckaert IV.⁷⁰ During the latter years of the 1650s, Ryckaert's growing reputation was reflected in the numerous copies made of his paintings by his contemporaries. By the close of that decade, Ryckaert's businesses, which included the export of art and a fabric shop, had developed into lucrative and stable enterprises. Leaving a wife and three surviving children, David Ryckaert III died in 1661 after a short illness.

2.1 The Budapest *Alchemist*

Distinctly un-feminized, David Ryckaert's earliest venture into the chymical workshop represents the most traditional of all his alchemical works. An archetypal chymical genre scene, the *Budapest Alchemist* (Fig. 56), painted c.1642, reveals little innovation.⁷¹ Seated at a formulaic furnace, a middle-aged, bearded alchemist grips a glass vial with one hand, while leafing through a large volume with the other. His beard neatly trimmed and attire pleasingly spruce, the chymist embodies the industry and discipline of a respectable Netherlandish worker. Containing numerous chymical accoutrements, the workshop is evidently a space of practical experiment. Behind the chymist, a young apprentice crouches at the mouth of a smaller furnace. The trim appearance of both the laboratory and chymist, in conjunction with the books tumbling about the floor and map pinned prominently to the back wall, indicates the superior status of the alchemist. *The Alchemist*, therefore, initially appears indulgent, even respectful of the pursuit of the Philosophers' Stone.

⁶⁹ Van Cauwenberghe-Janssens, 1970: 240.

⁷⁰ Gonzales Coques, *Group Portrait of David III Ryckaert and his Family*, 1651, Private Collection. See van Haute, 1999: 39. Although David Ryckaert IV is reported to have been a professional painter, it is now believed that he was an amateur, painting possibly only a single work and not appearing in *De Liggeren* of the Guild of St. Luke in Antwerp.

⁷¹ David Ryckaert, *The Alchemist*, c.1642, Szépművészeti Museum, Budapest. Oil on canvas, 60.5 cm x 80.5 cm. Provenance: Esterházy Collection.

However, these signifiers of social and moral standing are undermined by the inclusion of a small owl perched quietly under the desk in the lower left-hand corner of the painting. Probably referring to the popular proverb “Wat baet er kaers en bril, als den uyl niet zien en wil?”, the owl is frequently evoked in genre painting to denote man’s foolishness.⁷² This motif is especially visible in genre scenes of a chymical nature and in Ryckaert’s early work.⁷³ The insertion of such a widely recognized and distinctive symbol certainly “points out the foolishness and futility of the alchemist’s attempts to transmute quicksilver into gold” as van Haute suggests.⁷⁴ Keenly aware of the significance of such emblems, Ryckaert’s dichotomic vision conveys a regard for scholarly excellence and, concurrently, discreet contempt for the futility of the pursuit. Wholly conventional in content, Ryckaert’s painting also conforms to the superciliously droll tone of mid-seventeenth-century vogue. Betraying close adherence to the governing principles established by the leading genre painters of the time, the *Budapest Alchemist* reflects a period in which Ryckaert reproduced without restriction the motifs, subjects, tones, compositions, characters and even entire scenes of Teniers and Brouwer.⁷⁵ Composed primarily of moralizing peasant scenes, these paintings incorporate emblem book symbols with fervour, a propensity which accounts, in part, for the evident proliferation of owls during this period. The *Budapest Alchemist*, then, in its style, composition, characterization, reiteration and reference, dependency on motif and chymical apparatus, and even palette is a quintessential chymical genre painting, predictable in almost every aspect. It is curious, then, that David Ryckaert III later provided the most unique and innovative chymical genre paintings of the early modern period.

⁷² Translation: “What does the owl need with candles or glasses, if it cannot and will not see?”. For a discussion of this proverb in genre painting see Slive, 1995: 175; Schama, 1991: 209, 558; Orenstein ed., 2001: 169; Calisch, 1961: 2116. Interestingly, it should be noted that the symbol of the owl occasionally denotes learning or wisdom. See, for example, the use of the owl in Emblem XIX Alciato, 1580. It should be remembered too that the owl was also evoked by proponents of alchemy in alchemical literature. For more detail see Brinkman, 1982: 50. However, in light of Ryckaert’s consistent moralizing use of the owl in his oeuvre, it is highly unlikely that it denotes wisdom in this painting.

⁷³ Paintings which incorporate the owl emblem include: David Ryckaert, *Tavern Interior*, 1637, location unknown. Reproduced in van Haute, 1999: 278; David Ryckaert, *The Cobbler*, 1638, location unknown. Reproduced in van Haute, 1999: 283; David Ryckaert, *The Smithy*, c.1638, location unknown. Reproduced in van Haute, 1999: 283; David Ryckaert, *Drinking Peasant in a Barn Interior*, 1638, Dresden, Staatliche Kunstsammlungen, Gemäldegalerie Alte Meister; David Ryckaert, *Interior with Merry Company*, c.1638-39, Stockholm Nationalmuseum.

⁷⁴ Van Haute, 1999: 97.

⁷⁵ Van Haute, 1999: 97.

2.2 The Le Havre *Alchemist*

Six years later Ryckaert turned again to the subject of alchemy with astonishing results. The Le Havre 1648 *Alchemist* (Fig. 57) incorporates one of the few examples of a potentially female alchemist in chymical genre art.⁷⁶ In an exquisitely finished scene, an elderly bearded man, reminiscent of van Helmont's older chymists, sits at a large open furnace, with tongs in one hand and bellows in the other. Light from an unseen source catches the top of his bald head and the fringes of his hoary beard, a touch which emphasizes his advancing years. Decked in the familiar tan clothing evidenced in numerous chymical genre scenes, the chymist's drab figure is lifted by the inclusion of bright red stockings. His head bowed and shoulders drooping, the bellows fall to his side. Forehead furrowed, with brows drawn to a slight frown, the chymist gazes thoughtfully to the ground. The workshop hums with activity; distillations adorn the glowing furnaces, while an apprentice in the background pounds at a mortar. The chymical equipment, particularly the distillation in the foreground and the large copper cauldron in the lower left corner, is executed with a precision and clarity reminiscent of an accomplished Teniersian workshop. The room is clean and well-kept, with just a few superfluous coals spoiling the otherwise tidy floor. Unusually, an ominously overcast sky is visible through the window on the outer wall. But it is in his portrait of the alchemist's wife that Ryckaert truly departs from convention.

Sitting alongside her husband in the centre left foreground, a surly, old woman looms studiously over an open tome. While her face is gaunt and her expression stern, colour floods her ruddy cheeks and nose. Atop her head sits a white cap and while her attire is respectfully sombre, it comprises not the traditional blacks, greys and browns of background wives, but rather conspicuous reds, greens and blues. This, then, is a woman to be noticed. Her gaze is lifted from her reading, and rests unmistakably on her husband. The chymist, however, although clearly pausing in his work, is turned outwards towards the viewer, with his back to his attentive wife. Ostensibly this physical opposition evokes the anti-chymical detachment of those relationships explored by Chapter I. In paintings of domestic discord, physical alienation in the central partnership represents the antithesis of both the alchemical and Christian marriage. Yet, although *The Alchemist's* couple do not connect eye to eye, an intimate relationship is implied by numerous unorthodox details. Unconventionally, the couple inhabit a single space, with the female occupying a prime position in the centre of the workshop. While women are normally relegated to a distinct domestic sphere, the alchemist's

⁷⁶ David Ryckaert, *The Alchemist*, c.1648, Musée des Beaux-Arts André Malraux, Le Havre 77-19. Oil on canvas. Signed and dated: *D. Rijckaert 1648*.

wife clearly shares the traditionally male domain.⁷⁷ The physical positioning of the couple is also atypical: both are seated sharing the same physical plane, suggesting perhaps a shared status. As this thesis has demonstrated, the discord between an alchemist and his wife is consistently indicated by physical distance and differential positioning, a model which may be exemplified by Jan Steen's *Village Alchemist*, in which the female stands behind the seated male. A final unifying feature is the acknowledgement implied by the direction of the wife's gaze. Although her stare is not reciprocated, the wife has ruptured the compositional cage which regularly binds the non-hysterical female to the monotonous chore at hand, and in doing so she acknowledges the male component of her chymical context.

A dynamism, then, exists between Ryckaert's couple. But although a dialogue is implied, the content of their discourse is ambiguous. Van Haute interprets the wife as an admonishing figure, writing:

The artist warns the viewer against the risks of losing all possessions, through the figure of the alchemist's wife. She interrupts the alchemist in his work to confront him with an opened book which, in the present context, can only be interpreted as a Bible.⁷⁸

Van Haute's theory is certainly plausible.⁷⁹ Chapter II of this thesis identifies a gender delineation in the depiction of book readers in genre painting, noting that women are often portrayed with instructive, improving literature. Indeed while portraits of young maidens frequently include prominent devotional, domestic or moral handbooks, the subject matter for older female readers is even less varied. Gerrit Dou's *Old Woman Reading* is representative of numerous portraits of elderly women, piously poring over religious texts.⁸⁰ However, van Haute's assertion that the wife's book "can only be interpreted as a Bible" is erroneous. The text in question might instead purport to be a chymical manual and the wife, rather than admonishing her husband, is in fact collaborating in his quest. Indeed, the image of the wife recalls the illustration of Maria the Jewess on the frontispiece of *Symbola aureae mensae*

⁷⁷ For example in Thomas Wijck, *The Alchemist #3*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.06.

⁷⁸ Van Haute, 1999: 107.

⁷⁹ It should be noted that van Haute is not alone in her Bible theory. See Müller et al., 1978: 152. Research undertaken by this thesis has shown that Bibles in the seventeenth-century Netherlands appeared in a wide variety of formats and dimensions. A survey Bibles in the Koninklijke Bibliotheek and British Library reveals that such texts occur in nearly all bibliographical sizes, ranging from folio to 12o.

⁸⁰ Gerrit Dou, *Old Woman Reading*, c.1631-32, Rijksmuseum, Amsterdam. Other examples include Rembrandt van Rijn, *Old Woman Reading*, 1631, Rijksmuseum, Amsterdam; Rembrandt van Rijn, *An Old Woman Reading*, 1655, Drumlanrig Castle; Gabriel Metsu, *Old Woman Meditating*, c.1660-62, Rijksmuseum, Amsterdam.

duodecim nationum, who clasps a book in an expression of chymical excellence, not feminine piety. This reading is supported by the lack of moral signifiers in the composition. The chronology provided by van Haute indicates that Ryckaert's penchant for emblematic signifiers, and in particular the owl, endured for many years after this painting. Ryckaert's favourite proverbial owl and a snuffed candle, for example, are incorporated to unabashed moralizing effect in the 1650 painting *As the Old Ones Sing, so the Young Ones Pipe*.⁸¹ Yet, the Le Havre *Alchemist* contains no such signifiers. As such, van Haute is wrong to pronounce this painting a scene of female moralizing and male folly. The Le Havre *Alchemist* eludes such comfortable conclusions. Instead, the inherent ambiguity proclaims an entirely new development away from traditional emblematics and towards a revolutionary conception of alchemical art and the women therein.

2.3 Ryckaert's Ageing Alchemists

The owl does reappear, however, in the Brussels *Alchemist in his Laboratory* (Fig. 58).⁸² This painting, again dated 1648, essentially constitutes a reworking of the Le Havre *Alchemist*. This work, which reverses the composition of *The Alchemist*, consigns the male alchemist to the left and the wife to the right of the scene. Despite the inversion of the space, the workshops in the two paintings are strikingly similar, featuring the same spatial dimensions, furnace, wooden partitions, table, copper bowl and numerous other details. The background apprentice, pummelling the mortar, is repeated in *The Alchemist in his Laboratory*, with the addition of a further shadowy character in the far recesses of the room. The alchemist, although reversed, replicates the protagonist of the Le Havre *Alchemist* even wearing tonally matching clothes. The characterization of the wife, however, is almost entirely new. Although with white cap, rosy complexion and an ageing appearance the wife is superficially similar to her *Alchemist* counterpart, the artist opts for a bright azure for her skirts, a striking choice of colour, especially when juxtaposed against the muddy gloom of the dark workshop. Trumping her predecessor, this colourful leading lady is even less enamoured of traditional background obscurity. Crucial in this personification, however, is a new face.

The thin austerity of the previous wife is replaced here by a plumper benevolence. Although the couple still do not face each other, the wife here inclines to her husband as he too turns towards her. Smiles replace the scowls, as the alchemist's wife seems to assist her husband in

⁸¹ David Ryckaert, *As the Old Ones Sing, so the Young Ones Pipe*, 1650, Private Collection, Switzerland. Reproduced in van Haute, 1999: 348.

⁸² David Ryckaert, *The Alchemist in his Laboratory*, 1648, Koninklijke Musea voor Schone Kunsten van België, Brussels 156. Oil on canvas, 66 cm x 87.5 cm. Signed and dated: *D. Rijkar... f 1648*. Provenance: auction Brussels, P.-F. Tiberghien 22 May 1827, number 253.

his chymical operations, pointing purposefully to the lines in an open book. This is not, however, the interpretation of van Haute who maintains again that the wife is “referring to a passage in the Bible which is now held open towards the spectator”.⁸³ While van Haute’s reading of the lecturing wife is not unreasonable, it is curious that Ryckaert, in splaying the pages of the text, does not indicate its content. Warlick, in response to such criticism, argues that “the book might just as well be an alchemical text”, “indicating the wife’s attempt to help her husband follow the book’s instructions”.⁸⁴ Similarly, in contrast to van Haute, F.C. Legrand suggests that the alchemical couple embody the wisdom and serenity of the elderly, writing:

Alors que *L’Alchimist* de Brueghel illustre un aspect de la folie humaine s’épuisant en des recherches stériles, l’alchimist de Ryckaert et sa compagne incarnent la sagesse des vieillards, le labour paisible et partagé.⁸⁵

The Alchemist in his Laboratory, however, admits an ambiguity overlooked by Legrand; while depicting quiet dedication and scholarly activity, the painting does not constitute an unconditional defence of the couple’s alchemical pursuits. It is highly probable, given the subject, that the drawing of the owl tacked to the mantel emblematically cautions against folly. Despite this motif, the scene is essentially ambiguous; Ryckaert refuses either to condone or condemn the alchemical quest and deliberately cultivates mystery around the central female figure. In a perversion of Bruegel’s didactic and explicit drawing, Ryckaert transforms the alchemist and his wife into enigmatic spectres, whose identities remarkably continue to generate argument almost five hundred years on.

The debate is further fuelled by the recurrence of an elderly book-wielding woman in two nearly identical paintings *The Alchemist with his Wife in the Workshop* (Fig. 59)⁸⁶ and *The Alchemist with his Wife in the Laboratory* (Fig. 60).⁸⁷ Facially distinct from those discussed previously, this old woman appears older still. Lines deep with age traverse her brow, as the

⁸³ Van Haute, 1999: 108.

⁸⁴ Warlick, 2002: 192. It should be noted, however, that in correspondence with this author Warlick has now revised her opinion, writing: “After now looking at many more Ryckaert paintings, I agree with Bernadette van Haute that she probably serves more of a moralizing function, and that the book is a bible, rather than an alchemical manuscript.” (Email received 30 October 2003).

⁸⁵ Legrand, 1963: 155. Translation: “Whereas Bruegel’s *Alchemist* illustrated an aspect of human folly exhausting itself in futile quests, Ryckaert’s alchemist and his partner embody the wisdom of the elderly, peaceful and shared work.”

⁸⁶ David Ryckaert, *The Alchemist with his Wife in the Workshop*, 1648, Muscum der Bildenden Künst, Leipzig I.350. Oil on panel, 42 cm x 62 cm. Signed and dated: *D. Ryckaert f. 1648*. Provenance: Clauß bequest, 1861.

⁸⁷ David Ryckaert, *The Alchemist with his Wife in the Laboratory*, 1649, location unknown. Oil on panel, 40.6 cm x 62.2 cm. Signed and dated: *D. Ryckaert 1649*. Provenance: auction London, Christie’s 5 April 1963, number 37. Reproduced in van Haute, 1999: 333.

corners of her sagging mouth droop wearily down. Compositionally, the paintings are identical to *The Alchemist in his Laboratory*, but for a significant variation in the positioning of the chymist and his wife. In *The Alchemist in his Laboratory* the head of the alchemist inclines away from his work, towards his wife, as if listening and in some way heeding her gesturing finger. In *The Alchemist with his Wife in the Workshop* and *The Alchemist with his Wife in the Laboratory*, however, the chymist appears less attentive, with his eyes drawn to his work and his head veering towards the experiment at hand. With wrinkled countenance and soundless lips, the chymist's spouse stares mournfully at her husband's back, as if resigned to his rejection. Once again, the wife's role in the workshop is ambiguous; whether she is providing moral or chymical instruction for her husband is essentially uncertain. In either case, she is ignored by the central male chymist.

A final reconfiguration of this model occurs approximately ten years later in *The Alchemist and his Wife* (Fig. 61).⁸⁸ The painting reverts to the original arrangement of Le Havre's *Alchemist* in which the chymist is located towards the right and the wife on the left. While the setting is very similar, the arrangement is markedly different. The bald chymist replicated time and again is abandoned in favour of a new model, a dark-haired man who appears in numerous other Ryckaert paintings. The female, while maintaining the white cloth cap and large book, is also new. The couple are distinctly younger than any other featured by the artist. Working the bellows, the chymist conforms to the Ryckaert pattern; glancing up from his work, the chymist cocks his head slightly to one side as if listening. His wife, to form, grasps a large volume. In this example she holds the pages open to her chest, with the book's vellum cover facing out towards the spectator. Her eyes are keenly trained in the direction of her husband, although her gaze seems to fall over his shoulder; she appears to interrupt the chymist in his toil. Compared with earlier examples, *The Alchemist and his Wife* renders the couple even closer to one another. But despite their proximity, intimacy is lacking between them. As anticipated, the wife is positioned behind her husband, but this time is set slightly further into the background. As the alchemist looks up from his work, it is now completely impossible for him to see his wife. Once again, van Haute insists that the "work shows an alchemist in the company of his wife, who interrupts him to draw attention to a passage in the Bible."⁸⁹ However, ambiguity once more arises from the artist's reluctance to elucidate fully the painting's intention. As such, van Haute's readiness to ascribe a moralizing cast to the female figure appears, again, injudicious. Ryckaert's paintings at no point categorically identify the female as didactic. Indeed, in this contextual study it is clear that, as Ryckaert's

⁸⁸ David Ryckaert, *The Alchemist and his Wife*, c.1655-60, Kromerfz Castle, the Czech Republic. Oil on canvas, 56 cm x 67 cm.

⁸⁹ Van Haute, 1999: 144.

work evolves from simple imitation to complex innovation, ambiguity becomes a defining feature in his effort to capture the essential mysticism of the alchemical workshop and, in particular, the female within.

2.4

A brief survey of David Ryckaert's non-alchemical works uncovers an enthusiasm for central female figures. Specifically, the paintings of the cobbler's workshop (for example Fig. 62), executed by Ryckaert between 1645 and 1649, share several similarities with his alchemical work.⁹⁰ Often exploiting familiar alchemical models, these scenes portray mature couples, presumably husband and wife, sitting side by side. As the wife tends her spinning wheel, the cobbler works his leather. These partnerships, comparable in many ways to Ryckaert's alchemical spouses, clearly embody the virtues of age and industry.⁹¹ Applying this gendered paradigm to Ryckaert's alchemical work, Legrand's interpretation of "la sagesse des vieillards, le labour paisible et partagé" is especially difficult to deny. However, Ryckaert's female characters remain essentially and significantly enigmatic. These women occupy a space of possibility and variation; their identity is determined not by the artist, but by the viewer. While Legrand infers industrious and peaceful matriarchs, van Haute perceives admonishing matrons. Similarly, while this thesis identifies potential female chymists in these images, these characterizations, in their essence, represent the embodiment of alchemical hermeticism. Defying artistic tradition, Ryckaert's work refuses to command his viewer, rejecting both the moralizing didacticism of his contemporaries and the stifling cliché of his inheritors. Ryckaert refuses to reduce the female to an easily deducible symbol in the manner of alchemical emblemata and, in doing so, denies the clear characterization of the wife as nag, colleague or chymist.

Thomas Wijck

3.0

Although the enigmatic products of Ryckaert's palette allow the possibility of female chymistry, they ultimately admit a plethora of alternative readings. A less equivocal vision of the working female chymist lies in the paintings of Thomas Wijck. Chapter II of this thesis

⁹⁰ David Ryckaert, *The Cobbler*, c.1644-1649, Bally Schuhmuseum, Schönenwerd, Switzerland. Signed: DR.

⁹¹ For an analysis of this collection see van Haute, 1999: 34-35, 40-41, 105-07.

introduces Wijck as a painter of distinctive and innovative chymical scenes. These paintings, characterized most often by scholarly activity and compositional balance, evoke the sense of equilibrium that lies at the heart of the chymical marriage and Dutch domestic philosophy. Previously, this study has shown how Wijck's treatment of gender reflects that of chymical emblemata, transmuting the White Queen and Red King into their domestic equivalents. In the compositions discussed earlier, Wijck depicts two separate but interdependent spheres, in an expression of micro- and macro-cosmic equilibrium. Here in this final chapter, this study turns to his portrayal of marital partnership, in which husband and wife work side by side towards a shared chymical goal.

3.1 *An Alchemist In His Study*

An Alchemist in his Study (Fig. 63) is, in many ways, archetypal Wijck.⁹² Through an architectural arch which spans the entire width of the canvas, a thriving chymical workshop is captured in the midst of its daily routine. This capacious study reveals a red-capped scholar at a desk laden with scraps of paper. Relatively young, the bearded chymist, with prominent positioning and distinctive clothing, commands attention. With paper and pen in his hands, the scholar is momentarily diverted; as he turns outwards to the viewer, his eyes are drawn to the burning coals in the lower left corner of the room. With an eye to both his papers and his practical preparations, this chymist embodies the balance of the esoteric and exoteric. From the wood-beamed ceiling hangs a large blue swathe of curtain, a reptilian creature, a lantern and a birdcage. To the left of the scene Wijck's idiosyncratic and beautifully executed lead-latticed window floods the cluttered workshop with brilliant Haarlem daylight. The vast space is consumed by chymical paraphernalia which spills across the room. The intensity with which pots and papers pollute the workshop, however, is a signal not of moral disintegration, but of zealous industry. The framed portrait on the right of the scene indicates the wealth and social standing of the owner. But the scholar chymist is not the only figure in the room. Beyond a table burdened with a colossal globe and enormous tomes, a poorly lit assistant plunges two hands into a large iron mortar. With sleeves rolled up, back arched and knees bent, the dynamic figure neatly encapsulates the atmosphere of industry. Beyond the assistant, however, sits the remaining resident of the interior. Through a further arch and past a short flight of steps, a distant female figure stares out of the workshop directly into the eyes of the viewer. With a white apron riding up upon her red-skirted lap, the woman appears to be seated. Around her head is wrapped a white scarf, which trails heavily about her neck.

⁹² Thomas Wijck, *An Alchemist in his Study*, date unknown, Wellcome Library, London 45100i. Oil on wood, c.58 cm x 54 cm. Provenance: Robinson Fisher and Harding auction house, London, 11 March 1920, lot 126.

With her sleeves rolled up, this characterization continues the theme of diligence and, while her specific labour is imperceptible, she appears to hold up an object in her left hand related to her task. Significantly, there is no apparent kitchen and no child under her care. Initially, at least, she possesses every indication of being a female assistant.

While this potential assistant is the smallest character in the room, she is undoubtedly significant. In yet another example of shrewd construction, Wijck propels the viewer through the painting, forcing a final halt at this female element. As in Wijck's *Alchemist at Work with a Mother by a Cradle*, the room is lent a powerful sense of scale and depth by the steady lineal progression of horizontal rafters. This sense of progression is reiterated in the repetition of archways, which gradually, of course, decrease in size. The swooping arch through which the viewer first peers is echoed in a fully illustrated arch in the middle ground and then again in the arches implied beyond. The curves of the domineering globe resting in the mid-ground further enforce this progression. In addition, a series of directional diagonals and horizontals impel the viewer along the same path. Although the complex lineal staging appears almost random, each line forces the eye deeper and deeper into the heart of the painting. The horizontal rafters, combined with the straddling linkage beams, oblige the eye down, while powerful diagonal lines thrust the viewer into the small area occupied by the female. This contrivance is also evident in the intruding triangular formation to the right of the painting. In a sharp angle emphasized by falling light, a configuration of books and tables points precisely to the tiny figure in the back quarter.

While this configuration appears to embrace the female element in the recesses of the workshop, she is nevertheless alienated from the male sphere. As in Wijck's previous paintings, this female inhabits her own space; not only is she placed through another archway, but she is also located beyond a short flight of steps. Significantly, especially within the context of Wijck's oeuvre, this female space is illuminated by an independent source. A latticed window at the very rear of the section swamps the niche with its own light. Furthermore, although this minor area is heavily emphasized, barely any of it is actually visible. Therefore, while the viewer cannot see a domestic kitchen, an immediate chymical environment is equally absent; the female, although seemingly suffocated by various furnaces and pharmaceutical pots, is not tangibly connected to the workshop. Once removed from the chymical context, the female immediately assumes a more traditional appearance; seated and handling what may be a spindle and thread, this elusive female might simply represent a standard domestic spinner. Thus, while *An Alchemist in his Study* renders the possibility of a female chymical assistant, it is an identity which Wijck refuses to verify.

3.2 *Interior With An Alchemist*

Interior with an Alchemist Making a Gesture of Surprise, and a Female Assistant (Fig. 64) is the description ascribed to genre painting's most explicit depiction of the female chymical assistant.⁹³ Instantly recognizable, Wijck's painting is stylistically typical of the artist's chymical oeuvre. With its idiosyncratic arches and Italianate columns, *Interior with an Alchemist* depicts a quintessential Wijckian study. The interior and positioning of the chymist are replicated almost exactly in another remarkable painting by Wijck, *The Alchemist and Death* (Fig. 65), which represents the artist's most unusual treatment of the alchemical theme.⁹⁴ A spectacular piece, the painting includes the spectre of Death and the peculiar intrusion of a supernatural sky into the ceiling. While this completely unexpected composition contains no female characters, it is interesting that the background of this painting is also used in *Interior with an Alchemist Making a Gesture of Surprise, and a Female Assistant*.⁹⁵

Conforming to Wijck's standard arrangement, the red-capped chymist is repositioned to his usual raised desk to the left of the scene. As expected, the elevated desk, piled with tumbling books, parchment and a large globe, is positioned beside a large, ornate paned window. Equally true to form, a heavy swathe of blue curtain hangs from the ceiling, alongside a lantern and pulley-system. The floor is crowded with its usual signifiers; alembics and furnaces jostle for space amongst the discarded books, chipped pottery and pewter dishes. Reappearing too is the female presence at the heart of the painting. Although her face is turned away from the viewer, the female shares a similarity with her counterpart in *An Alchemist in his Study*, possessing broad, masculine features. Half hidden by a stone surface, the dark-haired female, with shoulders askew, leans to one side as if reaching for an object out of sight. Typically dressed, she wears a cap at the back of her head and a distinctive grey square-collared dress. With sleeves rolled up, tilted torso and crooked elbow, this dynamic characterization suggests industrious motion.

⁹³ Thomas Wijck, *Interior with an Alchemist Making a Gesture of Surprise, and a Female Assistant*, date unknown, Wellcome Library, London 45093i. Oil on wood, 43 cm x 38.5 cm. Provenance: Christie's, London, 20 April 1923, lot 157; description in Christie's catalogue "Th. Wyck. The interior of a laboratory, with two figures and numerous utensils. Unframed, on panel -- 17 in by 15 in".

⁹⁴ Thomas Wijck, *The Alchemist and Death*, date unknown, Wisconsin collection of Drs. Alfred and Isabel Bader, Milwaukee. Reproduced in Russell Corbett, 2004: 162.

⁹⁵ In relation to *The Alchemist and Death* Russell Corbett notes that "the architectural features of the room differ from those normally shown", Russell Corbett, 2004: 165. This statement is accurate with regards to the combination of features; however, the individual architectural components of the room are all common in Wijck's work.

As this thesis has demonstrated, Thomas Wijck, like David Ryckaert, encompasses female characters with conspicuously greater enthusiasm than other chymical painters of the period.⁹⁶ But this alchemist's wife, however, is something quite special. As in all of Wijck's portrayals, the wife is separated from her husband by a significant physical distance, a device which enforces the theme of balance through opposition. Whereas the chymist sits to the left of the scene, the wife stands to the right. Here, however, the female character is not seen through an archway or located in a separate quarter of the room. Instead, despite their physical distance, she enjoys shared space with her husband, even occupying the same light source, a rarity for Wijck's women. Neither does she appear occupied with household chores nor is she garnished with a brood of children.

Interestingly, it is the smallest variance in this female characterization which is most illuminating. All other female characters in Wijck's paintings focus on domestic tasks; with heads usually bent, their eyes are trained on some household chore. In *Interior with an Alchemist*, however, the head of the female is inclined to the left, with her open gaze directed towards her husband. This remarkable departure from convention fixes the female firmly to her chymical context. The red-capped scholar, however, does not glance up from his page. Instead, with his head bent towards the desk, he pushes the palm of his right hand out to the viewer, as if demanding a pause. With his left arm outstretched towards his wife, the chymist appears to instruct his assistant. Although the Wellcome Library's description of the painting identifies the gesture as "surprise" there is nothing explicit here to justify this reading.⁹⁷ Instead, the chymist at his desk appears to relate instructions from his treatise to his attentive wife. While they do not interlock eyes, the couple are certainly interacting with one another. The physical dynamism between characters implies a chymical dialogue absent from all other Wijck paintings.

Ostensibly, then, this is a true chymical partnership, the chymical marriage incarnate. Wijck's female, like Pérenelle Flamel, is seemingly the *soror mystica*, an equal and genuine participant in both a chymical quest and a Christian marriage. With sleeves rolled up,

⁹⁶ It should be noted that a female character also occurs in Thomas Wijck, *Alchemist in his Studio*, date unknown, Chemical Heritage Foundation, Philadelphia 00.01.254. However, the poor condition of this work and resulting unintelligibility precludes its inclusion in this study. It also appears stylistically inconsistent with the work of Thomas Wijck.

⁹⁷ In correspondence with the author, William Schupbach of the Wellcome Library has noted that "the wording 'Interior with an alchemist making a gesture of surprise' was probably introduced in the 1970s or 1980s when the Wellcome paintings were first listed (they did not then have catalogue numbers). To avoid listing the same painting twice or listing two different pictures as the same one, an attempt was made to distinguish the many paintings by Wyck which had all been listed as 'An alchemist in his laboratory'. Such wording confused the attempt to discover how many pictures by Wyck of that subject were actually in the Wellcome collection." (Email received 10 November 2005) .

patently attentive to the chymist and in the heart of the workshop, this figure is indisputably a chymical worker. But despite her immersion in a chymical environment, this individual does not represent a glorious legacy of female chymistry. Instead, there is evidence within the scene suggesting that the chymist's wife is simply that: a wife, helpmeet and subordinate. The primary indication of this is the location and centrality of the chymist. Wijck's alchemical paintings, while often including a crowded cast of characters, project a single, protagonist chymist. As this thesis has shown, this male figure is often a scholar, bearded and red-capped, positioned at an elevated desk near a window. While there are some variations upon this configuration, the presence of a singular chymist is constant. This principal component is often supplemented by assistants or apprentices. These are invariably secondary characters, with their marginality cleverly conveyed. Often faceless creations, the helpers are almost always depicted in the throes of action, regularly portrayed at a large pestle and mortar.⁹⁸ Furthermore, these assistants are consistently depicted on a lower physical plane to the alchemist: at his elevated desk, the chymist enjoys a superior status in the frame.⁹⁹ Similarly, these minions are most often depicted in the background.¹⁰⁰ As the chymist is pictured in the foreground, his presence dominates the scene and the remaining characters. The inferiority of the other characters is further emphasized by their slight frames and hunched figures; less visible, in these paintings, is less important. The chymist's wife in *Interior with an Alchemist* clearly conforms to many of the conventions governing the depiction of assistants and secondary characters. At a physically lower plane, she is consequently of a lower rank. Slightly hunched, she is also placed further back from her husband, thus representing a perspectively smaller figure. Significantly, she is also a figure of action; while the viewer cannot ascertain her task it is clear that she is a physical, not theoretical, worker. Like most other assistants, she is also located away from the light source. Although Wijck's alchemists do not commonly interact with their assistant, the implied dialogue of *Interior with an Alchemist* does not confer any special importance on the wife's role in the workshop. Occurring in at least three other paintings, implied dialogue is not abnormal and does not confer equal status between chymist and assistant.¹⁰¹ Instead, the thrusting arm asserts the authority of the male. Motioning his supremacy, he does not need to

⁹⁸ See, for example, Thomas Wijck, *The Alchemist #2*, date unknown, Chemical Heritage Foundation, Philadelphia 00.01.261 and Thomas Wijck, *The Alchemist #3*, date unknown, Chemical Heritage Foundation, Philadelphia 00.03.06.

⁹⁹ See, for example, Thomas Wijck, *Alchemist in his Studio*, date unknown, Chemical Heritage Foundation, Philadelphia 00.01.254 and Thomas Wijck, *Interior of a Laboratory*, date unknown, Wellcome Library, London 45096i.

¹⁰⁰ See, for example, Thomas Wijck, *Ein Alchimist in seiner Werkstatt*, date unknown, Staatliche Kunsthalle, Karlsruhe, Germany.

¹⁰¹ Thomas Wijck, *Ein Alchimist in seiner Werkstatt*, date unknown, Staatliche Kunsthalle, Karlsruhe, Germany; Thomas Wijck, *The Alchemist #4*, date unknown, Rijksmuseum, Amsterdam SK-A-489 and Thomas Wijck, *The Alchemist*, date unknown, Wellcome Library, London 45098i.

look up from his work to express command. Correspondingly, the female acknowledges her own position by her open and receptive passivity. Her alert countenance is turned to an indifferent master.

3.3

In depicting the female at the heart of a chymical scene, *An Alchemist in his Study* is ingeniously illusory. Relieved of all domestic signifiers and in the absence of children, the female is unambiguously a working woman. But while she has shed the standard symbols of motherhood and wifedom, this female figure is adrift, without real context and without identity. With little to suggest a relationship to her chymist husband, this woman is immersed in anonymity, which prohibits recognition of her as either chymist or chymical assistant.

It is in *Interior with an Alchemist*, then, that Wijck perhaps provides the only definite depiction of a female chymical worker in the entire breadth of seventeenth-century genre painting. A clearly significant characterization, this focal female is pictured amongst the fumes of the furnaces, a force of animation. But as this section has shown, *Interior with an Alchemist* does not portray a female chymist. Instead, the female figure is a worker, an instrument of male instruction. The partnerships evident in the *Mutus Liber* and the mythologized relationship embodied by the Flamels reflect vocational equality, encapsulating the harmonious equilibrium of the chymical marriage. Wijck's work, in contrast, reflects the perfect power imbalance of matrimony and encapsulates the harmonious disequilibrium of Dutch social gender philosophy.

It is possible that the relationship between *Interior with an Alchemist* and *Alchemist and Death* may offer further explanation of the female presence. Of Wijck's *Alchemist and Death*, Jane Russell Corbett writes:

Given the extent to which *The Alchemist and Death* differs not only from the majority of Wyck's alchemist subjects, but from the depictions of the theme in general, it is probable that it was painted for a particular patron rather than for the open market. Moreover, it is quite likely that it was painted for an English client. Wyck went to England around the time of the Restoration and seems to have remained there for some time. Quite a few of his paintings of alchemists appear to have been produced during his stay there.¹⁰²

¹⁰² Russell Corbett, 2004: 170.

As the only known painting to share a compositional background with *The Alchemist and Death*, it is feasible that *Interior with an Alchemist* was also produced in England and for English tastes. The subject of alchemy is rare in English art of the early modern period and, consequently, paintings produced along this theme do not suffer the constraints which govern Netherlandish chymical genre paintings. Although it clearly lacks the sensational impact of *The Alchemist and Death*, it seems likely that *Interior with an Alchemist*, in its uniqueness, may also be a commission piece. Incorporating the only known depiction of a female chymical worker in seventeenth-century Netherlandish genre painting, *Interior with an Alchemist* does not cater for a broad market. When separated from their spinning wheels and cooking pans, it seems that female workers are invariably unwelcome in Netherlandish chymical genre painting. Incredibly, then, the only known depiction of a female chymical worker in early modern genre painting might actually be more English than Netherlandish.

4.0 Conclusion

The pictorial legacy of the Founding Mothers of alchemy is, to say the least, slight. Art pays little testament to the mythological figureheads, *soror mystica*, learned ladies, helpmeet wives and the generations of domestic chymists who fundamentally transformed the history of chymistry. Emerging intermittently in alchemical treatises, the non-abstract female is essentially a generic symbol of womanhood, which negates the individual and denies female complexity. In its depiction of man and woman working side by side, the *Mutus Liber* defines the female in terms of her relationship with the male, and, necessarily, the male in terms of the female. Consequently, both characterizations represent pure gender, absolved entirely of human density and difficulty.

However, the paintings of David Ryckaert and Thomas Wijck and even the satirical prints of Bruegel reflect an evolution in the humanization of women in alchemical art. The preceding chapters of this thesis demonstrate how the female is ordinarily relegated to a separate sphere, marginalized to a very specific role: patient, mother, wife. In the paintings of Ryckaert, however, the female occupies space with her husband in a male arena and powerfully withstands such easy compartmentalization. For the most part, then, the identities of focal females in these paintings resist resolution, and undoubtedly raise more ambiguities than they resolve. The issue of whether Ryckaert's women are scolding wives, supportive helpmeets or *soror mystica* remains, and must remain, debatable. The complex characterizations evident in Ryckaert's work are echoed in the paintings of Wijck. Here again the female is elevated from symbolic entity to rounded, and inexplicable personality. Yet despite the increasing

complexity of female characterizations, the women in the paintings of Wijck and Ryckaert are powerfully bound to their emblematic ancestors. In almost all illustrated chymical treatises, the Female exists only within the context of the Male. So too, in genre art, while the male chymist is frequently depicted in isolation at the furnace, women workers are invariably portrayed only in male company: the independent female chymist simply does not exist in any Western graphic tradition.

The female, then, operates even in genre art as an emblematic counterbalance to the male. This thesis has explored the expression in genre painting of the binaristic perfection of two alchemical opposites: Sol and Luna. Chapters I and II identify how paintings of domestic discord embody the competition of polar opposites, while paintings of domestic harmony present completion through opposition. Male balances female, theory balances practice, private balances public, esoteric balances exoteric, sulphur balances mercury, father balances mother. The paintings of Wijck, and *Interior with an Alchemist* in particular, offer a further binaristic equation. While presenting the only unequivocal representation of a female chymical worker in genre painting, *Interior with an Alchemist* clearly delineates a power imbalance between the male and female protagonists. Despite initial appearance, the female figure in *Interior with an Alchemist* is aligned not with her husband chymist, but with a workshop hand. As her autonomy is enveloped by the master, the maid is consumed by the magus. Yet, completion is achieved through this philosophy of opposition; in a succinct expression of both societal and alchemical idealism, natural male supremacy balances female submission, as master balances slave.

CONCLUSION

OPUS CICULATORIUM

Uncovering a field of Netherlandish genre painting neglected by modern criticism, the findings of this thesis are both numerous and ground-breaking. It has illustrated how all central female characters in seventeenth-century Netherlandish alchemical genre paintings could be placed into one of four categories: Domestic Disquiet, Domestic Quiet, Patient, Chymical Worker. In the course of this research, however, several other important trends emerged. Firstly, that these female characterizations possess complex emblematic significance, relating to both alchemical philosophy and Dutch Emblemata. Secondly, that the iconographical female exists only in relation, and usually counter, to the male. Thirdly, that the male and female partnership within seventeenth-century Netherlandish alchemical genre painting may be aligned to Sol and Luna, in accordance with alchemical doctrine. Furthermore, each of these trends testifies to the emergence of a new argument: that alchemical symbology and philosophy translate, to a limited degree, to genre painting.

In conclusion, this final section begins by summarizing briefly the basic theoretical content of the four chapters. Next, it elucidates the collective findings of this research and clarifies its underlying arguments. Finally, this thesis concludes by outlining the specific areas which will benefit most from future research and by sketching the course of the alchemical genre painting in the eighteenth and nineteenth centuries.

1 Chapter Summaries

In its opening chapter, 'Emblemata and domestic discord', this thesis attends to images of female disquiet in seventeenth-century Netherlandish alchemical genre paintings. Here, specific attention is paid to the depiction of chrysopoeia in paintings critical of exoteric alchemy. While introducing the first of four female categorizations, this initial study establishes the key themes which underpin the remaining thesis and, importantly, indicates the centrality of graphic reference to both alchemical and Netherlandish genre art. At this early stage, a parallel is drawn between the "hidden symbolism" of genre painting and that of alchemical iconography. An analysis of paintings by Heerschop, Steen, Brakenburgh, van de Venne and van Ostade examines the female in terms of her emblematic significance. This analysis exposes a sophisticated matrix of allusion which draws on alchemical iconography,

Dutch Emblemata and contemporary genre painting. Sited within a binaristic gendered relationship, the male and female are explored in relation to alchemical philosophy, the Christian marriage and the Netherlandish household. In a perverse bastardization of alchemical polarities, the male and female represent an inclusive binary system of values: as the male symbolizes irresponsibility, egotism, introversion and recklessness, the female denotes responsibility, selflessness, extroversion and caution. Developing this conceit, 'Emblemata and domestic discord' relates traditional alchemical theory to genre painting; in scenes of domestic and alchemical turmoil, the male rejects the female, and in doing so appears to reject the ballast of the White Queen. Finally, in expounding the variance and perpetuation of female symbolism in chymical genre painting, this chapter alludes to the mysticism inherent to alchemical portraits of the Female.

In its examination of domestic quiet and alchemical scholarship, Chapter II explores female presence in depictions of the chymical study and reconsiders the alchemical concept of the 'chymical marriage' within Netherlandish genre painting. However, where Chapter I discusses representations of a purely exoteric endeavour, 'Pater et materfamilias' concentrates on images of esotericism. This section shows that the equilibrium central to conventional representations of the chymical marriage is present also in genre painting: male balances female, theory balances practice, private balances public, esoteric balances exoteric, father balances mother. Specifically, the domestic roles of Cook, Seamstress and Teacher are explored as female emblems which complement the portrait of the male scholar. As with the paintings discussed in Chapter I, these scenes of domesticity are relocated to a chymical context and read within a wider system of alchemical symbology. In its survey of Wijck's work, this chapter reveals the Dutch scholar and domestic paragon to embody the same idealized, gendered characteristics represented by the *Splendor Solis*' alchemical sovereigns. Thus, it concludes that while scenes of domestic discord embody the repulsion of polar opposites, paintings of domestic harmony present completion through opposition.

In the first study of its kind, Chapter III, 'Piskijken and Pisse-Prophets' excavates the emblematic role of women in paintings of the chymical-uroscopist's workshop. In their treatment of the popular uroscopal theme, these iatrochemical paintings are characterized by an exceptional inclusion of the female. Addressing a highly complex area of chymistry, this section places uroscopy within an early modern context of Galenic medicine, iatrochemistry, alchemical philosophy and chrysopoeia. In addition, the intricate associations of fertility and sexuality to urine are elucidated in relation to both seventeenth-century medicine and alchemy. Capitalizing on the findings of Chapters I and II, this section examines, with greater focus, the development of common key gendered emblems. The first section clarifies the

symbolic significance of the female patient in both a chymical and non-chymical context and examines the weeping woman as a symbol of pregnancy. In a distinct study, the second segment expounds the complexity of female fertility symbols in an analysis of work by Gerard Thomas and Balthasar van den Bossche. Specifically, this section uncovers a correlation between the Red King and Blue Queen of the *Splendor Solis* and the physician-patient motif of genre painting. Locating these fertility emblems within an iconographical chymical tradition, this section also charts the decline of chymistry and uroscopy in paintings of the early eighteenth century.

Finally, Chapter IV investigates the one remaining categorization of female characterization, unearthing the ostensible depiction of the female chymical worker. Siting the female worker within the ancient lineage of female chymistry, this study attends specifically to the ambiguity of female chymists in genre painting. Maintaining the themes of the preceding chapters, this segment connects the female chymical worker of genre painting to the symbolic imagery of alchemical culture. In its survey of work by David Ryckaert III and Thomas Wijck, this chapter breaks new ground in charting the evolution of the female from her symbolist roots in chymical emblemata to her figuration as a fully-formed, humanized chymical worker in Netherlandish genre art. Establishing that the female operates as an emblematic counterbalance to the male, this chapter offers a final component to the binaristic system which underpins all alchemical art.

2 Main Arguments

While the preceding summaries communicate the main themes which run throughout this thesis, the following passages more fully explicate its primary findings. So, to the key points of this investigation. Firstly, the overall argument of this project is that all focal characterizations of women in seventeenth-century Netherlandish alchemical genre painting can be placed into one of four categories: Domestic Disquiet, Domestic Quiet, Patient and Chymical Worker. Although this observation is plain in both theory and statement, it will undoubtedly prove fundamental to future research in the field. All secondary arguments, which are elucidated further on, are derived from this umbrella thesis.

Incorporating paintings which most effectively illustrate each classification, every chapter seeks to expound carefully the images of gender contained therein. Collectively these sections demonstrate that *every* principal female characterization in seventeenth-century Netherlandish alchemical genre painting belongs to a specific, immutable class; whether

mother, cook, teacher, helper, patient or worker, each woman fulfils a set role. In its review of such iconography, this thesis argues that, in line with traditional alchemical art, the female of alchemical genre painting is essentially a symbol of womanhood, which negates the individual and denies female complexity.

While this survey failed to uncover a single unequivocal exception to this statement, some qualification is necessary. Unsurprisingly, it is the enigmatic palette of David Ryckaert which offers impediment to the neat substantiation of this project's core theory. Although critics have identified female workers in the alchemical oeuvre of David Ryckaert, Chapter IV considers these figures deliberately ambiguous. Resisting easy compartmentalization, it asserts, these characterizations embody the essential hermeticism of alchemical philosophy. Having argued that Ryckaert's women transcend classification, Chapter IV might suggest a deficiency in this project's central premise. However, in acknowledging the ambiguity of Ryckaert's compositions, this discourse maintains that his figures, in occupying a space of possibility and variation, have their identity constructed not by the artist, but by the viewer. Legrand infers industrious and peaceful matriarchs, van Haute perceives admonishing matrons, while this thesis identifies potential female chymists. Given this caveat, Ryckaert's women comply with the prevailing premise of this study, simultaneously offering portraits of Domestic Disquiet, Domestic Quiet and Chymical Workers. Accepting then that all focal females are derived from four basic types, a subsidiary argument emerges: the female in alchemical genre scenes is typically emblematic. Serving a purpose external to the primary scene of male activity, women consistently represent a 'female' rather than a sexless or generic quality. In paintings of uroscopy, for example, women denote female fertility, while in scenes of domestic quiet they commonly signify female virtue. Clichés regarding the female character were cultivated and maintained by artists variously depicting shrewish nags and angelic brides entirely unconnected to the chymical theme. Drawing upon a wide variety of emblem books and prints, these painters consistently manipulated the female to complement the expressly male subject. Considering this strong propensity for the formulaic, it is unsurprising that focal females fall relatively neatly into identifiable categories.

The second assertion of this treatise is that the female in alchemical genre scenes does not exist independently. This research did not discover a single example of a solitary female in

any alchemical painting.¹ Contrary to the general conventions of genre art, the female in alchemical genre painting exists only in relation, and usually counter, to the male. This thesis considers this special coupling pivotal to a full comprehension of alchemical genre art. During the seventeenth century, women were frequently portrayed alone or in the company of other women and children, as well as in the presence of men. In alchemical genre painting, however, the female occurs only with male companionship; she is wife to the husband, patient to the doctor and assistant to the master. The consistent union of the female to the male has several potential explanations. The first possibility is that such compositions maintain the iconographical traditions of alchemical art, a theory which is discussed presently. As this treatise has noted throughout, the independent non-abstract female exists only in association with her male counterpart in alchemical literature, philosophy and art. A second, more obvious possibility pertains to the male-centricity of commercial and scholarly alchemy during the early modern period. With a dearth of information on the early modern chymical workshop, it is impossible to gauge accurately the extent of female involvement. However, it is fair to suggest that during the early modern period women were rarely professional alchemists in their own right. Chapter IV, in its history of chymists, uncovers precious few independent female practitioners during this period. As genre art is concerned with the representation and idealization of the everyday, it is unlikely that women would have been pictured alone in male-centric professions. Indeed, a brief survey of other 'profession' paintings quickly reveals the regularity of such male-nuclear relationships. *The Family of the Stone Cutter* by Gerard ter Borch, for example, depicts a mason bent over his work, while his diligent wife carefully tends the hair of their young daughter.² Similarly, separate works by Quiringh van Brekelenkam portray a tailor and a male spinner each accompanied by a female dutifully preparing food.³ In these pictures, and many more besides, the spouses sit independently of one another, refusing to interact.

¹ There are, however, two paintings which deserve mention. The National Museum of Stockholm holds an incomplete, possibly abandoned painting of a chemist in his laboratory, purportedly by Jan Pynas. In this work the gender of the protagonist is not explicit. This thesis, however, concurs with the Museum of Stockholm which records the figure as "male", and considers any ambiguity to result from a lack of proficiency. Jan Pynas, *Chemist in his Laboratory*, date unknown, Stockholm Nationalmuseum, no. 454. Panel, 34 cm x 27 cm. For a brief discussion of this painting see Russell Corbett, 2004: 110-11. The other painting, which does not fall within the compass of this thesis, is a portrait. This painting curiously depicts an elderly woman seated beside a still and holding a receiver. For a concise discussion of this painting see Russell Corbett, 2004: 114-15. François Verwilt, *Portrait of an Old Woman with a Still*, 1674, Location unknown. Canvas, 66 cm x 35 cm.

² Gerard ter Borch, *The Family of the Stone Cutter*, c.1653-55, Gemäldergalerie, Staatliche Museen Preussischer Kulturbesitz, Berlin.

³ Quiringh van Brekelenkam, *Interior of a Tailor's Shop*, 1653, Worcester Art Museum, Massachusetts; Quiringh van Brekelenkam, *Man Spinning and Woman Scraping Carrots*, c.1653-54, Philadelphia Museum of Art.

But there is a subsidiary point here which provides another dimension to this interesting relationship. The male and female in alchemical genre paintings very rarely interact eye-to-eye. This consistent formula effectively heightens the sense of division between the sexes. Again, this construct is atypical of wider genre art; indeed, in scenes of mixed company eye contact between the sexes is common.⁴ So why do the couples so rarely interact in alchemical genre painting? This segregation is easy to explain in representations of domestic harmony. With the work of de Hooch and Netscher, Chapter II demonstrates clearly how genre artists express female virtue through absolute dedication to the household chore at hand. Women are portrayed consistently with eyes trained diligently on their work. As the responsible alchemist devotes himself to his profession, so too the wife absorbs herself in the home. This model occurs in countless paintings of professions, including *The Family of the Stone Cutter*. Sharing the same frame, the husband and wife fulfil their separate duties within the spirit of Christian partnership. This formula, then, is not simply typical of alchemical genre art, but of 'profession' paintings which promote the virtues of industry and diligence through idealized images of gender. But what of paintings criticizing alchemy? Jan Steen's paintings do not promote the same idyllic visions of either gender or alchemy as those by Thomas Wijck. Chapter I suggests that in isolating the female, she is more easily read as a symbol, in the manner of Netherlandish Emblemata. On a more fundamental level, however, the separation of male and female in satirical art alludes to the disintegration of the marriage and household. Steen's wailing woman and scowling alchemist unequivocally suggest the collapse of a partnership and the partners within. Simple narrative devices such as these were intrinsic to genre paintings keen to communicate lessons to a properly moralistic and analytical market. It seems, then, that the motivation behind the segregation of genders depends on the artist's didactic intent. Paradoxically, both advocates and detractors of alchemy employ gender severance in support of their conflicting messages. This thesis, however, proposes a complementary theory for this segregation, which is delineated in the following passage.

The third finding of this investigation is that the male and female within seventeenth-century Netherlandish alchemical genre paintings may be aligned to Sol and Luna, the central figures of alchemical symbology. In proposing this new interpretative framework, this thesis potentially transforms conventional understanding of alchemical genre painting. Chapter I demonstrates how male rejection of the Luna ballast results in universal turmoil, while Chapter II describes the harmony which evolves from a balance of opposites. These two

⁴ Examples include Jacob Ochtervelt, *The Music Lesson*, 1671, The Institute of Art, Chicago; Hendrick Sorgh, *Vegetable Market*, 1662, Rijksmuseum, Amsterdam; Jan Steen, *Inn with a Violinist and Card Players*, c.1665-68, Collection of Elizabeth II; Frans van Mieris the Elder, *Inn Scene*, 1658, Mauritshuis, The Hague.

chapters align the binaristic system inherent to alchemical philosophy to the couples manifest within genre scenes. Male balances female, theory balances practice, private balances public, esoteric balances exoteric, sulphur balances mercury, father balances mother. Furthermore, Chapters III and IV offer binaristic possibilities in the diametrics of doctor-patient and master-slave. Each of these chapters individually reveals how the intricate balance of poles results in alchemical and familial success, while its disruption produces turmoil.

Extending this thread somewhat, this thesis contends that general alchemical symbolism and philosophy translate, to a limited degree, to genre art. Complementing established criticism, Chapters I and III demonstrate contemporary awareness of alchemical symbolism and processes. While numerous critics have explored public recognition of alchemical imagery in relation to poetry and drama, this thesis pioneers the approach to a genre painting. Considering the wide proliferation of alchemical iconographical literature during the seventeenth century, it seems likely that artists, in particular, would have possessed a basic appreciation of alchemical theory. As this thesis has demonstrated, cross-fertilization between artists was common, and consequently ideas and themes were highly communicable. It is also important to note that from the seventeenth century onwards, engravers of alchemical emblems did not concentrate solely on this specialized field; instead designers and engravers would have worked on numerous projects, ranging from genre prints to traditional emblem books.⁵ The probable involvement of artists such as David Teniers and Gerard Thomas in the chymical sphere further compounds the argument that paintings of the chymical workshop betray an awareness of alchemical philosophies. Significantly, however, debate regarding genre painters' conscious subscription to alchemical philosophies of gender is entirely speculative. Despite reasonable conjecture, the issue of whether genre artists actually possessed knowledge of esoteric philosophies remains essentially irresolvable. To be clear, therefore, this dissertation does not suggest that these paintings were necessarily constructed with alchemical philosophies in mind. Nor does it suggest that these paintings exist only within a broader context of alchemical symbolism. On the contrary, this study acknowledges that these works could be extracted from an alchemical context altogether and analysed within an entirely non-chymical framework. Nevertheless, chymical readings of alchemical genre paintings have proved immensely fruitful. Expounding the relationship between the red and blue doctor-patient motif and the Red Sol King and Blue Luna Queen of the *Splendor Solis*, Chapter III, in particular, exemplifies the potential benefits in aligning chymical symbology with genre painting. This, in conjunction with the other chapters,

⁵ See Wüthrich, 1966.

alludes to a shared visual culture, incorporating alchemical iconography, emblem literature and genre painting.

3 Further Research

The study of alchemical genre painting is undoubtedly in its infancy. Almost entirely uncharted, this vast field offers rare scope for historians of art, medicine, chemistry and gender. Perhaps of most urgent demand, however, concerns the issue of cataloguing. Although the Wellcome Library and Chemical Heritage Foundation possess substantial collections of alchemical art, accurate and comprehensive research into their holdings is lacking. Bernadette van Haute's study of David Ryckaert clearly illustrates how methodical and meticulous cataloguing allows subsequent scholars far greater range and precision in their research. At present, numerous works would benefit from focussed research to establish definitively the artist and date of creation. Considering the extent of direct replication and repetition in these paintings, collaboration between these two major collectors would also be valuable. A joint database of all known alchemical paintings would be relatively easy to construct and would benefit scholarship in this area immensely.

Equally urgent is the need for a scholarly introduction to alchemy. The wide proliferation of errors and inaccuracies in this discipline is remarkable. The lack of reliable material currently available is due in part to the diversity of people attracted to the subject of alchemy. On library shelves, the publications of modern-day 'alchemists' eager to reproduce the Philosophers' Stone vie for attention alongside university-published volumes. Indeed, a number of respected university-affiliated authors produce populist 'magic' books in addition to their academic output. The gap between serious academic endeavour and frivolous fancy is filled by a glut of under-researched and over-speculative paperbacks. The substandard condition of alchemical scholarship obviously hampers new research in the field and denies access to the uninitiated. It may be within the interests of the Chemical Heritage Foundation, whose mission statement encompasses advancing understanding of the historical role of chemical sciences, to fund and produce such an introduction. Currently, the academic standard is set by chemistry-orientated historians like William R. Newman and Lawrence Principe. Proficient in both practical science and historical methodology, these scholars exhibit rare objectivity in their approach to alchemy. While criticized by some in the field, Newman and Principe's attention to detail and prioritization of analytical skills remains unsurpassed.

In the course of its research, this thesis has had to rely on the work of other historians and scholars. It is unfortunate that the time constraints could not encompass fresh socio-historical data collection. Secondary material frequently fails to meet the standards of modern scholarship. Modern histories in this area consistently regurgitate the findings of ill-referenced papers fifty or sixty years old; some of the studies commonly referenced are almost antique. A fresh and thorough review of primary material is long overdue. In particular, new research must be directed towards the historical role of women in chemistry. This deficiency is symptomatic of a much wider and unhappier trend: the history of women in science and in the workplace is sorely neglected by current criticism. As yet, few academics have been prepared to assume the painstaking data collection required to yield results in this largely uncharted and diverse field. Instead, numerous studies, especially those of a feminist perspective, are purely reactive, responding only to the deficiencies of criticism already written.⁶ Happily, the issue of women in the early modern Netherlandish workplace is at present being addressed by the International Institute of Social History with their ambitious project, 'Women's Work in the Northern Netherlands in the Early Modern Period'. This potentially revolutionary research, involving an extensive micro-trawl of contemporary documents, will provide missing qualitative and quantitative information, as well as offering a more precise understanding of Dutch women's work in the early modern period. Similarly, excellent research has been produced in recent years on early modern women in the Netherlandish textile industries. The accomplished research on images of domesticity and fertility in genre painting has also been noted by this thesis.

Opportunities are considerable for future research on the specific theme of gender in seventeenth-century Netherlandish alchemical genre painting. Given the allowance of time, this thesis would have traced the sources of repeated gendered topoi. Accurate cataloguing and provenancing would have helped inestimably with this endeavour. Although alchemical historians currently betray little interest in genre painting, the expertise acquired through the study of alchemical symbolism is ideal for such a task. Furnished with the findings of this thesis, historians of mainstream alchemical art could undoubtedly advance the study of alchemical emblems significantly. In line with this, a comprehensive critique of women in alchemical culture is ripe for production. The broad subject of women in alchemy has soared in popularity in the past decade. Doctoral theses, chapters and papers have explored disparate elements of a wide field; it would be judicious, at this stage, to draw these distinct studies into

⁶ The vitriol with which Simon Schama's chapter 'Housewives and Hussies' is attacked by feminist critics is difficult to understand. It might be suggested that too often these assaults ostensibly descend to male-bashing. See, for example, Sneller, 1994: 21-34.

one comprehensive reading of women in chymistry. It is possible that the proposed work of M.E. Warlick, to be published in the coming years, will possess such an objective.

Furthermore, while it is essential to excavate the historical role of women in the early modern chymical workshop, the role of the male demands anchorage also. At present, numerous studies document the lives and works of celebrated European chymists and chemists. The chymical enterprises of John Dee, Robert Boyle, Isaac Newton and George Starkey, in particular, have been chronicled by several recent studies. However, the undistinguished village chymists of early modern Europe remain almost completely anonymous. Again, this enterprise would require a micro-level review of primary documentation.

Constraints permitting, this thesis would also have conducted a closer investigation of 'profession' paintings and the relationships contained therein. Thus far, this genus of painting has been overlooked by scholars. This inquiry has found that representations of men and women at work are, seemingly, governed by shared conventions. This curious commonality deserves investigation and it is regrettable that it was not within the scope of this thesis to explore further. In particular, it would be interesting to establish the exact extent to which chymical paintings conform to the conventions of 'profession' painting, especially in their depiction of gender. Regardless of this chymical connection, this research is especially important because the study of male/female relationships in Netherlandish genre painting is severely neglected.

Building on this thesis, future researchers should also seek to reconstruct a background to the historical chymical workshop. Currently, the chymical landscape of genre painting is evoked frequently by commentators to describe the actual historical workshop. In actuality, the demographical structure of the seventeenth-century chymical workshop eludes historians completely. The discrepancy between genre painting and historical reality must be acknowledged and investigated properly.

4 The Course of Alchemical Genre Painting

As suddenly as it began, the phenomenon of Netherlandish alchemical genre painting was over. Spanning most of the seventeenth century, the popularity of alchemical genre painting plummeted soon after the dawn of the eighteenth century. While it is difficult to pinpoint the

exact turning point, it is quite clear that the end was sudden and essentially permanent.⁷ This decline has no obvious source, but it is feasible that changing attitudes in the chymical workshop, as well as wider market trends in genre painting were responsible. By the mid-eighteenth century the vast majority of chymists had abandoned the quest for the Philosophers' Stone. Pure chemistry, which once enjoyed a cult status, rapidly infiltrated academic institutions and societies, propelled by its increasingly Enlightened advocates. Mirroring this sharp ascent, alchemical genre painting in the Netherlands embarked upon an irreversible descent. By the earliest years of the eighteenth century the conventions of alchemical genre art were beginning to loosen. Allusions to emblem book iconography were completely abandoned, perhaps in line with the waning popularity of the books themselves. It seems, in fact, that the governing conventions of iconology and those of alchemical symbology share numerous similarities, including their increased unintelligibility into the eighteenth century. It is certainly feasible that both symbolic systems gradually lost 'meaning' through a proliferation of unqualified and purely superficial reiteration.

Although the chymical workshop resurfaced sporadically in art, fewer and fewer alchemical genre paintings were produced in the Netherlands. Engravings after David Teniers were reproduced well into the nineteenth century, but the subject never returned earnestly to painting. Usurped by its younger, stronger progeny, chymistry was conquered by chemistry; chrysopoeia, it would seem, was slightly embarrassing in the wake of a brave new Enlightened world. Curiously, however, amidst this decline a minor revival emerged elsewhere. During the seventeenth century, the chymical workshop essentially occurred in the genre paintings of only Netherlandish and Italian artists. In the following two centuries, however, England, Austria, Germany and France all showed unprecedented interest in the subject.⁸ These European paintings bear scant resemblance to their Netherlandish predecessors. Diverging in numerous ways, even the earliest eighteenth-century paintings betray evidence of a fundamentally altered perspective.

⁷ The period of alchemical genre painting probably begins at around 1620 and ends in earnest around 1710.

⁸ While eighteenth- and nineteenth-century examples of alchemical painting are relatively uncommon, they aptly reflect this new geographical diversity. These paintings include Pietro Longhi, *The Alchemists*, c.1737, Museo del Settecento Veneziano di Ca'Rezzonico, Venice; Mehdi, *Alchemists*, 1893, Golestan Palace, Teheran; Hippolyte de la Roche, *The Alchemist*, c.1874, Wallace Collection, London; Carl Spitzweg, *The Alchemist*, mid-nineteenth century, Staatsgalerie, Stuttgart; Justus Juncker, *The Village Alchemist*, mid-eighteenth century, Chemical Heritage Foundation, Philadelphia 00.01.274; Franz Christoph Janneck, *The Medical Alchemist*, mid-eighteenth century, Chemical Heritage Foundation, Philadelphia 00.01.275; Edward Allan Schmidt, *The Chemist*, late nineteenth century, Chemical Heritage Foundation, Philadelphia 00.01.256; Charles O'Neill, *The Alchemist*, c.1900, Chemical Heritage Foundation, Philadelphia 00.01.260; François-Marius Granet, *The Alchemist*, early nineteenth century, Chemical Heritage Foundation, Philadelphia 00.03.41.

This deviation relates to a dramatic shift in tone, as the pretence of 'everyday life' was abandoned in favour of sensational narrative. This step towards sensationalism and romanticism is aptly exemplified by van Bentum's *Explosion in the Alchemist's Laboratory* (Fig. 2) and Joseph Wright of Derby's *The Alchemist, in Search of the Philosopher's Stone, Discovers Phosphorus* (Fig. 38). Van Bentum's alchemical painting, which was probably produced in the first quarter of the eighteenth century, is one of the last to include a female character. Developed from late seventeenth-century paintings like Heerschop's *Alchemist's Experiment Takes Fire*, this spectacular composition represents an evolutionary stage in alchemical genre painting. Where Heerschop's painting provides a faceted context for his protagonist's misadventure, *Explosion in the Alchemist's Laboratory* is consumed entirely by the fiery glow of the unexpected blast. As the wild, white-haired chymist raises his arms in defence, the mother and child shield themselves similarly. The mother and child, therefore, are aligned with the chymist; little distinction is drawn between the actions of the man and the actions of the family. The viewer is no longer expected to 'read' the painting closely; the impact and message of the painting is immediate, uncomplicated and unequivocal.

Probably some fifty years later, Joseph Wright of Derby resumes this sensationalist trend in his *Alchemist, in Search of the Philosopher's Stone*. Mentioned in Chapter III, this remarkable painting evokes Hennig Brandt's discovery of phosphorus in 1669. While it operates skilfully on various levels, *The Alchemist, in Search of the Philosopher's Stone* importantly develops the genre towards its nineteenth-century conclusion. Firstly, the painting tells a story; it fictionalizes a true historical event. Like *Explosion in the Alchemist's Laboratory*, *The Alchemist, in Search of the Philosopher's Stone* is a heavily designed piece, with no pretence of the 'everyday'. The alchemist has become a consciously constructed fiction, far removed from the commonly anodyne chymists of, for example, David Teniers. Secondly, the piece, like van Bentum's work, captures a 'mistake'; by the mid-eighteenth century very few artists would depict the chrysopoeian quest as a respectable endeavour. Thirdly, and most importantly, the 1771 painting unequivocally portrays the charm of a bygone age. In genuflection, the awed chymist is bathed in a radiant, almost spiritual light. Amid this apparent supplication, the chymist is wholly mesmerized by the enchantment of alchemy, probably completely ignorant of his true discovery.⁹

⁹A fascinating painting, *The Alchemist, in Search of the Philosopher's Stone* has been the subject of much criticism. Many critics disagree with the theory presented here, viewing the painting instead as a celebration of scientific discovery. This thesis, however, locates the painting within a context of the increasing fictionalization of alchemical painting. For alternative readings of this work see Daniels, 1999; Fara, 2002: 34-35; Fraser, 1988: 277-312; Fraser, 1990; Klingender, 1947; Wallis, 1997.

Throughout the course of the eighteenth century, alchemical painting became increasingly embellished, far removed from its genre roots. By the nineteenth century, what survived of the original genre was pure whimsy. Concerned only with cliché and romanticism, this new type of painting, having fabricated a male lead, had no need of women. Even peripheral female characters occur in only a handful of eighteenth- and nineteenth-century alchemical paintings. For the most part, depictions of alchemy in nineteenth-century art are scenes of pageantry, empty of alchemical meaning. Charles Meer Webb's *The Search for the Alchemical Formula* (Fig. 66) epitomizes the fashion for such theatrical re-enactment.¹⁰ Here the lone chymist sits centre-stage surrounded by the redundant props of an antique study. The futility of his task is only too apparent to nineteenth-century eyes. Transmutation here is an impossible dream, a worthless enterprise. Thus, the once hallowed practice of alchemical endeavour is recast as an archaic ritual of superstition and fancy; the layered and complex narratives of the seventeenth century are reduced to nostalgic costume pieces, wistful dreams of a bygone age.

¹⁰ Charles Meer Webb, *The Search for the Alchemical Formula*, 1858, Chemical Heritage Foundation, Philadelphia 00.01.281. Oil on canvas, 20 1/4" x 16 1/2". Provenance: Fisher Scientific; Gift of Mrs. Richard V. Nuttall to C. G. Fisher; Sheldon Hartford Collection; W.C. Jutte Collection, Pittsburgh, Pennsylvania.; Prince Demidoff Collection.

BIBLIOGRAPHY

Primary References: Manuscripts

Glasgow University Library, Glasgow

Aurora Consurgens, Ferguson MS 6.

Pietre Antonio Neri, *Alchima*, Ferguson MS 67.

Sonnenblume der Weisen / das ist Eine helle und klare Vorstellung der Präparirung des Philosophischen Steins / Neben bestrafung derjenigen, welche sich ohne Grund hierinnen bemühen, wie auch eine Wohlmeinende Warnung / In was vor Materien man sich hierinnen zu hüten, indem die Autorin ihre selbst eigene Thorheiten, so sie in ungegründeten Arbeiten begangen, aller Welt vor Augen stellet. Zum öffentlichen Druck Afflictionibus triumphante. Nunmehr zum andern mal in deutscher Sprache gedruckt Im Jahre Christi 1755, Ferguson MS 202.

British Library, London

Splendor Solis, Harley MS 3469.

Incipit Tractatulus de phenice sive de Lapide philosophico, Additional MS 11388.

The Practice of Mary the Phrophetesse upon Alchemy, Sloane MS 1451.

Hic incipit Mariae Phophetise de Elixer, Sloane MS 1744.

The practice of Mary the Prophetesse, Sloane MS 3506.

Wellcome Library, London

Columns of urine flasks, Ulrich Pinder, *Epiphaniae Medicorum*, Fol. A2^r.

Benjamin Lock, His Picklock to Riply his Castle, Wellcome MS 436.

Primary References: Printed Sources

Alciato, A. *Emblematum liber* (1531; Frankfurt, 1580).

Altus pseud. *Mutus Liber* (La Rochelle, 1677).

Anon. *Herbarius zu Teutsch* (Mainz, 1485).

Ashmole, E. *Theatrum chemicum Britannicum* (1652; New York and London, 1967).

Atwood, M. A. *Hermetic Philosophy and Alchemy: A Suggestive Inquiry into the Hermetic Mystery* (London, 1850).

Aubrey, J. *Aubrey's natural history of Wiltshire: a reprint of 'The natural history of Wiltshire'*, ed. J. Britton (1685; Newton Abbot, 1969).

Bacon, R. *Opera quaedam hactenus inedita*, ed. J. S. Brewer (London, 1859).

Beverwyck, J. van. *Schat der Ongesontheyt ofte genees-konste van de sieckten. Neerstelijck op nieuws by den authour oversien en gecorrigeert, ende tusschen beyde vergroot: mitsgaders met meer kopere platen als voor desen gedruckt.* (Dordrecht, 1644).

Bible. *King James Version: Standard Text Edition* (Cambridge, 1995).

Bie, C. de. *Het gulden cabinet van de edel vry schilderconst* (Antwerp, 1662).

Blankaart, S. *Anatomia practica rationalis* (Amsterdam, c.1688).

Boileau-Despréaux, N. *Satire contre les femmes* (Amsterdam, 1694).

Bostocke, R. *The difference betwene the auncient phisicke, first taught by the godly forefathers... and the latter phisicke proceeding from idolaters, ethnicks and heathen: as Gallen, and such other consisting in dualitie, discorde and contrarietie. And wherein the naturall philosophie of Aristotle doth differ from the trueth of Gods worde, and is injurious to Christianitie and sounde doctrine...* (London, 1585).

- Brian, T. *The Pisse-Prophet or, Certaine pisse-pot lectures. Wherein are newly discovered the old fallacies, deceit, and jugling of the pisse-pot science, used by all those... who pretend knowledge of diseases, by the urine, etc.* (London, 1637).
- Brune, J. de. *Johannis de Brunis, Emblemata of Zinne-werck: voorghestelt, in beelden, ghedichten, en breeder uijtlegginghen...* (Amsterdam, 1624).
- Casaubon, M. *True and Faithful Relation of what passed for many years between Dr John Dee (a mathematician of great fame in Q. Elizabeth and King James their Reignes) and Some Spirits* (London, 1659).
- Cats, J. *Houwelick. Dat is de gansche gelegentheydt des echten staets* (Middelburg, 1625).
- Cats, J. *Spiegel van den Ouden Ende Nieuwen Tijdt* (The Hague, 1632).
- Cavendish, M. *Observations Upon Experimental Philosophy* (London, 1668).
- Child, J. *A New Discourse On Trade*, second ed. (1693; London, 1694).
- Colson, L. *Philosophia maturata: an Exact Piece of Philosophy containing the Practick and Operative part thereof in gaining the Philosophers Stone* (London, 1668).
- Cyriacus, I. *De Alchimia Opuscula Complura Veterum Philosophorum* (Frankfurt, 1550).
- Donne, J. *John Donne: The Major Works*, ed. J. Carey (Oxford, 2000).
- Flammel, N. *Nicholas Flammel, his exposition of the hieroglyphicall figures which he caused to bee painted vpon an arch in St. Innocents Church-yard, in Paris. Together with the secret booke of Artephius, and the epistle of Iohn Pontanus: concerning both the theoricke and the practicke of the philosophers stone. Faithfully, and (as the maiesty of the thing requireth) religiously done into English out of the French and Latine copies. By Eirenaeus Orandus, qui est, vera veris enodans* (London, 1624).
- Gratarolus, G. *The Turba Philosophorum, or Assembly of the Sages. [By G. Gratarolus.]... An ancient alchemical treatise translated from the Latin, the chief readings of the shorter codex, parallels from the Greek alchemists, and explanations of obscure terms*, ed. and trans. A. E. Waite (London, 1896).

Hart, J. *The Arraignment of Vrines: wherein are set downe the manifold errors and abuses of ignorant Urine-monging Empirickes, cozening Quacksaluers, women-physitians, and the like stuffe: Confining the vrines within their owne lists and limits; and adding such Caueats and Cautions to the inspection and iudgement of Diseases by the same, as haue not hitherto by any beene obserued... Written first in the Latin tongue... by Peter Forrest... Newly epitomized and translated... by Iames Hart, etc.* (London, 1623).

Helmont, J. B. van. *Ortus Medicinae. Id est, Initia Physicae inaudita. Progressus medicinae novus, in morborum ultionem, ad vitam longau...* (1648; Brussels, 1966).

Holmyard, E. J. (ed.). *The Works of Geber* (London, 1928).

Houbraken, A. *De Grootte Schouburgh der Nederlantsche Konstschilders en Schilderessen*, 3 vols. (Amsterdam, 1718-21).

Hutchinson, L. *Memoirs of the Life of Colonel Hutchinson: With a Fragment of Autobiography*, ed. N. H. Keeble (London, 1995).

Huygens, C. *De Jeugd Van Constantijn Huygens Door Hemzelf Beschreven*, ed. and trans. A. H. Kan (1946; Rotterdam, 1971).

Jonson, B. *The Alchemist*, ed. B. Woolland (Cambridge, 1995).

Khunrath, H. 'Treuhertzige Wahnungs-Vermahnung an alle wahre Alchymisten, sich vor den betrügerischen Arg-Chymisten zu hüten', in H. Khunrath, *Vom Hylealischen, Das Ist / Pri-materialischen Catholischen Oder Allgemeinen Natürlichen Chaos* (1597; Frankfurt am Main, 1708), 268-86.

Khunrath, H. *Vom Hylealischen, Das Ist / Pri-materialischen Catholischen Oder Allgemeinen Natürlichen Chaos* (1597; Frankfurt am Main, 1708).

Lairesse, G. de. *Het Groot Schilderboek* (Amsterdam, 1707).

Linden, S. J. (ed.). *The Mirror of Alchimy: Composed by the Thrice-Famous and Learned Fryer Roger Bacon (1597)* (New York, 1992).

Maier, M. *Symbola aureae mensae duodecim nationum...* (Frankfurt, 1617).

Maier, M. *Atalanta Fugiens, hoc est, Emblemata Nova de Secretis Naturae Chymica, Accommodata partim oculis & intellectui, figuris cupro incisis, adjectisque sententiis, Epigrammatis & notis, partim auribus & recreationi animi plus minus 50 Fugis Musicalibus trium Vocum, quarum duae ad unam simplicem melodiam distichis cenendis peraptam, correspondeant, etc.* (Oppenheim, 1618).

Mander, K. van. *The lives of the illustrious Netherlandish and German painters: from the first edition of the Schilder-boeck (1603-1604)*, ed. and trans. H. Miedema, 4 vols. (Doornspijk, 1994).

McLean, A. *The Rosary of the Philosophers* (Edinburgh, 1980).

Mylius, J. D. *Opus Medico-Chymicum* (Frankfurt, 1618).

Mylius, J. D. *Philosophia reformata* (Frankfurt, 1622).

Paracelsus. *Das Buch Paragranum* (Frankfurt, 1565).

Paracelsus. *The Hermetic and Alchemical Writings of Aureolus Philippus Theophrastus Bombastus of Hohenheim, called Paracelsus*, ed. and trans. A. E. Waite, 2 vols. (London, 1924).

Philaletha, P. pseud. *Introitus Apertus ad occlusum Regis Palatium; auctore anonymo Philaletha Philosopho. In gratiam Artis Chymicae Filiorum nunc primum publicatus, curante J. Langio.* (Amsterdam, 1667).

Rabelais, F. *Gargantua and Pantagruel*, trans. B. Raffel (New York, 1991).

Shakespeare, W. *The Complete Works of Shakespeare*, ed. S. Wells and G. Taylor (Oxford, 1995).

Trismosin, S. *Aureum vellus, oder Guldin Schatz und Kunstkammer* (Rorschach, 1598).

Wright, T. *The Female Vertuoso's* (London, 1693).

Secondary References: Printed Sources

Abraham, L. *A Dictionary of Alchemical Imagery* (1998; Cambridge, 2001).

Adams, A. and Linden, S. J. (eds.). *Emblems and Alchemy* (Glasgow, 1998).

Alic, M. *Hypatia's Heritage: A History of Women in Science from Antiquity to the Late 19th Century* (London, 1986).

Allen, S. G. and Hubbs, J. 'Outrunning Atalanta: Feminine Destiny in Alchemical Transmutation', *Signs* 6 (1980), 210-29.

Alpers, S. *The Art of Describing: Dutch Art in the Seventeenth Century* (Chicago, 1983).

Archer, J. 'Women and Alchemy in Early Modern England' (Ph.D. dissertation, Univ. of Cambridge, 1999).

Baar, M. P. de (ed.). *Choosing the Better Part: Anna Maria van Schurman (1607-1678)* (Dordrecht, Boston and London, 1996).

Baarsen, R. J. et al. *Netherlandish Art 1600-1700* (New Haven and London, 2001).

Ball, P. *Bright Earth: Art and the Invention of Colour* (Harmondsworth, 2002).

Bedaux, J. B. 'Minnekoorts, zwangerschaps- en doodsverschijnselen op zeventiende-eeuwse schilderijen', *Antiek* 10 (1975-76), 17-42.

Bedaux, J. B. and Jongh, E. de (eds.). *Tot Lering en Vermaak. Betekenissen van Hollandse genrevoorstellingen uit de zeventiende eeuw* (Amsterdam, 1976).

Biesboer, P. *Collections of Paintings in Haarlem 1572-1745* (Los Angeles, 2002).

Biesboer, P. and Welu, J. (eds.). *Judith Leyster: A Dutch Master and Her World* (New Haven and London, 1993).

- Birkhan, H. 'The Alchemical Tracts of Gratheus Filius Philosophui', in Z. R. W. M. von Martels (ed.), *Alchemy Revisited* (Leiden, 1990), 162-70.
- Blankert, A. *Nederlandse 17e-eeuwse Italianiserende landschap-schilders* (1965; Soest, 1978).
- Blok, P. J. *History of the People of the Netherlands*, 5 vols. (1898–1912; New York, 1970).
- Bol, L. J. 'Een Middelburgse Brueghel-groep', *Oud Holland* 73 (1958), 128-47.
- Bol, L. J. *Adriaen Pietersz van de Venne: Painter and Draughtsman* (Doornspijk, 1989).
- Bredenkamp, H. and Diers, M. (eds.). *Aby Warburg, Die Erneuerung der heidnischen Antike* (Berlin, 1998).
- Bredius, A. 'Bijdragen tot de levensgeschiedenis van Hendrick Goltzius', *Oud-Holland* 32 (1914), 137-46.
- Brewer, J. and Porter, R. (eds.). *Consumption and the World of Goods* (London, 1993).
- Brezan, V. *Zivoty posledni Rozmberku*, 2 vols. (Prague, 1985).
- Bridenthal, R., Stuard, S. and Wiesner, M. (eds.). *Becoming Visible: Women in European History*, third ed. (1977; Boston, 1998).
- Bridgland, J. (ed.). *Preprints, 10th Triennial Meeting, ICOM Committee for Conservation* (Paris, 1993).
- Brinkman, A.A.A.M. *De Alchemist In De Prentkunst* (Amsterdam, 1982).
- Brown, C. *Scenes of Everyday Life: Dutch Genre Paintings from the Mauritshuis* (Oxford, 1999).
- Buckley, V. *Christina Queen of Sweden: The Restless Life of a European Eccentric* (New York, 2004).
- Butler, J. *Gender Trouble (Tenth Anniversary Edition)* (New York, 1999).

- Calisch, I. M. *Groot woordenboek der Nederlandse taal* (The Hague, 1961).
- Canseliet, E. *L'Alchimie et son livre muet* (Paris, 1967).
- Cauwenberghe-Janssens, F. van. 'De sociale toestand van de Antwerpse schilders in de 17e eeuw', in J. A. O. Duverger (ed.), *Jaarboek Koninklijk Museum voor Schone Kunsten van Antwerpen* (Antwerp, 1970), 233-40.
- Cavalli-Bjorkman, G. (ed.). *Netherlandish Mannerism: Papers Given at a Symposium in Nationalmuseum Stockholm, September 21-22, 1984* (Stockholm, 1985).
- Cennini, C. *Il Libro dell'Arte: The Craftsman's Handbook*, trans. D. V. Thompson (New York, 1960).
- Chapman, H. P. 'Review of *Kwesties van Betekenis: Thema en Motief in de Nederlandse Schilderkunst van de zeventiende Eeuw* by Eddy de Jongh', *Art Bulletin* 79 (1997), 329-34.
- Clark, A. *Working Life of Women in the Seventeenth Century* (London, 1919).
- Clucas, S. 'The Correspondence of a XVII-Century 'Chymical Gentleman': Sir Cheney Culpeper and the chemical interests of the Hartlib circle', *Ambix* 40 (1993), 147-70.
- Coelen, P. van der. *Everyday Life in Holland's Golden Age: The Complete Etchings of Adriaen van Ostade* (Amsterdam, 1998).
- Cook, H. J. *Trials of an Ordinary Doctor: Joannes Groenvelt in Seventeenth-Century London* (Baltimore and London, 1994).
- Cosgrove, D. and Daniels, S. (eds.). *The Iconography of Landscape* (Cambridge, 1988).
- Crisciani, C. 'Aspetti della trasmissione del sapere nell'alchimia latina: un'immagine di formazione; uno stile di commento', *Micrologus* 3 (1995), 149-84.
- Crisciani, C. 'Alchemy and Medieval Universities: Some Proposals for Research', *University of Bologna – Universitas CIS Newsletter* 10 (1997), 1-6.

Daniels, S. *Joseph Wright* (London, 1999).

Davidson, J. P. *David Teniers the Younger* (London, 1980).

Davidson, J. P. "I am the Poison Dripping Dragon": Iguanas and their Symbolism in the Alchemical and Occult Paintings of David Teniers the Younger', *Ambix* 34 (1987), 62-80.

Davis, N. Z. *Society and Culture in Early Modern France: Eight Essays* (Stanford, 1975).

Debus, A. G. 'Solution Analyses Prior to Robert Boyle', *Chymia* 8 (1962), 41-61.

Debus, A. G. *The English Paracelsians* (New York, 1965).

Debus, A. G. 'The Paracelsians and the Chemists: The Chemical Dilemma In Renaissance Medicine', *Clio Medica* 7 (1972), 185-99.

Debus, A. G. 'The Medico-Chemical World of the Paracelsians', in M. Teich and R. Young (eds.), *Changing Perspectives in the History of Science: Essays in Honour of Joseph Needham* (Boston, 1973), 85-99.

Debus, A. G. 'The Chemical Philosophers: Chemical Medicine from Paracelsus to Van Helmont', *History Of Science* 12 (1974), 235-59.

Debus, A. G. 'The Pharmaceutical Revolution of the Renaissance', *Clio Medica* 11 (1976), 307-17.

Debus, A. G. *Chemistry, Alchemy and the New Philosophy, 1550-1700: Studies in the History and Science of Medicine* (London, 1987).

Debus, A. G. 'Chemists, Physicians, and Changing Perspectives on the Scientific Revolution', *Isis* 89 (1998), 66-81.

Debus, A. G. *The Chemical Philosophy: Paracelsian Science and Medicine in the Sixteenth and Seventeenth Centuries*, 2 vols. (1977; Mineola, 2002a).

- Debus, A. G. *The French Paracelsians: The Chemical Challenge to Medical and Scientific Tradition in Early Modern France* (1999; Cambridge 2002b).
- Dicaprio, L. and Wiesner, M. (eds.). *Lives and Voices: Sources in European Women's History* (Boston, 2000).
- Dickson, D. R. 'The Alchemistical Wife: The Identity of Thomas Vaughan's "Rebecca"', *The Seventeenth Century* 13 (1998), 34-46.
- Dickson, D. R. 'The Identity of Thomas Vaughan's "Rebecca"', *Scintilla* 7 (2003), 129-42.
- Dixon, L. S. *Perilous Chastity: Women and Illness in Pre-Enlightenment Art and Medicine* (New York, 1995).
- Dobbs, B. J. 'Newton's Commentary on the Emerald Tablet of Hermes Trismegistus', in I. Merkel and A. G. Debus (eds.), *Hermeticism and the Renaissance: Intellectual History and the Occult in Early Modern Europe* (Washington, 1988), 182-91.
- Doberer, K. K. *The Goldmakers: 10,000 Years of Alchemy*, trans. E. W. Dicks (London, 1948).
- Durantini, M. F. *The Child in Seventeenth-Century Dutch Painting* (Ann Arbor, MI, 1983).
- Duverger, J. A. O. (ed.). *Jaarboek Koninklijk Museum voor Schone Kunsten van Antwerpen* (Antwerp, 1970).
- Egerton, J. (ed.). *Wright of Derby* (London, 1990).
- Eliade, M. *The Forge and the Crucible: The Origins and Structure of Alchemy*, second ed. (1962; Chicago, 1979).
- Emmens, J. A. 'A Seventeenth-Century Theory of Art: Nature and Practice', *Delta: A Review of Arts, Life and Thought in the Netherlands* (Summer, 1969), 30-40.
- Emmens, J. A. 'De Kwakzaler: Gerrit Dou (1613-1675)', *Openbaar Kunstbezit* 15 (1971): 4a-4b.

- Emsley, J. *The 13th Element: The Sordid Tale of Murder, Fire, and Phosphorus* (New York, 2000).
- Fara, P. *Entertainment for Angels: Electricity in the Eighteenth Century* (London, 2002).
- Fegan, S. 'Hidden Pleasures: The Representation of the Prostitute in Seventeenth-Century Dutch Painting', in C. Meek (ed.), *Women in Renaissance and Early Modern Europe* (Dublin, 2000), 109-35.
- Ferguson, M. W. et al. (eds.). *Rewriting the Renaissance: The Discourses of Sexual Difference in Early Modern Europe* (Chicago and London, 1986).
- Ferrand, J. *A Treatise on Lovesickness*, ed. and trans. D. A. Beecher and M. Ciavolella (New York, 1990).
- Fox Hofrichter, F. *Judith Leyster: A Woman Painter in Holland's Golden Age* (Doornspijk, 1989).
- Fox Keller, E. 'Gender and Science', *Psychoanalysis and Contemporary Thought* 1 (1978), 409-33.
- Fox Keller, E. *A Feeling For The Organism: The Life and Work of Barbara McClintock* (San Fransico, 1983).
- Fox Keller, E. *Reflections on Gender and Science* (London and New Haven, 1985).
- Fox Keller, E. 'Gender and Science: Origin, History and Politics', *Osiris* 10 (1995), 27-38.
- Franits, W. 'The Vertues which 'Ought to be in a Compleate Woman': Domesticity in Seventeenth-Century Dutch Art' (Ph.D. dissertation, Univ. of New York, 1987).
- Franits, W. *Paragons of Virtue*, second ed. (1993; Cambridge, 1995).
- Franits, W. (ed.). *Looking at Seventeenth-Century Dutch Art: Realism Reconsidered* (Cambridge, 1997).

- Franits, W. “‘For People of Fashion’”: Domestic Imagery and the Art Market in the Dutch Republic’, *Nederlands Kunsthistorisch Jaarboek* 51 (2000), 295-316.
- Franits, W. *Dutch Seventeenth-Century Genre Painting: Its Stylistic and Thematic Evolution* (London and New Haven, 2004).
- Franken, D. *Adriaen van de Venne* (Amsterdam and Paris, 1878).
- Fraser, D. “‘Fields of Radiance’”: The Scientific and Industrial Scenes of Joseph Wright’, in D. Cosgrove and S. Daniels (eds.), *The Iconography of Landscape* (Cambridge, 1988) 277-312.
- Fraser, D. ‘Joseph Wright of Derby and the Lunar Society: An Essay on the Artist’s Connections with Science and Industry’, in J. Egerton (ed.), *Wright of Derby* (London, 1990), 15-22.
- Freedberg, D. ‘Science, Commerce, and Art: Neglected Topics at the Junction of History and Art History’, in D. Freedberg and J. de Vries (eds.), *Art in history / History in art: Studies in Seventeenth-Century Dutch Culture* (Santa Monica, 1991), 377-428.
- Freedberg D. and Vries, J. de (eds.). *Art in history / History in art: Studies in Seventeenth-Century Dutch Culture* (Santa Monica, 1991).
- Fromentin, E. *The Masters of Past Time* (London, 1913).
- Gerson, H. and Kuile, E. H. ter. *Art and Architecture in Belgium 1600-1800: Pelican History of Art* (Baltimore, 1960).
- Geyl, P. *History of the Dutch Speaking Peoples, 1555-1648* (1932 and 1936; London, 2001).
- Gilbert, S. and Gubar, S. (eds.). *Shakespeare’s Sisters* (Bloomington, IN, 1979).
- Gilman, S. et al. *Hysteria Beyond Freud* (Berkeley, 1993).
- Goodrick-Clarke, N. *Paracelsus: Essential Readings* (Berkeley, 1999).

- Grafton, A. and Siraisi, N. (eds.). *Natural Particulars, Nature and the Disciplines in Early Modern Europe* (Cambridge, MA, 1999).
- Gray, R. *Goethe the Alchemist* (Cambridge, 1952).
- Grell, O. P. (ed.). *Paracelsus: The Man and his Reputation: his Ideas and their Transformation* (Leiden, 1998).
- Grijzenhout, F. and Veen, H. van (eds.). *De Gouden eeuw in perspectief: Het beeld van de Nederlandse zeventiende-eeuwse schilderkunst in later tijd* (1992; Cambridge, 1999).
- Groot, H. de. *Beschreibendes und kritisches Verzeichnis der Werke der hervorragendsten holländischen Maler des XVII. Jahrhunderts*, 10 vols. (Esslingen and Paris, 1907-28).
- Gudlaugsson, S. J. *The Comedians in the Work of Jan Steen and his Contemporaries*, trans. J. Brockway (Soest, 1975).
- Haeffner, M. *The Dictionary of Alchemy* (Manchester, 2004).
- Halleux, R. *Les textes alchimiques* (Turnhout, 1979).
- Hanawalt, B. (ed.). *Women and Work in Preindustrial Europe* (Bloomington, IN, 1986).
- Harkness, D. E. 'Managing an Experimental Household: The Dees of Mortlake and the Practice of Natural Philosophy', *Isis* 88 (1997), 247-62.
- Haute, B. van. *David III Ryckaert: A Seventeenth-Century Flemish Painter of Peasant Scenes* (Turnhout, 1999).
- Hawkesworth, M. 'Confounding Gender', *Signs* 22 (1997), 649-85.
- Hill, C. R. 'The Iconography of the Laboratory', *Ambix* 22 (1975), 102-10.
- Ho Ping, Y. and Needham, J. 'The Laboratory Equipment of the Early Medieval Chinese Alchemist', *Ambix* 7 (1959), 57-117.
- Hole, C. *The English Housewife in the Seventeenth Century* (London, 1953).

Holländer, E. *Die Medizin in der klassischen Malerei* (Stuttgart, 1950).

Hollander, M. 'Public and Private Life in the Art of Pieter de Hooch', *Nederlands Kunsthistorisch Jaarboek* 51 (2000), 273-93.

Hollander, M. *An Entrance for the Eyes: Space and Meaning in Seventeenth-Century Dutch Art* (Berkeley and London, 2002).

Holmyard, E. J. *Alchemy* (Harmondsworth, 1957).

Honig, E. A. 'The Space of Gender in Seventeenth-Century Dutch Painting', in W. Franits (ed.), *Looking at Seventeenth-Century Dutch Art: Realism Reconsidered* (Cambridge, 1997), 187-201.

Hopkins, A. J. *Alchemy: Child of Greek Philosophy* (Morningside Heights, NY, 1934).

Howell, M. *Women, Production, and Patriarchy in Late Medieval Cities* (Chicago, 1986a).

Howell, M. 'Women, the Family Economy and the Structures of Market Production in Cities of Northern Europe During the Late Middle Ages', in B. Hanawalt (ed.), *Women and Work in Preindustrial Europe* (Bloomington, IN, 1986b), 198-216.

Hudson, P. and Lee, W. R. (eds.). *Women's Work and the Family Economy in Historical Perspective* (Manchester, 1990).

Huisman, F. 'Itinerant Medical Practitioners in the Dutch Republic. The Case of Groningen', *Tractrix* 1 (1989), 63-83.

Huisman, F. *Stadsbelang en standsbesef. Gezondheidszorg en medisch beroep in Groningen 1500-1730* (Rotterdam, 1992).

Huisman, F. 'De correspondenten. Medici, staat en samenleving tijdens de Nederlandse Verlichting', in F. Huisman and C. Santing (eds.), *Medische geschiedenis in regionaal perspectief. Groningen 1500-1900* (Rotterdam, 1997), 69-100.

- Huisman, F. 'Shaping the Medical Market: On the Construction of Quackery and Folk Medicine in Dutch Historiography', *Medical History* 43 (1999), 359-75.
- Huisman, F. and Santing, C. 'Geneeskunde In De Samenleving: Het Geval Groningen', in F. Huisman and C. Santing (eds.), *Medische geschiedenis in regionaal perspectief. Groningen 1500-1900* (Rotterdam, 1997), 11-22.
- Huisman, F. and Santing, C. (eds.). *Medische geschiedenis in regionaal perspectief. Groningen 1500-1900* (Rotterdam, 1997).
- Hunter, L. and Hutton, S. (eds.). *Women, Science and Medicine 1500-1700: Mothers and Sisters of the Royal Society* (Thrupp, Gloucestershire, 1997).
- Hutton, S. *Anne Conway: A Woman Philosopher* (Cambridge, 2004).
- Ilsey, M. H. *A Daughter of the Renaissance, Marie le Jars de Gourney, Her Life and Works* (The Hague, 1963).
- Ingamells, J. *The Wallace Collection Catalogue of Pictures*, 4 vols. (London, 1985-92).
- Israel, J. *The Dutch Republic: Its Rise, Greatness, and Fall, 1477-1806* (1995; Oxford, 1998).
- Iversen, M. 'Retrieving Warburg's Tradition', *Art History* 16 (1993), 541-53.
- Jones, J. 'A Kind Of Magic', 'G2' supplement of *Guardian* (1 January 2002), 8-9.
- Jongh, E. de. 'Erotica in vogelperspectief; De dubbelzinnigheid van een reeks 17de eeuwse genrevoorstellingen', *Simiolus* 3 (1968-69), 22-74.
- Jongh, E. de. 'Realisme en schijnrealisme in de hollandse schilderkunst van de zeventiende eeuw', in E. de Jongh (ed.), *Rembrandt en zijn tijd*, exh. cat. (Paleis voor Schone Kunsten, Brussels, 1971), 143-94.
- Jongh, E. de. *Rembrandt en zijn tijd*, exh. cat. (Paleis voor Schone Kunsten, Brussels, 1971).

- Jongh, E. de. *Kwesties van betekenis: Thema en motief in de Nederlandse schilderkunst van de zeventiende eeuw* (Leiden, 1995).
- Jongh, E. de. *Questions of Meaning: Theme and motif in Dutch Seventeenth-Century Painting*, ed. and trans. M. Hoyle (Leiden, 2000).
- Jongh, E. de and Luijten, G. *The Mirror of Everyday Life: Genreprints in the Netherlands 1550-1700* (Ghent, 1997).
- Jordanova, L. *Sexual Visions: Images of Gender in Science and Medicine Between the Eighteenth and Twentieth Centuries* (London, 1989).
- Kemmer, C. 'In Search of Classical Form: Gérard de Lairese's Groot Schilderboek and Seventeenth-Century Dutch Painting', *Simiolus* 26 (1998), 87-115.
- Kemp, M. *The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat* (New Haven and London, 1990).
- Kettering, A. 'Tar Borch's Ladies in Satin', *Art History* 16 (1993), 93-124.
- King, H. *Disease of Virgins: Green Sickness, Chlorosis, and the Problems of Puberty* (London and New York, 2004).
- Klinge, M. *David Teniers the Younger: Paintings, Drawings* (Antwerp, 1991).
- Klingender, F. D. *Art and the Industrial Revolution* (London, 1947).
- Kloek, E. et al. *Women of the Golden Age. An International Debate on Women in Seventeenth-Century Holland, England and Italy* (Hilversum, 1994).
- Kloek, W. *Een huishouden van Jan Steen* (Hilversum, 1998).
- Kloek, W. et al. *Jan Steen: Schilder en verteller* (Amsterdam, 1996).
- Klossowski de Rola, S. *The Secret Art* (London, 1973).

- Klossowski de Rola, S. *The Golden Game: Alchemical Engravings of the Seventeenth Century* (1988; London, 1997).
- Knoeff, R. *Herman Boerhaave (1668-1738). Calvinist Chemist and Physician* (Amsterdam, 2002).
- Koertge, N. (ed.). *A House Built on Sand* (Oxford, 1998).
- Laqueur, T. *Making Sex: Body and Gender from the Greeks to Freud* (Cambridge, MA, 1990).
- Legrand, F. C. *Les peintres flamands de genre au XVIIe siècle* (Brussels, 1963).
- Lembert, A. and Schenkel, E. (eds.). *The Golden Egg: Alchemy in Art and Literature* (Berlin and Cambridge, MA, 2002).
- Lenep, J. van. *Alchimie: Contribution à l'histoire de l'art alchemique* (Brussels, 1985).
- Levy, M. 'Perfumery in Ancient Babylonia', *Journal of Chemical Education* 31 (1954), 373-75.
- Levy, M. 'Some Chemical Apparatus of Ancient Mesopotamia', *Journal of Chemical Education* 32 (1955), 180-83.
- Liedtke, W. A. *Architectural Painting in Delft: Gerard Houckgeest, Hendrick van Vliet, Emanuel de Witte* (Doornspijk, 1982).
- Liedtke, W. A. 'The Study of Dutch Art in America', *Artibus et Historiae* 21 (2000), 207-20.
- Lindemann, M. *Medicine and Society in Early Modern Europe* (Cambridge, 1999).
- Linden, S. J. *Darke Hieroglyphicks: Alchemy in English Literature from Chaucer to the Restoration* (Lexington, 1996).
- Linden, S. J. *The Alchemy Reader: From Hermes Trismegistus to Isaac Newton* (Cambridge, 2003).

- Lindsay, J. *The Origins of Alchemy in Graeco-Roman Egypt* (London, 1970).
- Loeff, L. S. van de and Groen, K. 'The Restoration and Technical Examination of Gerard Dou's Young Mother in the Mauritshuis', in J. Bridgland (ed.), *Preprints, 10th Triennial Meeting, ICOM Committee for Conservation* (Paris, 1993), 98-103.
- Manning, J. *The Emblem* (London, 2002).
- Manuth, V. and Rüger, A. (eds.). *Collected Opinions: Essays on Netherlandish Art in Honour of Alfred Bader* (London, 2004).
- Marchi, N. de and Miegroet, H. J. 'Art, Value and Market Practices in the Netherlands in the Seventeenth Century', *The Art Bulletin* 76 (1994), 451-64.
- Margolin, J.-C. and Matton, S. (eds.). *Alchimie et philosophie à la Renaissance* (Paris, 1993).
- Marland, H. and Pelling M. (eds.). *The Task of Healing: Medicine, Religion and Gender in England and the Netherlands 1450-1800* (Rotterdam, 1996).
- Martels, Z. R. W. M. von (ed.). *Alchemy Revisited* (Leiden, 1990).
- McLean, A. *A Commentary on the Mutus Liber* (Grand Rapids, 1991).
- Meek, C. (ed.). *Women in Renaissance and Early Modern Europe* (Dublin, 2000).
- Meige, H. 'Les Medecins de Jan Steen', *Janus* 5 (1900), 187-90.
- Merchant, C. *The Death of Nature: Women, Ecology, and the Scientific Revolution* (1980; San Francisco, 1990).
- Merkel, I. and Debus, A. G. *Hermeticism and the Renaissance: Intellectual History and the Occult in Early Modern Europe* (Washington, 1988).
- Michalski, S. (ed.). *Actes, XXVIIe congrès international d'histoire de l'art, Strasbourg 1-7 September 1989*, vol. 3 (Strasbourg, 1992).
- Mitchell, L. (ed.). *Women in Medieval Western European Culture* (New York, 1999).

- Mitter, S. and Rowbotham, S. (eds.). *Women Encounter Technology: Changing Patterns of Employment in the Third World* (London and New York, 1995).
- Montias, J. M. 'Art Dealers in the Seventeenth-Century Netherlands', *Simiolus* 18 (1988), 244-56.
- Montias, J. M. 'Works of Art in a Random Sample of Amsterdam Inventories', in M. North (ed.), *Economic History and the Arts* (Cologne, 1996), 67-88.
- Montias, J. M. *Art at Auction in 17th-Century Amsterdam* (Amsterdam, 2003).
- Muizelaar, K. and Phillips, D. *Picturing Men and Women in the Dutch Golden Age: Paintings and People in Historical Perspective* (New Haven and London, 2003).
- Müller, W. J. et al. *Die Sprache der Bilder: Realität und Bedeutung in der niederländischen Malerei des 17. Jahrhunderts: Ausstellung im Herzog Anton Ulrich-Museum Braunschweig vom 6. September bis 5. November 1978* (Braunschweig, 1978).
- Naumann, O. *Frans van Mieris the Elder (1635-1681)*, 2 vols. (Doornspijk, 1981).
- Nevitt, H. R. *Art and the Culture of Love in Seventeenth-Century Holland* (Cambridge, 2003).
- Newman, W. R. *The Summa Perfectionis of Pseudo-Geber* (Brill, 1991).
- Newman, W. R. 'Alchemy, Domination, and Gender', in N. Koertge (ed.), *A House Built on Sand* (Oxford, 1998), 216-26.
- Newman, W. R. 'The Homunculus and His Forebears: Wonders of Art and Nature', in A. Grafton and N. Siraisi (eds.), *Natural Particulars, Nature and the Disciplines in Early Modern Europe* (Cambridge, MA, 1999), 321-45.
- Newman, W. R. *Promethean Ambitions: Alchemy and the Art-Nature Debate* (Chicago, 2004).

- Newman, W. R. and Grafton, A. (eds.). *Secrets of Nature: Astrology and Alchemy in Early Modern Europe* (Cambridge, 2001).
- Newman, W. R. and Principe, L. M. 'Alchemy vs. Chemistry: The Etymological Origin of a Historiographic Mistake', *Early Science and Medicine* 3 (1998), 32-65.
- Newman, W. R. and Principe, L. M. *Alchemy Tried in the Fire: Starkey, Boyle and the Fate of Helmontian Chymistry* (Chicago and London, 2002).
- Nochlin, L. and Sutherland Harris, A. *Women Artists 1550-1950* (New York, 1976).
- Nomanul Haq, S. *Names, Natures and Things: The Alchemist Jabir ibn Hayyan and His Kitab al-Ahjar* (Kluwer, 1994).
- North, M. (ed.). *Economic History and the Arts* (Cologne, 1996).
- North, M. *Art and Commerce in the Dutch Golden Age*, trans. C. Hill (New Haven, 1997).
- Nummedal, T. E. 'Alchemical Reproduction and the Career of Anna Maria Zieglerin', *Ambix* 48 (2001), 56-68.
- Obrist, B. 'Les rapports d'analogie entre philosophie et alchimie médiévales', in J.-C. Margolin and S. Matton (eds.), *Alchimie et philosophie à la Renaissance* (Paris, 1993), 43-64.
- Ogrinc, W. H. L. 'Western Society and Alchemy from 1200 to 1500', *Journal of Medieval History* 6 (1980), 103-32.
- Orenstein, N. M. (ed.). *Pieter Bruegel the Elder: Prints and Drawings* (New York, 2001).
- Ozment, S. *When Fathers Ruled: Family Life in Reformation Europe* (Cambridge, MA and London, 1985).
- Pagel, W. *Paracelsus: An Introduction to Philosophical Medicine in the Era of the Renaissance* (Basel, 1958).

- Pagel, W. *Das medizinische Weltbild des Paracelsus, seine Zusammenhänge mit Neuplatonismus und Gnosis* (Wiesbaden, 1962).
- Pagel, W. *From Paracelsus to van Helmont: Studies in Renaissance Medicine and Science* (London, 1986).
- Pagel, W. *Joan Baptista van Helmont: Reformer of Science and Medicine* (Cambridge, 2002).
- Panek, J. (ed.). *Zivoty poslednich Rozmberku*, 2 vols. (Prague, 1985).
- Panofsky, E. *Studies in Iconology* (New York, 1939).
- Panofsky, E. *Early Netherlandish Painting*, 2 vols. (1953; New York, Evanston, San Francisco, London, 1971).
- Park, K. *Doctors and Medicine in Early Renaissance Florence* (Princeton, 1985).
- Partington, R. 'The Identity of Geber', *Nature* 111 (17 February 1923), 219-20.
- Pascalis, A. de. *Alchemy, The Golden Art: The Secrets of the Oldest Enigma* (Rome, 1995).
- Patai, R. 'Maria the Jewess: Founding Mother of Alchemy', *Ambix* 29 (1982), 177-97.
- Pelletier, S. W. *Adriaen van Ostade: Etchings of Peasant Life in Holland's Golden Age* (Athens, GA, 1994).
- Pelling, M. 'Thoroughly Resented? Older Women and the Medical Role in Early Modern London', in L. Hunter and S. Hutton (eds.), *Women, Science and Medicine 1500-1700: Mothers and Sisters of the Royal Society* (Stroud, 1997), 63-88.
- Pereira, M. 'Alchemy and the Use of Vernacular Language in the Late Middle Ages', *Speculum* 74 (1999), 347-48.
- Phillips, P. *The Scientific Lady: A Social History of Women's Scientific Interests 1520-1918* (London, 1990).

- Plokker, A. *Adriaen Pietersz. van de Venne (1589-1662): De grisailles met spreukbanden* (Leuven, 1984).
- Ploss, E. E. et al. *Alchemia ideologie und technologie* (Munich, 1970).
- Pott-Buter, H. A. *Facts and Fairy Tales about Female Labor and Family and Fertility: A Seven-Country Comparison* (Amsterdam, 1993).
- Prak, M. 'Guilds and the Development of the Art Market during the Dutch Golden Age', *Simiolus* 30 (2003), 236-51.
- Prak, M. *The Dutch Republic in the Seventeenth Century: the Golden Age*, trans. D. Webb (Cambridge, 2005).
- Principe, L. M. *The Aspiring Adept: Robert Boyle and His Alchemical Quest* (Princeton, 1998).
- Principe, L. M. and DeWitt, L. *Transmutations: Alchemy in Art, Selected Works from the Eddleman and Fisher Collections at the Chemical Heritage Foundation* (Philadelphia, 2002).
- Principe, L. M. and Newman, W. 'Some Problems with the Historiography of Alchemy', in W. Newman and A. Grafton (eds.), *Secrets of Nature: Astrology and Alchemy in Early Modern Europe* (Cambridge, 2001), 385-431.
- Puerto Sarmiento, F. J. 'La panacea áurea. Alquimia y destilación en la corte de Felipe II (1527-1598)', *Dynamis* 17 (1997), 107-40.
- Puerto Sarmiento, F. J. 'Los 'destilatorios' del monasterio de El Escorial: Alquimia y paracelsismo en la Corte de Felipe II', in E. M. Ruiz (ed.), *Felipe II, la Ciencia y la Técnica* (Madrid, 1999), 429-46.
- Rampléy, M. 'From Symbol to Allegory: Aby Warburg's Theory of Art', *Art Bulletin* 79 (1997), 41-55.
- Rayner-Canham, M. and Rayner-Canham, G. *Women In Chemistry: Their Changing Roles from Alchemical Times to the Mid-Twentieth Century* (Philadelphia, 2001).

- Read, J. *Prelude to Chemistry: An Outline of Alchemy, Its Literature And Relationships* (London, 1936).
- Read, J. *The Alchemist in Life, Literature and Art* (London, 1947).
- Rice, E. F. *Saint Jerome in the Renaissance (The Johns Hopkins Symposia in Comparative History)* (Baltimore and London, 1988).
- Roberts, G. *The Mirror of Alchemy: Alchemical Ideas and Images in Manuscripts and Books From Antiquity to the 17th Century* (London, 1994).
- Robinson, F. *Gabriel Metsu (1629-1667): A Study of His Place in Dutch Genre Painting of the Golden Age* (New York, 1974).
- Roob, A. *Alchemy & Mysticism: The Hermetic Museum* (1996; Cologne, 2001).
- Roper, L. *The Holy Household: Women and Morals in Reformation Augsburg* (Oxford, 1991).
- Rossiter, M. *Women Scientists in America: Struggles and Strategies to 1940* (Baltimore, 1982).
- Rotermund, H.-M. 'Rembrandts bibel', *Nederlands Kunsthistorisch Jaarboek* 8 (1957), 123-50.
- Rowbotham, S. 'Feminist Approaches to Technology', in S. Mitter and S. Rowbotham (eds.), *Women Encounter Technology: Changing Patterns of Employment in the Third World* (London and New York, 1995), 44-69.
- Rowling, J. K. *Harry Potter and the Philosopher's Stone* (London, 1997).
- Rudolf, H. "'Vanitas". Die Bedeutung mittelalterlicher und humanistischer Bildinhalte in der niederländischen Malerei des 17 Jahrhunderts', in H. Sedlmayr (ed.), *Festschrift Wilhelm Pinder* (Leipzig, 1938), 405-33.
- Ruiz, E. M. (ed.). *Felipe II, la Ciencia y la Técnica* (Madrid, 1999).

- Russell Corbett, J. *Painted Science: Convention and Change in Seventeenth-Century Netherlandish Paintings of Alchemists, Physicians and Astronomers* (Ph.D. dissertation, Queen's Univ., Kingston, Ontario, 2004).
- Russell Corbett, J. 'Convention and Change in Seventeenth-Century Depictions of Alchemists', in J. Wamberg (ed.), *Art and Alchemy* (Copenhagen, 2005), 195-212.
- Ruurs, R. *Saenredam: The Art of Perspective* (Amsterdam, 1987).
- Salomon, N. *Shifting Priorities: Gender and Genre in Seventeenth-Century Dutch Painting* (Stanford, 2004).
- Schama, S. *Embarrassment of Riches: An Interpretation of Dutch Culture in the Golden Age* (1987; London, 1991).
- Schiebinger, L. L. *The Mind Has No Sex? Women in the Origins of Modern Science* (Cambridge, MA, 1989).
- Schupbach, W. 'An (Al)Chemist Restored', *Friends of the Wellcome Library & Centre for the History of Medicine Newsletter* 31 (2003), 6-8.
- Scott, J. 'Gender: A Useful Category for Historical Analysis', *American Historical Review* 91 (1986), 1053-75.
- Sedlmayr, H. (ed.). *Festschrift Wilhelm Pinder* (Leipzig, 1938).
- Shapin, S. 'The House of Experiment in Seventeenth-Century England', *Isis* 79 [A Special Issue on Artifact and Experiment] (1988), 373-404.
- Shapin, S. "'The Mind is Its Own Place": Science and Solitude in Seventeenth-Century England', *Science in Context* 4 (1990), 191-218.
- Sheon, A. 'Art and Alchemy: The Fisher Collection of Alchemical Paintings', exh. pamphlet (Franklin Institute, Philadelphia, 1973).

- Sigerist, H. E. 'Bedside Manners in the Middle Ages: The Treatise "De Cautelis Medicorium" Attributed to Arnould of Villanova', *Quarterly Bulletin of the Northwestern University Medical School* 28 (1946), 136-43.
- Simpson, J. A. (ed.). *The Oxford English Dictionary*, 20 vols., second ed. (Oxford, 1989).
- Simson, O. von and Winner, M. (eds.). *Pieter Bruegel und seine Welt* (Berlin, 1979).
- Slive, S. *Dutch Painting 1600-1800* (New Haven and London, 1995).
- Sluijter, E. J. 'Some Observations on the Choice of Narrative Mythological Subjects in Late Mannerist Painting in the Northern Netherlands', in G. Cavalli-Bjorkman (ed.), *Netherlandish Mannerism: Papers Given at a Symposium in Nationalmuseum Stockholm, September 21-22, 1984* (Stockholm, 1985), 61-72.
- Sluijter, E. J. 'Hoe realistisch is de Noordnederlandse schilderkunst van de zeventiende eeuw? De problemen van een vraagstelling', *Leidschrift* 3 (1990), 5-39.
- Sluijter, E. J. 'Overvloed an onbehagen: Interdisciplinariteit en het onderzoek naar zeventiende-eeuwse Nederlandse beeldende kunst', *De zeventiende eeuw* 14 (1998), 231-45.
- Smith, C. 'Jane Lead: Mysticism and the Woman Cloathed with the Sun', in S. Gilbert and S. Gubar (eds.), *Shakespeare's Sisters* (Bloomington, IN, 1979), 3-18.
- Smith, D. 'Privacy, Realism and the Novelistic in 17th-Century Dutch Painting', in S. Michalski (ed.), *Actes, XXVIIe congrès international d'histoire de l'art, Strasbourg 1-7 September 1989*, vol. 3 (Strasbourg, 1990), 35-52.
- Sneller, A. 'Reading Jacob Cats', in E. Kloek et al., *Women of the Golden Age. An International Debate on Women in Seventeenth-Century Holland, England and Italy* (Hilversum, 1994), 21-34.
- Sotheby's London, *Old Master Paintings. 2002 Apr. 18.*, sales cat. (Sotheby's, London, 2002).
- Stavenhagen, L. *A Testament of Alchemy* (Hanover, NH, 1974).

- Steadman, P. *Vermeer's Camera: Uncovering the Truth Behind the Masterpieces* (Oxford, 2001).
- Steland, A. C. 'Thomas Wick als italienisierender Zeichner: Beobachtungen zu Herkunft, Stil und Arbeitsweise', *Wallraf-Richartz-Jahrbuch* 50 (1989), 215-47.
- Stevens, A. *On Jung*, second ed. (1990; Princeton, NJ, 1999).
- Stone-Ferrier, L. A. *Images of Textiles. The Weave of Seventeenth-Century Dutch Art and Society* (Ann Arbor, MI, 1985).
- Sudhoff, K. *Bibliographia Paracelsica: Besprechung der unter Theophrast von Hohenheims Namen 1527-1893 erschienenen Druckschriften* (1958; Mansfield Centre, CT, 2000).
- Sumowski, W. *Gemälde der Rembrandt-Schüler*, 6 vols. (Landau and Pflaz, 1983-94).
- Sutton, P. C. 'Jan Steen: Comedy and Admonition', *Bulletin of the Philadelphia Museum of Art* 78 (1982-83), 3-43.
- Sutton, P. C. *Masters of Seventeenth-Century Dutch Genre Painting* (Philadelphia, 1984).
- Sutton, P. C. et al. *Love Letters: Dutch Genre Paintings in the Age of Vermeer* (London, 2003).
- Swan, C. *Jacques de Gheyn II and the Representation of the Natural World in the Netherlands ca. 1600* (Ph.D. dissertation, Univ. of Columbia, 1997).
- Swan, C. *The Clutius Botanical Watercolors: Plants and Flowers of the Renaissance* (New York, 1998).
- Taylor, F. S. *The Alchemists, Founders of Modern Chemistry* (1948; London, 1951).
- Teich, M. and Young, R. (eds.). *Changing Perspectives in the History of Science: Essays in Honour of Joseph Needham* (Boston, 1973).
- Theisen, W. 'The Attraction of Alchemy for Monks and Friars in the 13th-14th Centuries', *The American Benedictine Review* 46 (1995), 239-53.

- Thieme, U., Becker, F., and Vollmer, H. *Gesamtregister: Register zum Allgemeinen Lexikon der bildenden Kunstler von der Antike bis zur Gegenwart und zum Allgemeinen Lexikon der bildenden Kunstler des XX. Jahrhunderts*, 6 vols. (Munich, 1996-97).
- Thornton, D. *The Scholar in His Study: Ownership and Experience in Renaissance Italy* (New Haven and London, 1997).
- Travaglia, P. *Una cosmologia ermetica: Il Kitâb sirr al-halîqa / De secretis naturae* (Naples, 2001).
- Vandenbroeck, P. 'Verbeeck's Peasant Weddings: A Study of Iconography and Social Function', *Simiolus* 14 (1984), 79-124.
- Veen, J. van der. 'Eenvoudig en stil: Studeerkamers in 17de-eeuwse woningen, voornamelijk te Amsterdam, Deventer en Leiden', *Nederlands Kunsthistorisch Jaarboek* 51 (2000), 137-71.
- Vlieghe, H. *Flemish Art and Architecture 1585-1700* (New Haven and London, 1998a).
- Vlieghe, H. 'Flemish art, does it really exist?', *Simiolus* 26 (1998b), 187-200.
- Vries, J. de. 'Between Purchasing Power and the World of Goods: Understanding the Household Economy in Early Modern Europe', in J. Brewer and R. Porter (eds.), *Consumption and the World of Goods* (London, 1993), 85-132.
- Vries, J. de and Woude, A. van der. *The First Modern Economy: Success, Failure and Perseverance of the Dutch Economy 1500-1815* (Cambridge, 1997).
- Vries, L. de. 'The Changing Face of Realism', in D. Freedberg and J. de Vries (eds.), *Art in History / History in Art: Studies in Seventeenth-Century Dutch Culture* (Santa Monica, 1991), 209-248.
- Wack, M. F. *Lovesickness in the Middle Ages: The Viaticum and Its Commentaries* (Philadelphia, 1990).
- Waite, A. E. *Alchemists Through the Ages* (New York, 1970).

- Waley Singer, D. *Catalogue of Latin and Vernacular Alchemical Manuscripts in Great Britain and Ireland Dating from Before the XVI Century*, 3 vols. (Brussels, 1928-31).
- Wallach Scott, J. *Gender and the Politics of History* (New York, 1988).
- Wallis, J. *Joseph Wright of Derby, 1734-1797* (Derby, 1997).
- Wamberg, J. (ed.). *Art and Alchemy* (Copenhagen, 2005).
- Warlick, M. E. 'The Domestic Alchemist: Women as Housewives in Alchemical Emblems', in A. Adams and S. J. Linden (eds.), *Emblems and Alchemy* (Glasgow, 1998), 25-48.
- Warlick, M. E. *Max Ernst and Alchemy: A Magician in Search of Myth* (Austin, 2001).
- Warlick, M. E. 'Moon Sisters: Women and Alchemical Imagery', in A. Lembert and E. Schenkel (eds.), *The Golden Egg: Alchemy in Art and Literature* (Berlin and Cambridge, MA, 2002), 183-97.
- Webster, C. 'Alchemical and Paracelsian Medicine', in C. Webster (ed.), *Health, Medicine and Mortality in the Sixteenth Century* (Cambridge, 1979), 302-44.
- Webster, C. (ed.). *Health, Medicine and Mortality in the Sixteenth Century* (Cambridge, 1979).
- Westermann, M. *The Amusements of Jan Steen: Comic Painting in the Seventeenth Century* (Zwolle, 1999).
- Westermann, M. "'Costly and Curious, Full of Pleasure and Home Contentment": Making Home in the Dutch Republic', in M. Westermann et al., *Art and Home: Dutch Interiors in the Age of Rembrandt* (Newark, 2001), 15-81.
- Westermann, M. *The Art of the Dutch Republic 1585-1717* (1996; London, 2004).
- Westermann, M. et al. *Art and Home: Dutch Interiors in the Age of Rembrandt* (Newark, 2001).

- Wheatcroft, A. *The Hapsburgs* (Harmondsworth, 1997).
- Wheelock Jr., A. K. *Perspective, Optics, and Delft Artists around 1650* (New York, 1977).
- White, D. G. *The Alchemical Body: Siddha Traditions in Medieval India* (Chicago, 1997).
- Wiesner, M. E. 'Early Modern Midwifery: A Case Study', in B. Hanawalt (ed.), *Women and Work in Preindustrial Europe* (Bloomington, IN, 1986a), 94-113.
- Wiesner, M. E. 'Spinsters and Seamstresses: Women in Cloth and Clothing Production', in M. W. Ferguson et al. (eds.), *Rewriting the Renaissance: The Discourses of Sexual Difference in Early Modern Europe* (Chicago and London, 1986b), 191-205.
- Wiesner, M. E. *Women and Gender in Early Modern Europe* (Cambridge, 1994).
- Wiesner, M. E. 'Spinning Out Capital: Women's Work in Pre-Industrial Europe 1350-1750', in R. Bridenthal, S. Stuard and M. Wiesner (eds.), *Becoming Visible: Women in European History*, third ed. (1977; Boston, 1998), 203-31.
- Wiesner, M. E. and Dicaprio L. (eds.). *Lives and Voices: Sources in European Women's History* (Boston, 2000).
- Wilson, W. J. 'Catalogue of Latin and Vernacular Alchemical Manuscripts in the United States and Canada', *Osiris* 6 (1939), 1-836.
- Winner, M. 'Zu Bruegels "Alchimist"', in O. von Simson and M. Winner (eds.), *Pieter Bruegel und seine Welt* (Berlin, 1979), 193-202.
- Wolf, B. J. *Vermeer and the Invention of Seeing* (Chicago, 2001).
- Woolley, B. *The Queen's Conjuror* (London, 2001).
- Woude, A. M. van der. 'The Volume and Value of Paintings in Holland at the Time of the Dutch Republic', in D. Freedberg and J. de Vries (eds.), *Art in history / History in art: Studies in Seventeenth-Century Dutch Culture* (Santa Monica, 1991), 285-329.
- Wüthrich, L. H. *Das druckgraphische Werk von Matheus Merian* (Basel, 1966).

Zoege von Manteuffel, K. 'Bilder David Ryckaerts d. J. in Dresden und Leipzig',
Mitteilungen aus den sächsischen Kunstsammlungen 6 (1915), 53-71.

Secondary References: Internet Sources

Dickey, S. S. 'Antwerp and Amsterdam: Artistic Exchange c.1580-1675' Workshop,
Historians of Netherlandish Art Conference, Antwerp, 2002.

<http://www.hnanews.org/2005/workshops/dickey.htm>

(accessed 10 November 2005).

McLean, A.

<http://www.levity.com/alchemy/female.html>

(accessed 10 November 2005).

McLean, A. (administrator)

http://www.levity.com/alchemy/a-archive_apr05.html

(accessed 10 November 2005).

McLean, A. (administrator)

http://www.levity.com/alchemy/r_july98.html

(accessed 10 November 2005).

McLean, A. (administrator)

<http://www.levity.com/alchemy/statists.html>

(accessed 10 November 2005).

Sluijter, E. J. 'State of the Art in Seventeenth-Century Dutch and Flemish Studies',
Historians of Netherlandish Art Conference, Antwerp, 2002.

<http://www.hnanews.org/2005/sluijter2.htm>

(accessed 10 November 2005).