Alchemy in the Anthropocene

New Horizons for an Ancient Psychology

by

Alan Bleakley

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Acknowledgements

To my loving partner Sue and our lifelong alchemy.

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Preface

Contemplation of ancient (Medieval and Renaissance) alchemy affords two key outcomes. First, it educates a poetic imagination rich in metaphor that transcends the instrumental or technical language infecting contemporary culture. Second, it takes attention away from our habitual (and narcissistic) inward turn to self to consider instead the substances of the world around us - a turn away from the ego-system towards the eco-system. In this turn to closely noticing things of the world we might find that consciousness is raised. This fusion of ancient and future-facing psychologies is enabled by the catalyst of metaphor – an altered state of language.

Altered states of consciousness are common for humans - as dreams, daydreams, fantasies, and the 'little death' of orgasm; in suspended states such as fainting, swoons, and blackouts; and while drunk, or as the effects of mind-altering drugs. Altered states can result from prayer or meditation, and as intense adrenaline rushes in extreme sports. Patients on life support in intensive care who recover often report out of body experiences. As 'peak experiences' such events by contrast show how limited everyday consciousness is, but also how ridiculous it is to wish for a permanent state of altered consciousness - for then there would be no ordinary state of being by which we can gauge the extraordinary. And yet a permanent state of higher consciousness – as 'illumination' - is what many spiritual techniques promise, from Ayurvedic yoga to Zen Buddhism.

There has been an explosion of New Age interests, embracing self-help 'growth' techniques, psychotherapies, and a host of quasi-religious or mystical approaches such as Astrology, Qabalah, I Ching, and Tarot. Interest in alchemy is part of this mix. Few New Agers will be engaged by technical or instrumental readings of alchemy – that it was a practical, but misguided, forerunner to modern chemistry. Failing to achieve an actual transmutation of base metals like lead or tin into precious metals – silver and gold, alchemists such as Paracelsus (1493-1541) discovered instead medical uses for materials such as mercury for syphilis, opium for pain, and liniment as balm. Many New Agers will, however, follow the view that alchemy is a spiritual symbol system that plots a path for enlightenment through contemplation of such symbols. They will in particular be drawn to Carl Jung's groundbreaking and extensive work on the symbolism of alchemy. But in embracing this path we lose the substance of alchemy – the fires, stinks, colours, and material transformations of solids into liquids, and liquids into airs.

Alchemy is certainly embodied. One alchemical text – the *Rosarium Philosophorum*, first printed in 1550 – has explicit sexual images in which a Queen and a King embrace (figure 0.1), with the following description:

> O Luna, by means of my embracing and sweet kisses,
> Thou art made beautiful, strong and mighty like as I am.
> O Sol, thou art to be preferred before all light,
> But yet thou needest me, as the cock does the hen.

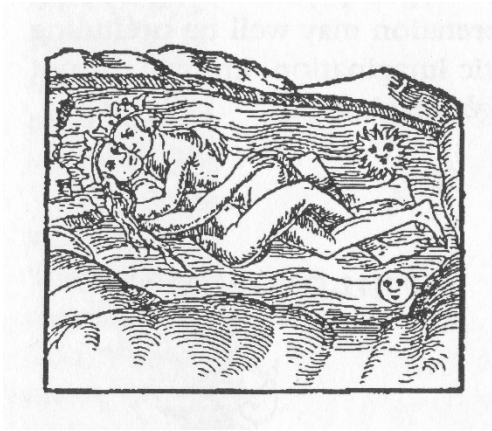

Figure 0.1: The Queen and King embrace

This is neither abstract nor metaphorical, but literal. At the same time, much of ancient alchemy is abstract - abstruse or allegorical. How then shall we navigate through the dense collection of alchemical texts and accompanying images? And what lessons can be drawn from such texts? It is important to acknowledge that there is no 'right' way to interpret ancient alchemical texts as coded stories and pictorial ciphers.

This book adopts a position between the literal and the symbolic, but also shifts gear from the personal to the environmental. This shift speaks to the major existential concern of our time – the climate crisis and its effect on the human psyche that is shaping an Age of Anxiety. Steering between readings of alchemy as either literal (as a forerunner to chemistry) or symbolic (offering meditative archetypal images that feed the imagination), this book shifts from personal, or ego-logical meanings to worldly, or eco-logical meanings. The vehicle for this is metaphor, where base or literal meanings are replaced by more complex, aesthetically rich

registers. But metaphors are read as embodied – sensual and material. Alchemy provides a poetic diction and imagination to better engage with ecological issues. But there is value in fine tuning the personal to better engage worldly matter. The starting point is to educate a sensual imagination in which appreciation (of other, and of matter or the natural world) precedes explanation.

On style in the book – references in the text are purposefully avoided to create a better flow for the reader. A comprehensive bibliography is provided at the end of the text.

1
Definitions and a Health Warning!

Prelude: Entry into the Anthropocene

That we live in an age of anxiety is all too clear. Contemporary life – technically entry into the Anthropocene or Age of Humanity since the 1950s - has introduced a climate crisis, already causing mass movements of people and disruptive weather changes swinging between mass flooding and destructive fires. The threat of nuclear war - that already came to a head once between the Soviet Union and the United States of America after the Bay of Pigs disaster in Cuba in 1961 – has now returned as, for example, today's Russia has become increasingly isolated from the West, North Korea postures and relationships between China and America are persistently soured. The ever-increasing gap in wealth between the very rich and the rest of the world's population has become obscene. Just 1% of the global population now owns twice as much money as the rest of the world's population, while 10 billionaires (all men) own between them six times as much wealth as the combined capital of the three billion poorest people on the planet. Such inequality naturally gives rise to uncertainty and anxiety. For many, life is a struggle – simply to eat and gain shelter - and does not permit the luxury of contemplation of how one might develop the potential that we all have as humans. And, despite such vast wealth among the super-rich (or maybe because of it), they too suffer from deep anxiety or existential dread.

Primary existential dread is due to the knowledge of our inevitable deaths, and the various illnesses (mental and physical) and disabilities that we may encounter. Add to this the conditions of political instabilities and social inequalities referred to above. The rest of our everyday angst is down to the daily grind with questions such as: can we make a living?; do we have a roof over our heads and can we afford it?; how do we form and sustain friendships?; how stable or unstable will our commitments such as long-term relationships be?; how shall we bring up children?; what values shall we adopt and how might this affect our political interests? and so forth.

But this is a glass-half-empty story. Against this grain, the human spirit seeks fulfilment. Life can be beautiful, inspiring, deepening, emotionally and intellectually stimulating - demanding imagination and commitment. To provide this context of depth in life does not require major material scaffolding such as a large income, nor can such enriching context be bought. It is part of the necessity of education – learning to read and write at first, and then to engage critically with events, while we also expand our horizons through ethics (adopting moral positions that help others for example), politics (engaging with democratic structures for example), aesthetics (educating the senses and sensibility through the arts for example) and the transcendental (engaging with wonder - philosophies, humanisms, and religions). In the realm where the aesthetic and the transcendental meet, we have developed, historically, systems of myth and symbols. Where we have developed science to explore and explain our material world, the immaterial (such as imagination, fantasy, visions) remains

largely in the realm of the unexplained or inexplicable, the world of mystery.

Science will claim that there are no such things as 'mysteries' – that all substantial things can be explained in terms of matter and forces, down to the level of the brain, the cell and the particles that make up matter. But much remains intangible. For example, the entanglement of the forces of nature that combine to make matter – the wave and the particle, or energy and substance – allegedly came to Einstein in a vision (a waking dream) and were then worked out mathematically. Einstein dreamed that he was walking through a farm. He came towards some cows by an electric fence. While the fence gave the cows a shock, so the cows jumped. Poetry and literature, such as the body of work of Shakespeare, involve intangibles such as deep inspiration. We have attempted to uncover the dynamics of such inspiration that lead to understandings and activities going beyond mere information into deeper meaning and these have been encoded into systems – material, philosophical, literary, visual and spiritual. One of these – alchemy, that in Europe reached a peak during Shakespeare's time in the early 17th century - is the subject of this book. The concern here is not to dwell on the history of alchemy as a philosophical and metaphysical system, but rather to see what alchemy's legacy might say to us today in our 'post-truth' Age of Anxiety as we enter the greatest alchemical experiment in humanity's history – the effects of global warming.

Again, although there is plenty of solid academic content in this book, the normal academic apparatus of referencing within the

text has been suspended to create more flow in the text. A comprehensive bibliography is included at the end of the text.

Definitions

You've got this book in your hands, so that means you have some interest in alchemy. You may already know what alchemy is, in which case perhaps this book might add new angles to your knowledge. But you may not know much, or indeed anything, about alchemy, although you've heard the word and probably associate it with the attempt to make gold from common or base metals such as lead, copper, and tin. This section will give you a road map for the rest of the book. 'Alchemy' is not just one thing but has several different meanings, each of which has value. Below is a summary of different ways of approaching ancient alchemy for modern times.

Ancient alchemy – peaking in the late 16th and early 17th centuries in Europe (as noted, the time of England's William Shakespeare) - is an abstruse, heavily coded system that immediately fascinates as it confuses. Its language and illustrations are complex and obscure. The obscurity was partly to put off authorities trying to sniff out alchemists when its practice was officially illegal (more on this later). Alchemy has been re-invented in modern times by the Swiss psychiatrist Carl Gustav Jung as an early, pre-scientific psychological system - a symbolic system seeking to make meaning out of life (as all spiritual and philosophical outlooks do). Alchemy needs a code to decode it and Jung provided that code.

Jung made it clear that the common assumption of a material approach to alchemy – literally making gold from base metals – was never the true meaning of alchemy. While this material approach provided a forerunner to modern chemistry (explained later), alchemy was at heart a symbol system that attempted to make sense of humanity's reach for meaning and greater depth of experience, again just as all religions and philosophy attempt to do. But in doing so, Jung turned away from the literal matter of alchemy – its material interests in substances and their transformations under heat and in solution – towards more mystical abstractions. In his system we miss the hands-on sensory experience of extreme heats, engaging with poisonous substances such as unintentionally inhaling potentially dangerous fumes, stuff blowing up, the textures of metals, colour changes, sulphurous stinks, and the ephemeral nature of vapours – now here, now gone.

This text maps out a half-way house between the material aspects of alchemy (the stinks, the colours, the vaporous clouds) and alchemy's abstract and mystical nature (the descriptions of fantastic creatures such as dragons, and the obscure poetry describing spiritual transformations). This mid-point is a form of *embodied metaphor.* A metaphor is where one word or phrase is used instead of another to raise the value of the latter, such as iron pyrites (a gold-coloured mineral) being called 'fool's gold'; or synapses (connections across nerve endings) originally being called 'protoplasmic kisses'; or 'the rub of the green' (as good fortune). Such metaphors are 'embodied' because they refer to tangible matter. Metaphors matter because they turn the literal into poetry – something far more intense, engaging and inspirational.

Alchemy is a system of embodied metaphors that turns object-led information into meanings, as first-hand experiences. For example, 'lead' as leaden depression, 'fire' as various kinds of emotional warmth and extreme or heightened feelings, 'sulphur' as manic behaviour and 'salt' as obsession and memory. The substances are metaphors (shifting from the mundane into a more complex level of experience that is also ambiguous such as 'the salt of the earth') that are embodied as emotional, intellectual and imaginative experiences. We feel the heaviness and poisonous nature of lead in a leaden depression. We are fired up, or inflamed, or merely feel warmth towards another. Extreme heated exchanges are sulphurous. We salt away memories and feel bitter remorse. Where such alchemical activities occur, referring obliquely to the transformation of material substances from the everyday base to the precious, so language deepens from the surface and literal to the deeper metaphoric and poetic as the innovative metaphor count increases.

Given the deep historical importance of the alchemical tradition, informing the plays of Shakespeare, the poetry of John Donne and the science of Isaac Newton for example, can we merely reject alchemy as an aberration, a misguided precursor to modern chemistry? Yes, we can certainly reject alchemy read literally, as a laboratory-based search for the philosopher's stone, describing both a substance and set of processes that supposedly not only transforms base metals into gold but also heals disease. But perhaps this is not what alchemy primarily set out to do – it is a literalist aberration. Alchemy rather can provide *a way of thinking about life that distorts the naturalistic perspective while sticking with matter as the substance of thinking*. The naturalistic fallacy is to take

the world literally rather than metaphorically. In turn, metaphors must be read materially and substantially – metaphors are embodied. Alchemical language, as embodied metaphors - or the act of the material imagination – is as potent now as it was in the time of Shakespeare. Why does this matter? Imagine a world without the fruits of metaphor – the arts and humanities. A world reduced to technology and free from wonder. Authentic alchemists never claimed to literally make gold, rather they made golden metaphors – they improved or enhanced things through enriching language both verbally and visually. They were poets. They invented a tactile, sensuous language that was also contradictory or ambiguous - such as oily earths, wet fires, and stones that sweat.

Turning base metals into gold: A metaphor and a philosophy for life

Let's clear the ground quickly. Again, alchemists in their laboratories never literally turned base metals such as lead into gold. Where they claimed to do so, they were frauds, or tricksters. But in such laboratory-based experimentation, the alchemists who became known as 'puffers' (because they spent a lot of time with bellows, keeping fires alight and regulating heat) made many fascinating discoveries about how materials reacted with one another under conditions of heat and in solution, in the process establishing modern chemistry. For example, in the 16th century, Paracelsus discovered that lead tainting water causes goitre (a swelling of the thyroid gland).

We must swing back and forth between the earth-bound 'puffers' and alchemy as a metaphor system. In a contemporary alchemical process, since the 1980s we have indeed been able to literally

change base metals into gold through nuclear reactions. The problem is that the process costs more than the gold yield is worth (one quadrillion dollars per ounce), while the product is also radioactive and therefore useless. However, we will not close the door on this issue right here for there were important historical consequences concerning the belief that some alchemists could indeed change relatively worthless metals into silver or gold. Let's recount this story.

What lies beneath our feet

We have always been fascinated with what lies beneath our feet – the geography and geology of our surroundings, as the apparent stability of what is a highly unstable *terra firma*. Recall that humanity is a mere microsecond in the history of planet Earth - fundamentally a history of a large, unstable rock mantle with a molten core. A species that, in an evolutionary blink of an eye, we are intent on destroying through emissions leading to global warming (again, a massive and misguided aberrant-alchemical experiment). As humans evolved so they dug up special stones from that mother rock, such as flint – thought of as the bones of the body of Earth - and learned how to knap them to create sharp-edged tools primarily used for killing animals (arrowheads and spearheads), and flensing (scraping fat from) their hides. Metals also rest in the earth's mantle, a literal spin-off product of millions of years of churning activity at the molten core of the planet. At hot-spots of volcanic and seismic activity - such as granite-rich areas where the stone had been thrust up from deep in the earth millennia ago and then cooled rapidly - some metals would get thrown up to the surface and could be gathered from soil or panned from streams. This included useful metals such as tin, plus

rarer metals such as silver and gold that became used largely in ornamentation such as jewellery. But humans soon learned that digging deeper into the earth would reveal rich seams of metals in ores (rocks or sediment containing mixtures of metal deposits). Metals such as copper and tin, used in making bronze, were sought by cultures around the world to make tools and weapons (the ten-years-long war at Troy waged by the Greeks against the Trojans documented in Homer's *Iliad* is set in the late Bronze Age, twelve hundred years BCE).

The deepest puzzle facing humanity has always been that nature seems eternal, immoveable and this is best represented by stone (seen to weather, but to apparently never age), yet humans age quickly and die. Why are humans so fragile, perishable and not more stone-like? This conundrum has led to humanity seeking an elixir (commonly called a 'stone' in alchemy) that will prolong life. Flip the coin and another quirk of humanity shows: accepting that we have a short (and often rough) life, how can we quickly make it 'better' or of greater quality? Three short answers to this. First, we can alleviate suffering and help somewhat to lengthen life through remedies for illnesses. These are first gathered in nature, mainly from plant life but also from animal products. Later in humanity's development, remedies began to be made in the laboratory through trial-and-error processes such as extracting opium from poppies and then, in the laboratory, morphine from the opium. In the process of experimenting in the laboratory to make gold from base metals, alchemists such as Paracelsus discovered a range of compounds that could be used medically, such as liniment applied to the skin to relieve pain and stiffness. Second, for believers across faiths, to make life 'better' is to adopt spiritual beliefs: life is brutal

and short, but that doesn't matter because the afterlife is eternal and sweet. Third, for non-believers, if this is the only life, seek to make it better through hedonism – live on the edge, make money, buy pleasure! Indeed, buy life extension through plasma transfusions or mass intake of vitamins and minerals.

The ideas of all three alchemical approaches – alleviation of suffering, taking on faith and hedonism - have been put into practice since Graeco-Roman times in Egypt in the first few centuries AD, spreading across the Chinese and Islamic worlds and flowering in Christian Europe since the 12th century (the late medieval period), peaking during the Renaissance (14th to 17th centuries) and transforming into chemistry during early modernity (18th century). As noted, Paracelsus discovered a range of medicinal products to alleviate suffering; spiritually-inclined alchemists developed a symbol system for the cultivation of spirit beyond the flesh; and hedonistic 'puffers' – again, so-called because they spent much time at the flame, or forge, blowing on the coals - pursued the literal transformation of base metals into gold yet made spin-off discoveries that created the foundations of modern chemistry.

The group that developed alchemy as a symbolic and spiritual practice coined a language of metaphors to describe their work, paralleled in exotic illustrations, and forming a kind of priestly sect. To avoid persecution from the State (channelling the voice of the Church), their shared metaphoric language became more and more coded. For example, their form of alchemy became a close study of the longevity of 'stone'. Just as stones in the earth show solidity, so our spirit can become 'stone-like', eternal. This quest for

eternal life as an afterlife is of course common to many religious beliefs. In alchemy it was represented as a quest for a 'fire-tried stone' or a 'tincture' that promised eternal life (in spirit) but that could be tasted in this life as forms of enlightenment or heightened awareness. As noted earlier, Carl Gustav Jung, who singlehandedly re-discovered ancient alchemy for modern times, followed this path. Alchemy for Jung was a symbol system partaking in a host of universal symbols (such as the snake, that sheds its skin and emerges renewed, standing for 'transformation') that constituted a preparation for life after death but also gave glimpses of such a life through epiphanies or illuminations – sudden, overwhelming insights both meaningful and full of beauty (and sometimes terror, or the sublime).

This transcendental alchemical path – with its complex, coded symbols - is not the one adopted in this book. Rather, the 'afterlife' is seen as already explicit in both the beauty and terror of this life, or in the immanence of the natural world – the flourishing and perishing of earth, sky and oceans. Alchemy can be seen to be like a lens that magnifies the splendour of nature – the hovering buzzard, the smell of earth after a rainstorm, the taste of fresh-harvested honeycomb – and the deepest emotional connections of people in love, friendship and mutual admiration working in collaboration for the betterment of human life.

Jules Verne's *Journey to the Centre of the Earth* expresses the fantasy that humans can penetrate deep under the mantle of the planet to its core. Of course, they cannot – it's too hot in there! However, visiting the centre of the earth is a valuable *metaphor* – as Jules Verne himself illustrates - for life as a journey of discovery. The 15th

century alchemist Basilius Valentinus took up this metaphor of life as a journey to a core or essence, describing the alchemical 'work' as care for the self. Just as we can work out physically, so we can work out to make our lives more meaningful, for example through a deeper engagement with nature. Care for nature equates with care for self.

Valentinus talked about this work drawing on the same metaphor that Jules Verne used later, as a journey to the centre of the earth: *Visita Interiora Terrae Rectificando Invenies Occultum Lapidem* (V.I.T.R.I.O.L). This translates as 'Visit the interior of the earth and purifying you will find the hidden stone'. VITRIOL is sulphuric acid; and also means anger and hate. Valentinus was not suggesting that we become vitriolic, but rather that we purify vitriolic intentions through the journey to the core of the earth. Here, the interior of the earth can be taken as your own being; 'purifying' means whatever exercises or regimes you use to improve life and experience. And finding 'the hidden stone' means a treasure emerges that is the 'gold' standard of your own worth – the best you can be or realising your potential in whatever sphere of life interests you. But we must not throw out the baby with the bathwater here, for the journey to the centre of the earth can be taken literally as putting down roots, digging where you stand, getting to know the earth that sustains you. The metaphor is for us all to take root, become earthy, standing firm like trees. And, as modern botany tells us, the roots of trees become entangled with underground mycorrhizal webs, fungal structures covering miles of ground, in a woodland community. Our wider alchemical work is surely to care for nature and not work against her. Thus, we have a duty to care for an ecosystem and not to pollute it.

We have seen that in contrast to the more spiritually inclined alchemists were those who pursued the impossible task of 'quickening' nature by turning base metals into gold. The hedonist alchemists aimed to get rich quick and have fun now. Even if they could not really produce gold from base metals, they would convince (and show by a bit of trickery) potential rich patrons that they could, disappearing when they were exposed as charlatans, but pocketing their advance payments. These 'sharks' are of course still around - instantly recognisable today.

This group of alchemists saw that metals 'grew' in the earth. Some were common and relatively worthless, like lead, tin, and copper. Others were rare and precious, like silver and gold. The idea occurred to them that all metals in rocks had the same origin, but some had been 'quickened' in their development through natural forms of heating, compression and combinations of elements. If these forces of quickening could be studied and understood, they may, perhaps, be reproduced in small ways in the laboratory, where base metals might be transformed into gold. A small number of alchemists claimed that they had mastered these secrets through intensive laboratory experimentation. They faced a different challenge to the spiritually inclined alchemists. While the latter were hunted down and persecuted by the Church, the material alchemists were hunted down and persecuted by the State. By the end of the 13th century, Pope John XXII had issued a decree declaring alchemy to be against nature – an irony, as alchemy was grounded in a principle of 'quickening' nature first by understanding the natural world and its substances. Alchemy was outlawed - and then officially declared an illegal activity in 1403 by Henry IV of England who saw that economies controlled

by the king could be destabilised if gold could be produced and circulated in an unregulated manner. An act was passed in Parliament in 1404 that forbade the transmutation of base metals into silver or gold (if that were indeed possible). (The law was repealed in 1689 on the condition that any false precious metals produced by alchemists would be passed on to the State to be deposited in the mint in the Tower of London. In return, the depositor would be issued with the same weight of natural gold or silver. No such transactions occurred).

Alchemy as a metaphor factory

'Metaphor' was introduced earlier and serves as the central concept and driving force of this book. Alchemy can be read as a system of embodied metaphors whose work is to create deep meaning where previously there was mere surface information. In other words, metaphors, and alchemy, create value. This is the making of 'gold'. A value such as compassion for others is worth its weight in gold – the metaphor fits the intention. Alchemy's journey to the centre of the earth is an exploration of how persons can support humanity as a kind of symbiosis, a mutual feeding, or the creation of a mycorrhizal web. As this book unfolds, you will see that alchemy is a way of creating democracy, where fellow-feeling essential to an authentic democracy can be seen as a form of poetry.

Poetry is the supreme art form for creating, developing and displaying metaphors. What is a metaphor and why are metaphors important? As noted, a metaphor, technically, is a feature of language where a meaning is transferred across from one word or set of words to another such that the meaning is made more

intense, beautiful, complex and sometimes disturbing. A metaphor can be simply a comparison of one object with another that heightens the meaning of the first object: 'Shall I compare thee to a summer's day?' says Shakespeare in the opening line of his Sonnet 18. The metaphor (in this case as simile or comparison) rests with the raising of the first object ('thee', a person) to a heightened condition of beauty ('a summer's day'). But Shakespeare then provides a twist in the second line of the Sonnet: 'Thou art more lovely and more temperate'. The metaphor reverses itself. The person is now a metaphor for the 'summer's day' – a heightened expression, a new level of meaning. Metaphors can be simple, again as comparisons (similes): he was 'as tough as old boots' (worn and cracked leather). But they are usually opaquer than this, such as: 'that lends weight to the argument'. 'Weight' is not used here in a literal sense. 'She has the weight of the world on her shoulders' we say of a person with overbearing responsibilities.

In Greek myth, the Titan Atlas bears the weight of the world on his shoulders. He shoulders his responsibilities or was famous for being 'broad shouldered'. This burden was a result of punishment by Zeus, leader of the gods, for Atlas's heading of a rebellion against the gods to overthrow them and restore the old order of the Titans. We can read this as a rebellion of the code of the natural world against human culture's designs on that world (human nature in its various expressions represented by the gods). This is the struggle that has culminated in the climate crisis, again the greatest - and surely the most foolhardy - of all alchemical experiments, twinned with mass species extinctions.

Why metaphor is important is that it raises the register of language and conversation from mere 'information' to 'meaning'. In this way, language engages at a deeper level. When alchemy transformed into chemistry in the mid- and late 18th century in Europe, something important was lost. The highly charged, metaphorical and artistic language of alchemy was replaced by a technical, scientific and logical language stripped of metaphor. This language of chemistry was purely descriptive, where formulae also displaced complex illustration. Descriptions of qualities were replaced by measurement of quantities.

As an example, in the 1780s the French chemist Antoine Lavoisier, in cataloguing the latest chemical discoveries such as the isolation of oxygen from air, explained how matter in the laboratory could now be decomposed into the smallest constituent parts that in turn could be weighed, or quantified. Earlier alchemical principles or abstractions (such as 'salt', 'sulphur', and 'mercury') did not refer specifically to known matter, but to conditions such as discrimination (salt), heat (sulphur) and change (mercury). Now the new reductive chemistry would replace such principles by 'elements' (such as hydrogen and oxygen). These would be combined to make matter (such as water) that could again be quantified by weight (with the metaphor subtracted from the substance).

But look at how the metaphors of alchemy became dried out in forming the new technical, reductive language of chemistry: 'sugar of lead' becomes 'lead acetate', 'oil of vitriol' becomes 'sulphuric acid', 'strong water' (*aqua fortis*) becomes 'nitric acid', and 'flaming water' (*aqua ardens*) becomes 'alcohol' or 'spirit'. Alchemical

language is impoverished in the transition to chemical language, as metaphors are replaced by technical terms. The Titans (Big Metaphors or Symbols – or Transcendental Categories such as Time and Space) have been ousted by the gods (Metaphor as Myths, such as Aphrodite as the sensual goddess of love), who in turn have been ousted by humans (Metaphors in language such as 'leaden depression') who have adopted science as our primary language, where metaphor is finally quashed - displaced by technical terms.

Our most potent metaphor factory is lyrical poetry, where sentences are purposefully packed with meanings rather than simply information, as big ideas are collapsed into small spaces. 'Poetry' can be used also to describe human activity beyond the written word, such as movement of the body, sexual activity and expression through – say - visual art and music. We can think of alchemy as a kind of poetry – there is expression through words, illustrations, and activities (in the laboratory, at the furnace) that aims to increase the metaphor count or enrich life and the life of the imagination.

Alchemy as psychology

After the rise of chemistry, alchemy as a laboratory-based inquiry died altogether. But the history and philosophy of alchemy lingered. Many historians of sciences such as chemistry have written about alchemy as a precursor to chemistry. Some literary figures, such as the writer DH Lawrence and the poet Robert Duncan, drew on alchemical themes and images. But contemporary interest in alchemy can be put down, again, to Carl Gustav Jung, who turned away from the literal side of alchemy as

a search for a means to transform base metals into gold and the transformation of this into modern chemistry. Jung returned to the idea of alchemy as a spiritual transformative path but couched this in terms of his own interests as a psychiatrist and psychoanalyst. For Jung, alchemy was seen as an ancient system of personal transformation from a life lived well below potential to a life lived meaningfully, realising one's gifts.

Jung had a dream in 1926 where he was 'held captive' deep underground, and he somehow knew in the dream that it was the 17th century. He had devoured alchemy texts, particularly from its peak in Europe in the 17th century and saw them as describing an early form of psychology as knowledge of the human mind, emotions and imagination. Jung believed that dreams and fantasies tapped into a 'collective unconscious' beyond a personal unconscious (as described by Freud). The collective unconscious that accumulated historically was shared across cultures and recorded in myths and folklore where universal themes could be tracked. These included the Great Mother (Earth herself), the Trickster figure (a practical joker, often represented as an animal) and the Hero (who sets out on a journey of discovery and faces a series of difficult tasks that he must overcome). The imagery of such trans-personal myth and folklore – that could also appear in personal dreams - could be wild and expansive, just like the puzzling or coded illustrations that Jung was discovering as he studied ancient alchemical texts. He set to work to decode such texts through his own model of how the human psyche (mind and imagination) worked. In alchemical imagery he saw the playing out of big human themes such as sexual identities, transformations and relationships with the natural world. Jung saw alchemy's

explicit goal of the 'perfecting' of base metals, transmuting them into gold, as a metaphor for human individuation or turning the base metal of character into something more regal.

Alchemy (and Jung) became part of the counter-cultural vocabulary of the 1950s Beat and 1960s Hippy movements, morphing into the New Age interests of the 1970s and 1980s, along with a mishmash of Eastern mysticism, Gnosticism, the Kabbalah, the Tarot, astrology and mind and body therapies – the 'human potential' movement. Without much understanding of alchemy's history or codes, its wild illustrative work heavily influenced 1960s and 1970s cartoonists and their legacy nowadays, such as Ron Regé Jr's *The Cartoon Utopia*. As the optimism of the 1960s has faded, replaced by cynicism and anxiety, so what might 'alchemy', of whatever persuasion, have to offer now? Regé says that 'the goal of alchemy is to bring together and destroy the opposites'. This sounds nihilistic and may just be a grammatical slip. What Regé probably means is to destroy the principle of oppositionalism rather than the substances or ideas that stand in opposition.

Health warning

Alchemy is no panacea and this is not a self-help book. It offers neither snake oil remedies nor empty promises. Rather, it translates ancient (Medieval and Renaissance) alchemy into contemporary language that may well shed light on a variety of human issues such as the importance of embodied metaphor in expressive language and living an expressive life. The study of alchemy can be seen as part of the project of celebrating the poetic imagination as amongst the richest gifts that humanity possesses. Much of ancient alchemy was written as riddles and in code, because to be

an alchemist, as we have seen above, was a dangerous business. To repeat: in 1404, King Henry IV of England signed a law that made alchemy illegal. The outward reason was that if alchemists really could make gold out of base metal such as lead, then this could lead to flooding the market with gold and destabilising the currency. The real reason was that the Church saw alchemists as heretics and their symbol systems as heresy. So fellow alchemists developed even more complex symbol systems as codes - ways of communicating their ideas without apparently challenging the Church or the State.

Translating such codes of alchemy into modern talk and ideas, mostly about human psychology, may help us to gain insight into a life's course. Or it may not. It may provide an entertaining diversion. Although alchemy does provide very interesting ways of looking at life, it does not guarantee 'illumination'. New Age purveyors of 'illumination', 'growth' and 'enlightenment' can be a scourge. They will take your money through courses and workshops, you will get a short buzz and then you will be seeking another course, quickly becoming a New Age junkie. This is made worse by New Age shamans promising 'cures' for illnesses that need proper, sustained medical help, informed by high-tech science. Alchemy has been scooped up by this wider 'growth' movement as another track to enlightenment. You will be wasting your money again if you seek such a shift in consciousness through alchemy, whose content can be troubling, puzzling, even disturbing. Alchemy won't necessarily make your life better – it will educate you by making your life more complex (and therefore worth living). Alchemy itself is no magic potion. Rather, it is a *medium* through which productive change can be facilitated.