# Four Ways of Measuring the Distance Between Alchemy and Contemporary Art

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Abstract: Alchemy has always had its ferocious defenders, and a small minority of artists remain interested in alchemical meanings and substances. In this essay I will suggest two reasons why alchemy is marginal to current visual art, and two more reasons why alchemical thinking remains absolutely central. Briefly: alchemy is irrelevant because (1) it is has been a minority interest from early modernism to the present, and therefore (2) it is outside the principal conversations about modernism and postmodernism; but alchemy is central because (3) it provides the best language to explain the fascination of oil paint, and (4) it is one of the best models for understanding the contemporary aversion to full logical or rational sense.

Keywords: alchemy, aesthetics, modern art, postmodern art.

#### Introduction

This essay, which I hope hovers between art history, the history of chemistry, art criticism, and contemporary art, was born of a series of skeptical engagements with artists who use chemical symbols in their work.<sup>1</sup> For several years I have been writing about the disconnection of science and art.<sup>2</sup> In particular I have gotten interested in the lack of living connection between alchemical images and contemporary art.<sup>3</sup> There are the inevitable counterexamples, including Roald Hoffmann's collaboration with the artist Vivian Torrence, but the exceptions prove the rule: chemistry and alchemy have little to do with contemporary art.<sup>4</sup>

What I have in mind here is a meditation on the distance between contemporary art practice and the history of chemistry. I do not intend to make a comprehensive review of the literature, but to assay the major points of connection and disconnection between the fields.

Alchemy's Babel of symbols – its 'seeds', menstrua, Eves and Adams, its greenlions – has cut it off from other disciplines, especially since the Enlightenment. And for their part, alchemists tried to swallow neighboring disci-

HYLE – International Journal for Philosophy of Chemistry, Vol. 9 (2003), No.1, 105-118. Copyright © 2003 by HYLE and James Elkins. plines, mixing them together into a new Babel: folklore, mythology, witchcraft, medieval mysticism, botany, anatomy, agriculture, medicine, color theory, metallurgy, and the study of music were all incorporated, at one time or another, into alchemical doctrines.

It stands to reason, then, that alchemy has become a field of study for people in various modern disciplines: the history of chemistry, the history of mysticism and religious thinking, the history of natural philosophy, the histories of mining and technology. Scholars in those fields mine alchemy, just as it mined them, and try to classify and elucidate alchemy's many misunderstandings and borrowings.

In terms of fine art, alchemy has long been a place Western artists could go to veil their work in obscurity. From Ferrara in the fifteenth century to the Venice biennale, artists have drawn on alchemy, and art historians have worked hard to elucidate the artists' intentionally hidden meanings. So art history and even art criticism should be added to the list of disciplines that are legitimately concerned with alchemy.

Yet always there is the question of the relation between alchemy and the disciplines that are interested in it. In the seventeenth century the principal questions were the relation of alchemy and the church, and the emergence of scientific practices. The relation of alchemy and the humanities (that is, the university) was a difficult question then, and even now it is the object of debate. I do not know any university that would admit a professor of alchemy. Such a person might teach Jungian theories in the Psychology Department, or meditative theories in the Religious Studies Department, or even the philosophy of substances in the Philosophy Department. The 'alchemists' who work in universities are all, to my knowledge, either historians of chemistry or historians of medicine or art – in other words, they are 'alchemists' only in the sense that they study other peoples' beliefs about their subject, not the subject itself. In that respect alchemy remains outside the university, as it always was in European universities from the Middle Ages onward.

When art historians study alchemical images, the historians themselves become part of this unresolved history. An interest in alchemical images is a sub-specialty within, for example, the specialty of Baroque art – and it is a problematic specialty at that. The historians who make alchemy their particular interest are sometimes looked on as eccentrics: their methodology may be impeccable (I mean, good archival research, sound iconographic analyses), but their choice of subject matter makes them suspect. In that respect art historians who are interested in alchemy become one further example of the oil-andwater problem of mixing alchemy with any 'legitimate' discipline.

The same observation can be made about art critics who are drawn to the work of artists who employ alchemical symbols. They too tend to be marginalized in the world of art criticism. People might take such critics to be New Age spiritualists, or else to have some private spiritual agenda that attracts them to like-minded artists.<sup>5</sup>

There are many contemporary artists who openly use alchemical symbols: Brett Whiteley,<sup>6</sup> Krzysztof Gliszczynski, Rosslynd Piggott,<sup>7</sup> Sharon Walker, Leigh Hyams, Milan Mrkusich,<sup>8</sup> Therese Oulton,<sup>9</sup> Domenico Bianchi,<sup>10</sup> Helmut Dirnaichner,<sup>11</sup> Tommaso Cascella,<sup>12</sup> Pat Martin Bates,<sup>13</sup> Jean Aujame,<sup>14</sup> Ljuba (Popovic Alekse Ljubomir),<sup>15</sup> Arturo Duclos,<sup>16</sup> Ian Howard,<sup>17</sup> Richard Mueller,<sup>18</sup> Anna Hollings,<sup>19</sup> Claudia Schink,<sup>20</sup> Dick Ket, Raoul Hynckes, and Pyke Koch.<sup>21</sup> All of them are minor in the sense that they appeal to a narrow specialty public.<sup>22</sup> (For an opposing view, see Sidney Perkowitz's work; he does not concern himself with quality, but only with the presence of scientific themes in art.<sup>23</sup>) I have gotten several dozen portfolios from such artists, who were responding to my book: none of my colleagues had heard of any of them.

I know this phenomenon of exclusion and suspicion firsthand. When I was researching my book on alchemy and painting, What Painting Is, I found only a few art historians or historians of chemistry willing to talk about the subject. I contacted real alchemists, people who teach alchemy outside the university system, but when I proposed symposia that would include those people along with chemists and historians of chemistry, I was turned down. (I proposed one such conference at Cambridge University, to a group of scholars who were advertising their interest in unusual, non-academic subjects: but this subject was too unusual even for them.) Some painters, historians, and critics also kept their distance from my project. After the book was published, I started getting letters from painters who liked the book's approach, and I still get six or seven invitations each year to speak at studio art departments. The book has made a certain number of 'converts' among painters - people who are very enthusiastic, and tell me that my book is the first one they have found that gives voice to their sense of what painting is really all about. Yet the book has also lost me some friends, especially art historians who have read it and politely declined to comment; and it also attracts letters from contemporary artists who use explicit alchemical symbols in their work, or who follow Jung - even though my book argues, explicitly, against those ways of employing alchemy.

So what I want to do here is step back and assess the relation between alchemy and two of the many fields it intersects: contemporary art, and contemporary art criticism or art history. My object is to try to describe the problematic relation between alchemy and those two disciplines (art production and scholarship). I think the troubled relation among those disciplines is typical of the troubled relation alchemy has long had with science, with the humanities, with religion, and with the university.

I find there are four basic ways that alchemy can be related to contemporary art and scholarship. Alchemy can be considered to be basically irrelevant to contemporary art and art scholarship because (and this is my first point) it is has been a minority interest from early modernism to the present, and also because (this is the second point) it is outside the principal conversations about modernism and postmodernism. On the other hand, alchemy can be said to be central to contemporary art and scholarship on art because (point three) it provides the best language to explain the fascination artists can feel for oil paint, and (the last point, number four) alchemy is one of the best models for understanding the contemporary aversion to full logical or rational sense. I will consider the four points in order.

# 1. Alchemy is irrelevant because it has been a minority interest from early modernism to the present

The histories of alchemy and art have a number of points of contact. There have been persuasive arguments about the importance of alchemy to Joseph Beuys,<sup>24</sup> Francesco Clemente, Marcel Duchamp,<sup>25</sup> Adolph Gottlieb,<sup>26</sup> Brice Marden,<sup>27</sup> Sigmar Polke,<sup>28</sup> John Graham,<sup>29</sup> Yves Klein,<sup>30</sup> André Masson,<sup>31</sup> Salvador Dalí,<sup>32</sup> Anselm Kiefer,<sup>33</sup> Pollock,<sup>34</sup> Max Ernst,<sup>35</sup> Remedios Varo,<sup>36</sup> Francis Picabia,<sup>37</sup> Jim Dine,<sup>38</sup> Joan Miró,<sup>39</sup> and many others. (Among pre-modern artists: Parmigianino,<sup>40</sup> Dürer,<sup>41</sup> Teniers, Bosch,<sup>42</sup> Giorgione,<sup>43</sup> and Breughel.) Alchemy has also been featured in exhibitions, most prominently the 1986 Venice biennale, where it was associated with the current revival and transformation of the *Wunderkammer*.<sup>44</sup>

I would argue that such connections are generally superficial and tenuous. The principal reason is that alchemy is a *radically incomplete* source of explanation even for the works of the artists I have named. Joseph Beuys' Tallow (1977), for example, is a massive cast of the unused space at one end of a pedestrian underpass. It conforms to several important alchemical concepts: it involves transformation, and uses its material in an essentialist manner. Yet an account of Tallow in terms of alchemy would be inadequate because so many other themes are more important. (For instance, Tallow connects to Beuys' critiques of urban space, of architecture, of use-value and exchangevalue in modern life.) Gottlieb's Alchemist (1945) and Pollock's Alchemy (1947) are one-off pieces, typical of an interest in alchemy that swept the New York art scene in the mid 1940s. In neither painting are the alchemical symbols the most important elements in the paintings. In Gottlieb's case, the alchemical pictographs were interchangeable with non-alchemical ones. In Pollock's painting the symbols are so subtle, and so integrated into the painting, that there is no reason to suppose Pollock even intended them as such. Even Kiefer's enormous Nigredo, explicitly named after a stage in the alchemical process, cannot be adequately glossed as an alchemical image: it is ultimately about history, memory, and national guilt. As Ann Temkin has pointed out, the black is preeminently the morally darkened soil of Germany.<sup>45</sup>

Let me suggest four conclusions: first, few modern artists out of the total number were influenced by alchemy; second, the influence was often not alchemy proper but the *idea* of it; third, not much of any given artist's production can be explained by appealing to alchemy (with the exception of minor artists such as the ones I listed earlier); and fourth, what is explained is often not the work's most important features.

### 2. Alchemy is irrelevant because it is outside the principal conversations about modernism and postmodernism

By 'principal conversations' I mean questions of the place of cubism and surrealism, the importance of abstract expressionism, the value accorded to abstraction, the end of naturalism in Cézanne and postimpressionism, the rise of dada and conceptual art, the question of painting after minimalism and support/surface, the various competing definitions of postmodernism.

Here the exceptions are especially interesting. I would name Forrest Bess, the mid-century psychotic visionary artist from Texas who caught the interest of the historian Meyer Schapiro, and Marco Breuer, a contemporary photographer.<sup>46</sup> Bess and Breuer are very different artists, but their work is significant. As Schapiro pointed out, Bess' paintings are among the very few authentically visionary artworks, uninfluenced by notions of 'outsider art'. Bess is especially important given the current interest in naïve art and outsider art. Breuer does not speak of his art in alchemical terms, although it could easy be argued that transformation is its central trope. He is, I think, one of the most interesting photographers who are currently working. He makes photographs without light, by scratching and burning photographic paper in the dark. The heat and friction produce chemical reactions that are then developed, producing 'minimalist' forms, grids, lines, and scratches.

But there are precious few artists whose work is alchemical and also part of the mainstream of conversations on modernism and postmodernism. The major problems and issues of modernism and postmodernism have nothing to do with alchemy. To make connections between contemporary art and alchemy it is necessary to back up, and speak less in terms of symbolic content and more in terms of abstract similarities.

## 3. Alchemy is central because it provides the best language to explain the fascination of oil paint

This is the contention of my book, *What Painting Is.* There I argue that alchemy is the best language for talking about substances: thickness and weight and heft (they are all different), viscosity and stickiness and tackiness and goo (again all different), color and tint and hue and chroma and the 'feel' of color.

That is the basic reason I wrote the book. It is not Jungian, and it does not have much to do with alchemical symbols. I was interested in relating some of the universal problems of oil painting in the West – the managing of light and dark, the systems of colors – to the *words* alchemists invented to describe the phenomena they saw in their vessels and crucibles. I thought that painters often love the textures and even the smells of oil paint, but have no words to convince non-painters, including historians. The idea was to adopt the words alchemists had invented to give voice to the painters' love of the paint itself. This is how I put it in the book (p. 5):

To a nonpainter, oil paint is uninteresting and faintly unpleasant. To a painter, it is the life's blood: a substance so utterly entrancing, infuriating, and ravishingly beautiful that it makes it worthwhile to go back into the studio every morning, year after year, for an entire lifetime. As the decades go by, a painter's life becomes a life lived with oil paint, a story told in the thicknesses of oil. Any history of painting that does not take that obsession seriously is incomplete.

Many of my colleagues in art history go on the assumption that painters want to be out of the studio as quickly as possible, because they think of the studio a bit like writers think of their computer keyboards. But in my experience serious oil painters *love* oil: they just lack the words to describe their attachment.

For those reasons the book *What Painting Is* stays away from artists who are literal about alchemy, and use alchemical symbols and so on – all my examples in the book are mainstream artists, from Sassetta and Tintoretto to Rembrandt, Dubuffet, Bacon, and Pollock.

I used alchemy only because I had no alternative. Like painters, spent their lives peering into their vessels, looking for colors, for changes of nature, for the mixtures of the elements, for fixity and liquidity and the propensity to stain or evaporate or sublimate: and that is exactly what painters do.

Hypostasis and transcendence are absolutely central to what painters think about, even though most would not put it in those terms. Some painters would talk about their paint in terms of transcendence, illusion, or the ability to signify beyond the paint's raw 'materiality'; and for all of those things, I think alchemy's spiritual allegories of transubstantiation and hypostasis are ideal. One art critic called my book 'moony', and it is moony (*i.e.*, ridiculous, lunatic) if it is taken literally, as an attempt to claim that *all* painting is *secretly* about alchemical allegories: but it is not so moony to try to find an adequate conceptual frame for something that painters are still very engaged with, even if they don't have a good vocabulary for describing it. There is a debate in contemporary art history and criticism about 'base materialism', the impossibility of transcendence, and the purposes of painting after minimalism: but that discussion leaves the *majority* of working painters out in the cold: they still believe painting's purpose is some kind of 'transcendence' – some way of getting beyond the literal reference to the support and medium themselves – but they have been left out of the current critical discussion.<sup>47</sup>

I still think that book is on the right track: it is a way to revive, or change, alchemy so that it can continue the work it did for past generations.

## 4. Alchemy is central because it is one of the best models for understanding the contemporary aversion to full logical or rational sense

This is the broadest and most general connection, I think, between alchemy and contemporary art. The strongest continuity between alchemy and 20thcentury art is best sought not by tracing direct iconographic evidence of alchemical thinking, nor even by finding a vocabulary for paint itself, as I did, but by looking in particular at *strategies for increasing mystery* by introducing fragments of language or allusions to language into predominantly or originally 'purely' pictorial settings.

I want to suggest a general term, the *feeling of meaning*, which I think captures this affinity. The idea on the part of artists is, generally speaking, to increase the quotient of irrationality until the picture only *seems* to have meaning, or *feels like* it has meaning. First, however, I want to make several specific observations about the relevance of alchemy in this hermeneutic.

From the fourteenth to the early eighteenth centuries, alchemical illustrations achieved a richer vocabulary, a greater expressive freedom, and a more articulate economy of 'verbal' and 'visual' elements than other kinds of pictures before the twentieth century.<sup>48</sup> Contemporary painters who work with improvised, private symbols can do no better than study the alchemical illustrations, with their dense mingling of the visual with the linguistic in all its forms: from simple typographic lexeme to calligraphic and multiple symbol, from hieroglyph to elaborate emblem, from device to perspectival, theriomorphic, and animate heraldry.

In this respect it is important to recall that alchemical illustrations are in large measure feral outgrowths of domestic Renaissance emblems, which are in turn partly misunderstandings of Egyptian hieroglyphics. Because Renais-

#### James Elkins

sance artists had no clear sense that one might want to *write* in hieroglyphics, artists such as Albrecht Dürer, following the humanist Willibald Pirckheimer, felt free to expand and elaborate the hieroglyphic symbols into little pictures (which Renaissance artists continued to call 'hieroglyphics'). A well-known example is Horapollo's simple, codified 'dog' – once a hieroglyphic sign, which Dürer made into a textured drawing with expression and *contraposto*. It became a little picture; it would take five minutes or more to draw, making it entirely impractical as a graphic element in a written script.<sup>49</sup>

In that way writing, emblems, and pictures were tangled from the outset. Yet in contrast with contemporary painting, Renaissance emblems are *entirely intelligible* once one reads the accompanying motto (the *inscriptio*) and verse (*subscriptio*). In Guillaume de La Perrière's *La Morosophie*, for example, an owl disturbs two sleepers.<sup>50</sup> The author explains the meaning: just as an owl's hooting will frighten sleepers, so will good people be shocked by a slanderous man's words. The 'visual component' – the *pictura* – is crudely done, and attracts no special attention.

Alchemical emblems tended to increase the pictorial content, and delimit or obscure the *inscriptio* and *subscriptio*, turning them into ciphers. Those strategies meant that viewers were sent back to the images in their quest to understand the emblems. The result, in technical terms, is *pseudolinguistic*: the emblem appears to comprise a sentence, as it does in the traditional nonesoteric emblemata, but it cannot be read. Postmodern figurative painting by artists as different as Eric Fischl, Francesco Clemente, Susan Rothenberg, and Ross Bleckner, becomes pseudolinguistic whenever a private story is presented as a picture. Viewer and maker share the knowledge of the presence of private meanings, but unless the artist explains the work, the viewer does not share the private meaning and the work remains enigmatic: it is indecipherable, pseudolinguistic. The ultimate source of such pictures is the Renaissance misunderstanding of hieroglyphs, and the Baroque elaboration of that misunderstanding in the form of alchemical and esoteric emblems.

Here is an example from alchemy (figure 1). Over a Lowlands canal four fiery spheres appear, representing the four Fires of the Work.<sup>51</sup> This time the text, Maier's *Atalanta fugiens*, offers four interpretations: the four fires are Vulcan, Mercury, the Moon, and Apollo; or true fire (*ignis verò*), natural fire (*ignis naturis*), unnatural fire (*ignis innaturalis*), and antinatural fire (*ignis contra naturam*); or fire, air, water, and earth; or the dragon, the *menstruum*, water, and Sulphur & Mercury.<sup>52</sup> The fires build skyward, just as the alchemist aspires to the height of the phoenix's pyre and its eternal regeneration. In this way the commentary compounds the four spheres with a fourfold interpretation, instead of explaining the single mystery by a single meaning – a typical gesture.

Here the landscape is a larger player. It is only partly drawn into the meanings of these apparitions: the outhouse may allude to the earthly origins

of the alchemical process (which was often connected to the four humors, and began with black, the bilious humor, and the materia prima), and the canal water suggests the menstruum and, as Maier says, it indicates that alchemical fires are "waters that do not wet the hands", as quicksilver does not. Yet these are only details in the landscape. There is still the basic question, not meant to be asked but impossible to squelch: Where is this? What landscape, what country? The only available answers – that it is a dream, a fable, or a vision - are all cut off by the picture's commentary, which proclaims symbolic meanings. The mystery of four flaming spheres on a canal is not resolved by a list of allegorical meanings, and we are thrown back on the apparition. We begin again, looking into the flames, watching the reflections, wondering if those people on the boats see the spheres at all. An earthly flame or storm engulfs the right half of the sky. Is it, too, a symbol? Or a conventional device added by the engraver? Is the entirety of the plate a vision? (The darkened foreground makes it seems as if the spheres glow, but they sit in a pool of shadows.) What forms are 'natural', and what is to be included in the enuntiagraph, the symbolic sentence that must, in the end, pronounce the meaning of the picture?



Figure 1: Emblem XVII from Michael Maier, *Atalanta fugiens* (Oppenheim: Hieronymus Gallerus, J. Theodorus de Bry, 1618).



Figure 2: Susan Eder, *Cloud Faces*, 1984, detail. Photos on 16 x 20" mountboard. Courtesy of the artist.

The same, I want to suggest, happens in contemporary art, although the language of alchemical emblems has yet to be applied to it. I choose an example from photography, partly to show that these phenomena are nearly ubiquitous. (The avoidance of meaning, and the inheritance of ideographic images and emblemata, may be as close as it is possible to come to a grounding definition of the current state of image making.) The example is Susan Eder's collection of photographs called Cloud Faces (Figure 2). Eder is a versatile photographer whose work can be traced most clearly to the institution of the Wunderkammer (roughly: the world as a source of wonder, rather than a repository of science), which is currently undergoing an intermittent renascence in visual art. But the deeper current here, the one that underwrites even the inconsistent revivals of the Wunderkammer, is the tradition of emblems without texts. Here there is no inscriptio or subscriptio, as in La Perrière, and not even any accompanying mystifying text, as in Maier (although gallerists supply such texts with exhibition catalogues). The clouds are simply clouds, or simply faces: there is no clear meaning, no moral, no purpose. There is a bit of whimsy, in this case, and a touch of wonder and playfulness: but to what end? If it had a clear purpose, a La Perrière-style moral, it would probably not be counted as art. I could have chosen pictures with more formal affinity to the seventeenth-century emblems - Clemente's and Schnabel's paintings often mix odd symbols with figures - but that would be a little misleading. It's not the formal similarities that provide the deepest affinities, but the suspension of clear meaning.

A strategy of current painting, as well as of the old alchemists, is to increase the *feeling of meaning*, the sense that meaning is present without the forced quality of naked written meaning. A feeling of meaning is an intuition of meaning, the result of mingling 'word' and 'image', emblem and picture. The result is an incomplete fusion: in viewer's terms, *it asks for incomplete reading and incomplete viewing*. Recent painting has achieved objects that are neither word nor image, and they stand directly on the heritage of alchemy. That, I think is the deepest connection between the history of alchemy and contemporary art, and one that is still waiting to be explored.

#### Notes and References

- <sup>1</sup> This essay was originally presented at a conference on alchemy at the University of Århus, Denmark, 2001. I thank the participants and an anonymous reader for suggestions.
- <sup>2</sup> See my reviews of M. Kemp, The Science of Art (Yale, 1990), Zeitschrift für Kunstgeschichte, 54, no. 4 (1991), 597-601; of Picturing Science, Producing Art, ed. by C. Jones and P. Galison, in Isis, 97 no. 9 (2000), 318-19; and of E. Reeves, Painting the Heavens: Art and Sciences in the Age of Galileo (Princeton, 1997), in Zeitschrift für Kunstgeschichte, 62 (1999), 580-85. A book, Six Stories from the End of Representation: 1975-2002 (Stanford CA: Stanford UP, forthcoming), formally sets out the ideas in those reviews.
- <sup>3</sup> The book *What Painting Is* (Routledge, New York, 1998) contains the basic argument; see further the essay 'On the Unimportance of Alchemy in Western Painting', *Konsthistorisk tidskrift*, **61** (1992), 21–26, which was followed by an ex-

change with Didier Kahn titled 'What is Alchemical History?', Konsthistorisk tidskrift, 64, no. 1 (1995), 51-53.

- <sup>4</sup> R. Hoffmann & V. Torrence, *Chemistry Imagined: Reflections on Science*, with a forward by Carl Sagan, Smithsonian Institution, Washington DC, 1993.
- <sup>5</sup> An interesting recent example is the book *Beautiful Necessity*, on women's altars. A few examples in the book have alchemical, Rosicrucian, and Masonic symbols; the book as a whole would be regarded more as sociology than art history. K. Turner, *Beautiful Necessity: The Art and Meaning of Women's Altars*, Thames & Hudson, London, 1999.
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- <sup>7</sup> H. Edquist, 'The Transformations of Rosslynd Piggott', Art and Australia, 32, no. 3 (1995), 380-89.
- <sup>8</sup> A. Wright, 'The Alchemy of the Painted Surface: The Early Work of Milan Mrkusich, 1960-65', Art New Zealand, 82 (1997), 44-8, 79-80.
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- <sup>10</sup> E. Cappuccio, 'Domenico Bianchi', *Tema Celeste*, **32-33** (1991) 92 [vv].
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- <sup>12</sup> A. Riva, 'Il Vietcong dell'arte si mette a nudo: tra simboli magici e forme dell'inconscio', Arte, 297 (May 1998), 71.
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- <sup>15</sup> G.R. Hocke, 'Der Jugoslawische Maler Ljube: Zur Charakterisierung seiner gemalten Träume', *Kunst und das Schöne Heim*, 93 no. 6 (1981), 397-404, 437-38.
- <sup>16</sup> G.-G. Lemaire, 'Conversation avec Arturo Duclos', Verso, 14 (April 1999), 16-17.
- <sup>17</sup> I. Howard, 'Artist's Eye', Art Review, **51** (March 1999), 48-49.
- <sup>18</sup> Chr. Ross-Hopper, 'In Conversation: Richard Mueller', NS [Canada], 2, no. 1 (March 1992), 20-29.
- <sup>19</sup> E. Simpson, 'Mute Poetry: The Art of Anna Hollings', *Art New Zealand*, 90 (Autumn 1999), 58-59.
- <sup>20</sup> S. Wedewer, 'Begriff und Bild: Claudia Schink', *Neue Bildende Kunst*, 6 (1999), 46-8.
- <sup>21</sup> For the last three see J. Coignard, 'Une vie inquietante', *Connaissance des Arts*, 571 (April 2000), 100-103.
- <sup>22</sup> This list is culled from a work in progress, *Failure in Twentieth-Century Painting*. For further information see R.A. Coates, *The Influence of Magic on the Iconography of European Painting*, PhD diss., unpublished, New York University, 1972.
- <sup>23</sup> S. Perkowitz, *Empire of Light: A History of Discovery in Science and Art*, Joseph Henry Press, Washington DC, 1996).
- <sup>24</sup> J. Moffitt, Occultism in Avant-garde Art: The Case of Joseph Beuys, UMI Press, Ann Arbor MI, 1988.
- <sup>25</sup> For alchemy in Duchamp see first L.D. Henderson, *Duchamp in Context: Science* and *Technology in the* Large *Glass and Related* Works, Princeton UP, Princeton

NJ, 1998; and then (all of them less reliable sources) J.V. Messenger, Marcel Duchamp: Alchemical Symbolism in and Relationships Between the Large Glass and the Étant Donnés, University Microfilms, Ann Arbor MI, 1984; A. Schwartz, Arte e alchimia, exh. cat. of the XLII Esposizione internazionale d'arte la Biennale di Venezia, Venice, 1986; and P. Hulten, J. Clair, et al., Marcel Duchamp, abécédaire, approches critiques, Musée national d'art moderne, Centre national d'art et de culture Georges Pompidou, Paris, 1977; J. Golding, Marcel Duchamp: The Bride Stripped Bare by Her Bachelors, Even, Viking, New York, 1973, p. 90, strikes an appropriately skeptical note in relation to the Bride.

- <sup>26</sup> M.D. MacNaughton, *The Painting of Adolf Gottlieb*, 1923-1974, PhD diss., Columbia University, 1981 (UMI Press, Ann Arbor, 1988), p. 137.
- <sup>27</sup> Brice Marden: Marbles, Paintings, and Drawings, exh. cat., Pace Gallery, New York, 29 Oct.-27 Nov. 1982.
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- <sup>31</sup> P. Trigano, in *André Masson*, ed. by Arnau Puig, Fundació Caixa de Pensions, Barcelona, 1985.
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- <sup>34</sup> J. Welsh, 'Jackson Pollock's »The White Angel« and the Origin of Alchemy', in *The Spiritual Image in Modern Art*, ed. by K. Regier, Wheaton, Illinois, 1987, p. 193; J. Wolfe, 'Jungian Aspects of Jackson Pollock's Imagery', *Artforum*, 11 (November 1972), 65-73.
- <sup>35</sup> M.E. Warlick, Max Ernst and Alchemy: A Magician In Searth of Myth, University of Texas Press, Austin TX, 2001; D. Hopkins, 'Max Ernst's La toilette de la mariée', Burlington Magazine, 133, no. 1057 (April 1991), 237-44.
- <sup>36</sup> S. Taylor, 'Into the Mystic', Art in America, 89, no. 4 (April 2001), 126-29; J. Kaplan, Remedios Varo: Unexpected Journeys, Abbeville Press, New York, 2000; D. Haynes, 'The Art of Remedios Varo: Issues of Gender Ambiguity and Religious Meaning', Woman's Art Journal, 16, no. 1 (1995), 26-32.
- <sup>37</sup> A. Schwarz, 'Picabia... sobre alguno arquetipos alquímicos', *Kalías*, 7, no. 14, (1995), 20-31, 177.
- <sup>38</sup> D. Paparoni, "The Memory of Death: Jim Dine', *Tema Celeste*, **6**, no. 3 (1988), 28-33.
- <sup>39</sup> H. Gassner, Joan Miró: Der magische Gärtner, DuMont, Köln, 1994.
- <sup>40</sup> See M. Fagiolo Dell'Arco, *Il Parmigianino, un saggio sull'ermetismo nel Cinquecen*to, M. Bulzoni, Rome, 1970), p. 45. Comparative material is available in the fundamental study by S. Freedberg, *Parmigianino, His Works in Painting*, Harvard UP, Cambridge MA, 1950.
- <sup>41</sup> For a recent account see M. Calvesi, 'A Noir (Melencolia I)', *Storia dell'Arte*, 1-2 (1969), 37-96.

#### James Elkins

- <sup>12</sup> See L. Dixon, Alchemical Imagery in Bosch's Garden of Delights, UMI Research Press, Ann Arbor MI, 1981; M. Bergman, Hieronymus Bosch and Alchemy, Almqvist & Wiksell International, Stockholm, 1979.
- <sup>13</sup> See G.F. Hartlaub, Giorgiones Geheimnis: Ein kunstgeschichtlicher Beitrag zur Mystik der Renaissance, München, 1925. Hartlaub is critiqued in S. Settis, La "Tempesta" Interpretata (1978), translated by E. Bianchini as Giorgione's Tempest, Interpreting the Hidden Subject, U of Chicago Press, Chicago, 1990, p. 52.
- <sup>44</sup> M. Gabriele, *Alchimia: la tradizione in occidente secondo le fonti manoscritte e a stampa*, exh. cat, XLII Esposizione internazionale d'arte la Biennale di Venezia, Electa, Venice, 1986.
- <sup>45</sup> Temkin, '*Nigredo* (1984) by Anselm Kiefer', *Philadelphia Museum of Art Bulletin*, 86, no. 365-366 (1990), 24-26.
- <sup>46</sup> Bess is discussed in my *Pictures of the Body: Pain and Metamorphosis*, Stanford UP, Stanford, 1999, and in *Forrest Bess*, exh. cat., ed. by John Yau, Hirschl and Adler Modern, New York, 1988. Breuer is discussed in my 'Renouncing Representation' essay in *Marco Breuer: Tremors, Ephemera*, exh. cat., Roth Horowitz, New York, 2000.
- <sup>47</sup> I am thinking of R. Krauss and Y.-A. Bois's book *Formless: A User's Guide*, Zone, New York, 1997.
- <sup>48</sup> The problem of finding satisfactory synonyms for 'word' and 'image' is discussed in N. Bryson's Word and Image, French Painting in the Ancien Régime, Harvard UP, Cambridge MA, 1981. Bryson considers various alternates: the Latinate "discursive" and "figural," "[t]he interactions of that part of our mind which thinks with words, with our visual or ocular experience," and the near-synonyms "optical truth," "Being," "Life," "'being-as-image" and "visual experience independent of language" as against "those features which show the influence on the image of language" (pp. 5-7). Here I have opted for 'visual' and 'linguistic', with the understanding that they are a lesser evil than the overly restrictive and explicit 'word' and the optically-tinged 'image'. The question is pursued in, M. Bal, *Reading* "*Rembrandt": Beyond the Word-Image Opposition*, Cambridge UP, Cambridge, 1991; and my own *Domain of Images*, Cornell UP, Ithaca NY, 1999.
- <sup>49</sup> See the discussion of the emblem of Maximilian I in E. Panofsky, *Albrecht Dürer*, Princeton UP, Princeton NJ, 1948.
- <sup>50</sup> Guillaume de La Perrière, *La morosophie de Guillaume de la Perriere, Tolosain, contenant cent emblemes moraux, illutrez de cent tetrastiques latins, reduitz en autant de quatrains françoys,* Par Macé Bonhomme et a Tolose par Iean Mouhier, Lyon, 1553.
- <sup>51</sup> Maier, Atalanta fugiens, emblem XVII. See H.M.E. de Jong, Michael Maier's Atalanta fugiens: Sources of An Alchemical Book of Emblems, Brill, Leiden, 1969.
- J. Fabricius, Alchemy: The Medieval Alchemists and Their Royal Art, Diamond Books, London, 1994, p. 207, for the four fires as "1) earthly fire 2) lunar fire 3) heavenly, solar fire 4) solar, nuclear fire". This reading is pursued in context of "word-image" relations in my Domain of Images, p. 201.

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118