



*Phlogiston.*



*Pulvis.*

# ALCHEMICAL SYMBOLS AND SYMBOLISM: AN EXPLORATION

TIMOTHY O. DESCHAINES, PH.D.



*Caput mortuum.*



*Dephlogisticated.*

# Egyptian Symbols



*nub*

Gold.



*asem*

Electrum.



*hat*

Silver.



*Xomt*

Copper.



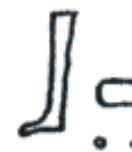
*men*

Iron.



*teht*

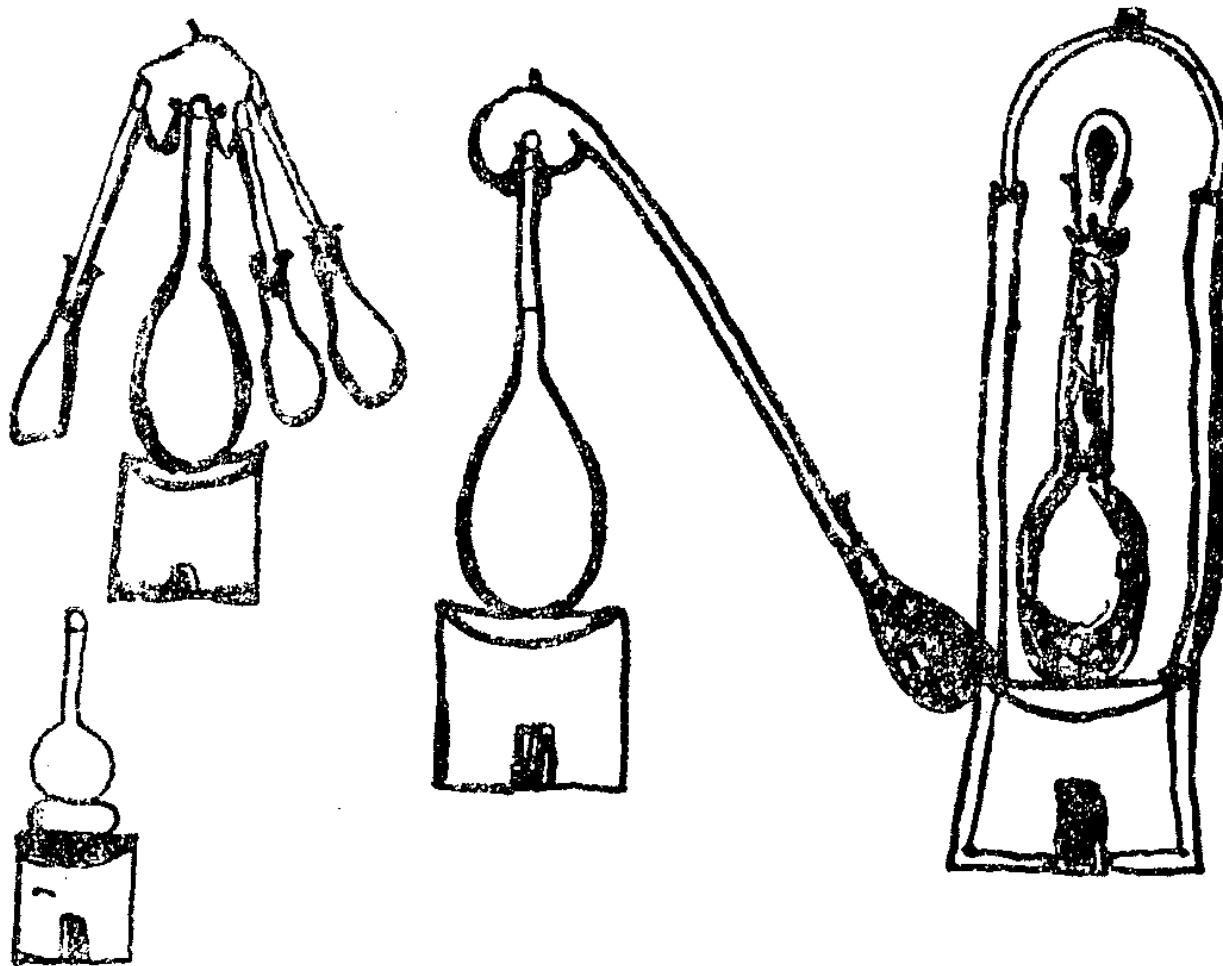
Lead.



*chesbet*

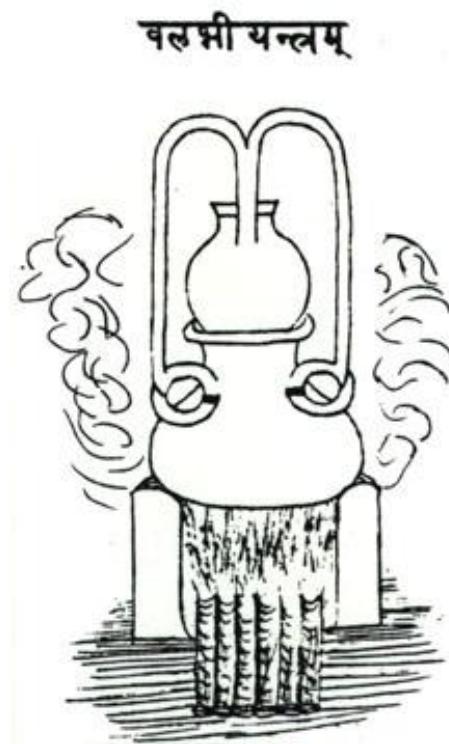
Blue Stone, or Enamel,  
or Sapphire.

# Greek Apparatus



TRIBICUS, STILL, AND OTHER APPARATUS DESCRIBED BY SYNESIUS  
IN THE FOURTH CENTURY  
From a drawing in a Greek manuscript

# Indian Alchemical Apparatus



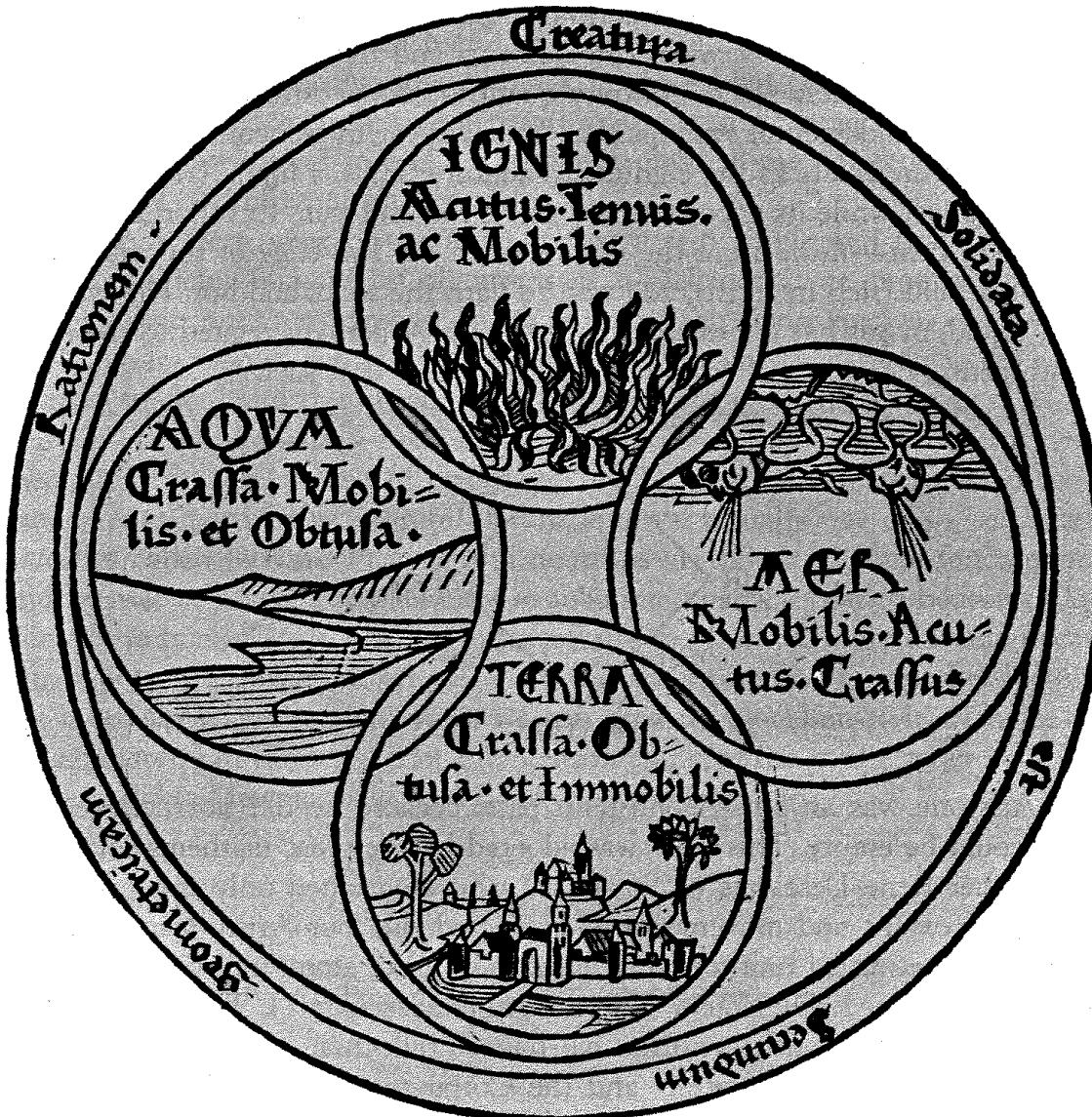
# The Four Elements

△ Fire

▽ Water

▲ Air

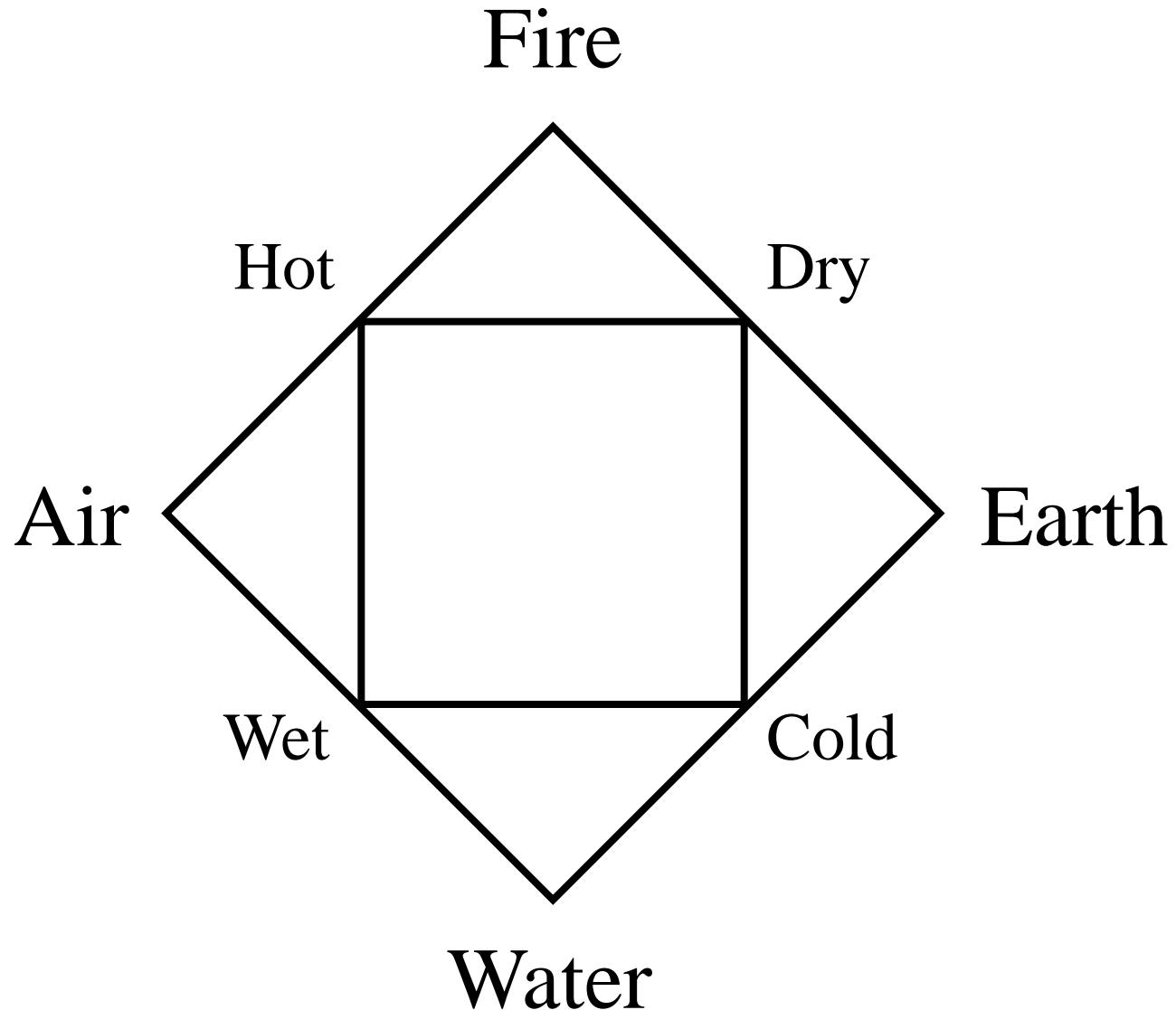
▼ Earth



**FIGURE 2** ■ The four elements of the ancients: Fire, Air, Earth, and Water from St. Isidore, *De Responsione Mundi Et Astrorum Ordinatione* (Augsburg, 1472) (courtesy of The Beinecke Rare Book and Manuscript Library, Yale University).

From Greenberg - “A Chemical History Tour”

# Aristotle's Transmutation Diagram



# Modern appearances of the four elements



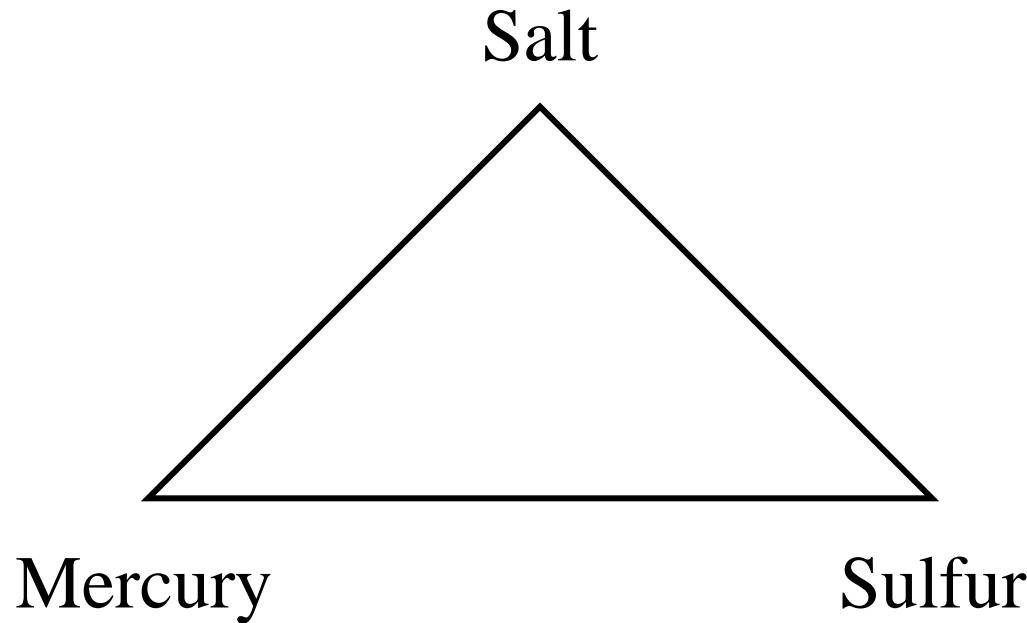
Water

Air

Fire

Earth

# The Tria Prima - Paracelsus



Sophic Sulfur – male, Soul

Sophic Mercury – female, Spirit

Sophic Salt – Material Body



Tria prima from *Della Tramutazione Metallica* by Giovanni Battista Nazari (Brescia, 1599)

# The Seven Planetary Metals

<u>Metal</u>	<u>Symbol</u>	<u>Planet</u>
Gold	○	Sun
Silver	☽	Moon
Iron	♂	Mars
Mercury	♀	Mercury
Tin	₄	Jupiter
Copper	♀	Venus
Lead	☿	Saturn

TABLE OF THE ASSOCIATION OF METALS AND PLANETS.

<i>Saturn.</i>	<i>Jupiter.</i>	<i>Mars.</i>	<i>Sun.</i>	<i>Venus.</i>	<i>Mercury.</i>	<i>Moon.</i>
1. a metal ?	—	—	gold	lead	—	silver
2. —	—	—	gold	copper	—	silver
3. lead	bronze	mixed metal	gold	tin	iron	silver
4. lead	tin	iron	gold	copper	electrum *	silver
5. lead	electrum	iron	gold	copper	tin	silver
6. —	—	—	gold	—	—	silver
7. lead	electrum †	iron	gold	copper	tin	silver
8. iron	electrum	bronze	gold	tin	lead	silver
9. lead	iron	mixed metal	gold	bronze	tin	silver
10. lead	tin	iron	gold	copper ‡	mercury	silver
11. lead	—	—	gold	bronze	tin	silver
12. lead	bronze	iron	gold	tin	copper	silver
13. lead	tin	iron	gold	copper	mercury	silver
14. lead	tin	iron	gold	copper	mercury	silver
15. lead	brass	iron	—	—	electrum	silver
16. lead	tin	iron	gold	copper	electrum *	silver
17. lead	tin	iron	gold	copper	?	silver
18. lead	tin	iron	gold	copper	mercury	silver
19. lead	silver	iron	gold	tin	bronze	crystal
20. copper	gold	iron	electrum	tin	lead	silver
21. lead	tin	iron	gold	copper	mercury	silver
22. lead	tin	iron	gold	copper §	electrum	silver

\* or mercury; † or mixed metal; ‡ or bronze; § or brass.

# The 12 processes of the Zodiac

<u>Zodiac Sign</u>	<u>Symbol</u>	<u>Process</u>
Aries	♈	Calcination
Taurus	♉	Congelation
Gemini	♊	Fixation
Cancer	♋	Solution
Leo	♌	Digestion
Virgo	♍	Distillation

Zodiac Sign	Symbol	Process
Libra	$\Omega$	Sublimation
Scorpio	$\sigma$	Separation
Sagittarius	$\nearrow$	Ceration
Capricorn	$\checkmark$	Fermentation
Aquarius	$\wedge\wedge$	Multiplication
Pisces	$\circ\circ$	Projection

# More Processes

Amalgamation	℞	To Boil	ꝝ
To Solve	ꝫ	To Rot	ꝧ
To Take	℞	To Compose	ꝩ
To Precipitate	ꝯ	To Filter	Ꝫ
To Sublimate	ꝯ	Distill	ꝭ
To Pulverize	Ꝯ	To Purify	Ꝩ

# Substances

Essence	◆	Universal Seed	⊕
Amalgam	▲	Aqua Vitae	○○○ †
Oil of Vitriol	⊕—	Aqua Vitae	▽
Aqua Regia	●○	Aqua Fortis (nitric acid)	▽—
Distilled vinegar	●●	Vinegar	✚

Antimony		Zinc	
Platinum		Nickel	
Steel (?)		Brass	
Alum		Sulphur	
Nitre		Tartar	

Sal Ammoniac	*	Magnesia	ꝝ
Quicklime	Ψ	Stone	✚
Salt	⊖	Oil	•••
Sand	◆◆◆◆◆	Urine	•
Manure	Ꝛ	Crucible	ꝝ
Water Bath	ꝛ	Retort	ꝙ

# Weights & Measures

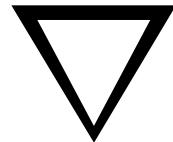
Pound	℔	Ounce	℔
Dram	℔	Scrumple	℔
Pinch	℔	Pint	℔

# Time

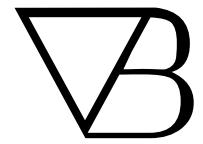
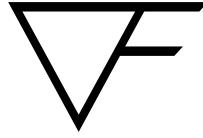
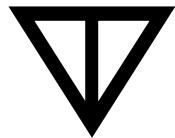
Hour		Week	
Month		Year	
Night & Day		Year	
Day		Night	
Summer		Autumn	
Winter		Spring	

# Symbolic Relationships

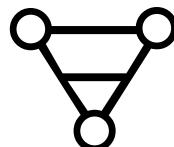
Water



Aqua Vitae    Aqua Fortis    Aqua Regia    Water Bath



Clay



or

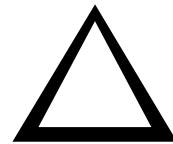


Rust



# Symbolic Relationships

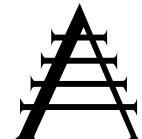
Fire



Sulphur



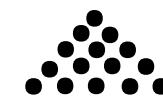
Amalgam



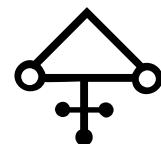
Distill



Sand



Arsenic Sulfur

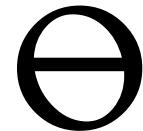


# Symbolic Relationships

Universal Seed



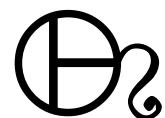
Salt



Nitre



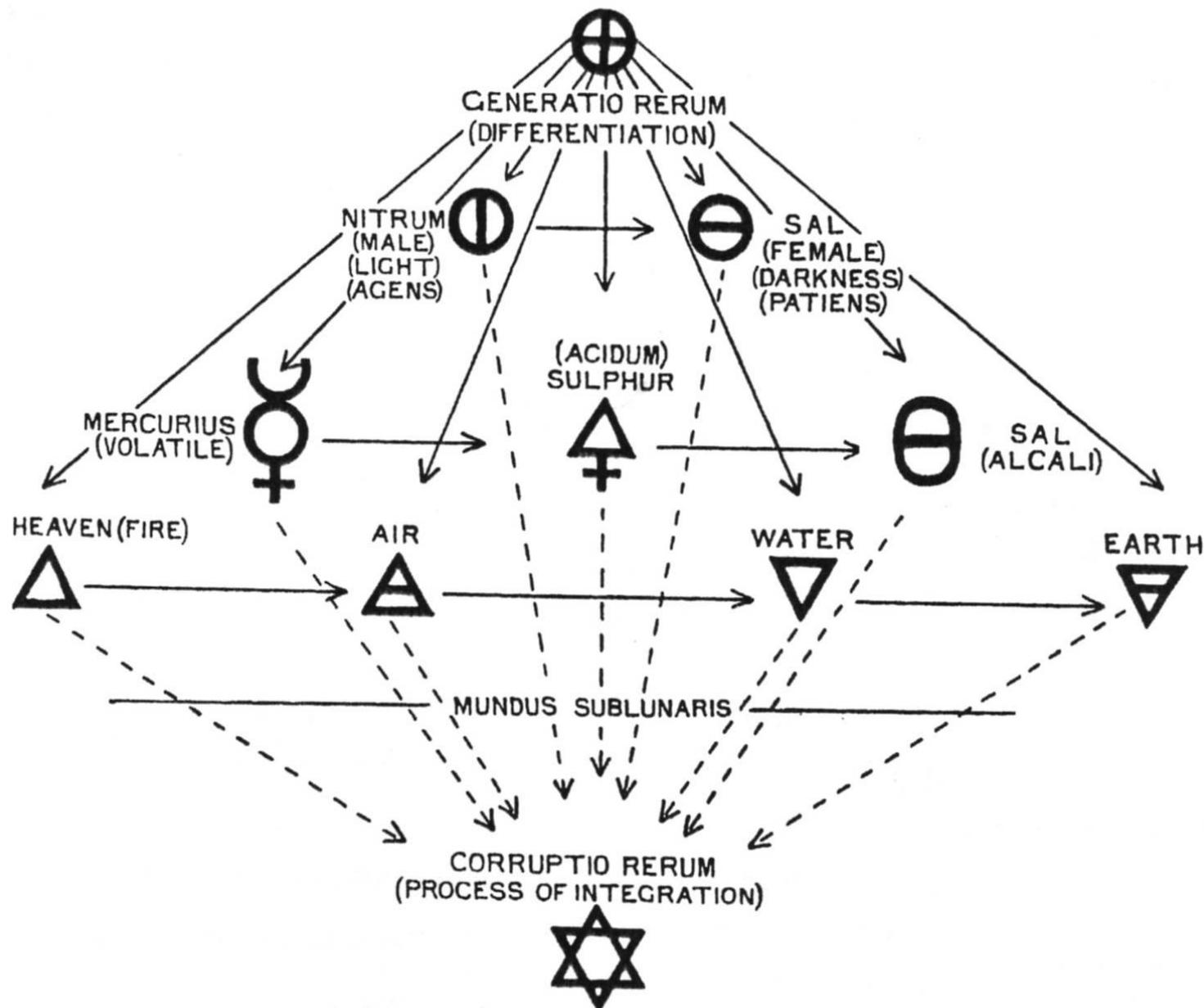
Oil of Vitriol



Rock salt



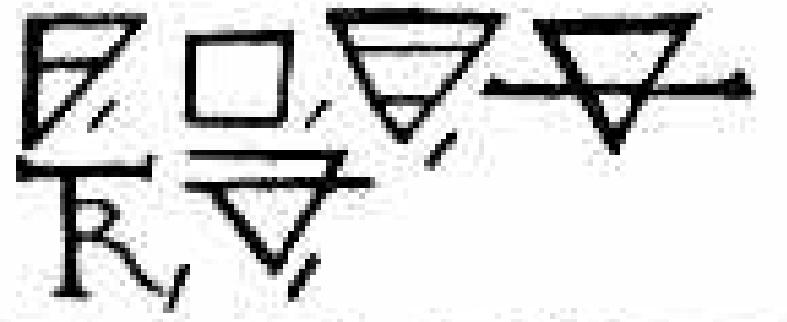
# CHAOS.



# Systematized Symbols...?

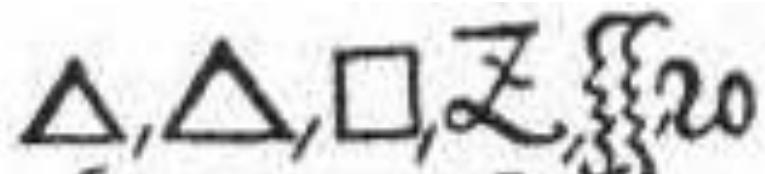


Water



Earth

Air



Fire

No!

# Animals – Birds

Black Crow – blackening, putrefaction

White Swan – superficial spirituality

Peacock – shift in perspective

Pelican – self sacrifice

Phoenix – completion and rebirth

# Animals

Green Lion – power of nature, iron sulfate

Gray Wolf – antimony, amalgamation

Snake or Serpent – Rebirth, connection

Ouroboros – infinity, completion

Toad – wet pathway similar to Black Crow

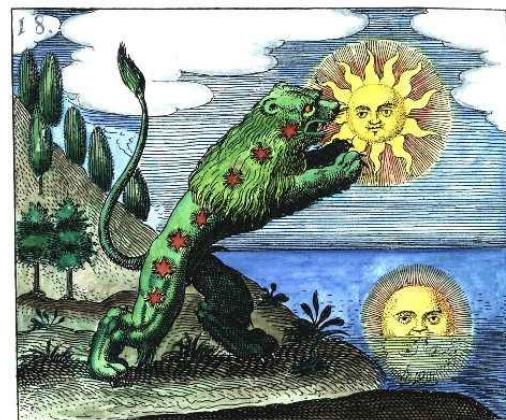
White Eagle – dry pathway of Swan

White Unicorn – spiritual transition

Dragon – like serpent, beginning and end



# The Green Lion





**FIGURE 18.** ■ The passionate struggle of the winged Green Lion (volatile female principle; “sophic” mercury) and the Red Lion (fixed male principle; “sophic” sulfur) (from *Atalanta Fugiens*, courtesy The Roy G. Neville Historical Chemical Library).

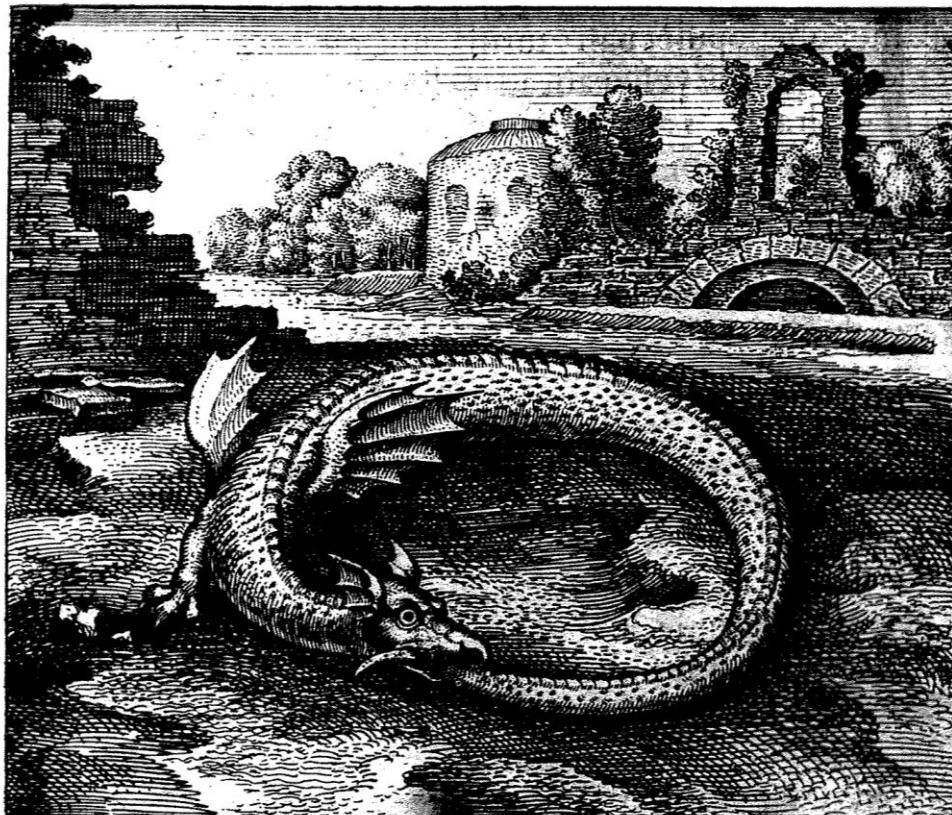
From Greenberg - “A Chemical History Tour”



# The Gray Wolf (of Antimony)



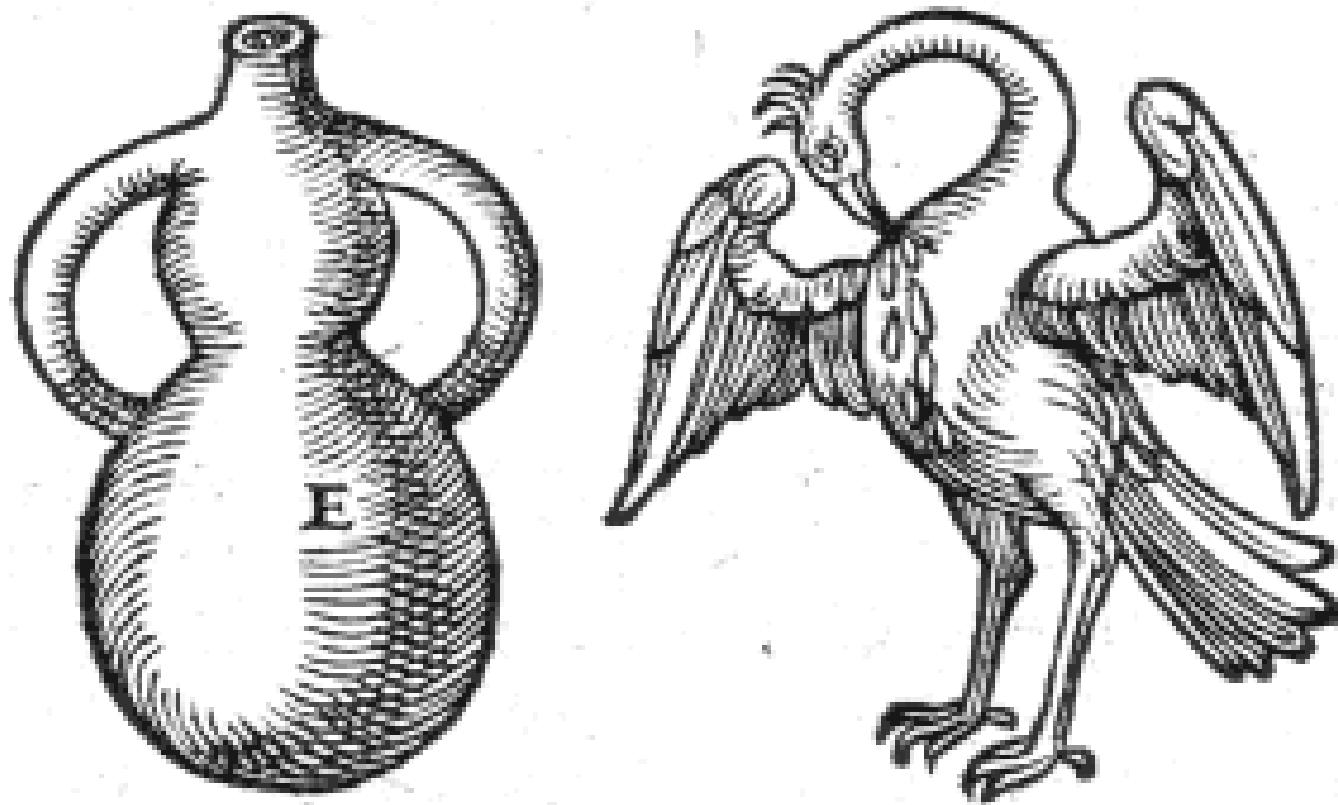
# Ouroboros

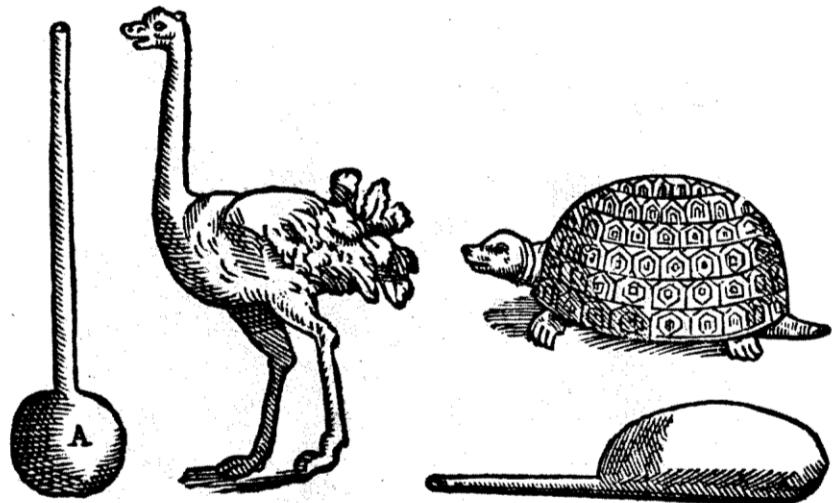


# The Phoenix



# The Pelican

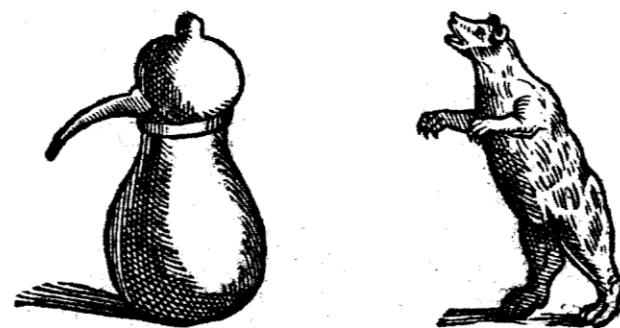




(a)



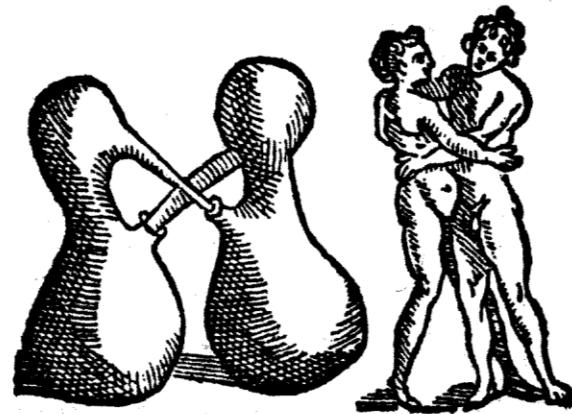
(b)



(a)



(b)



# Salamander



# Dragon's Blood



SANGVINIS DRACONIS  
*descrip<sup>tio</sup>.*



# The Twelve Philosophical Keys of Basil Valentine

DUODECIM CLAVES PHILOSOPHICÆ



- |                 |                    |
|-----------------|--------------------|
| 1. Amalgamation | 7. Gestation or ?  |
| 2. Separation   | 8. Fermentation    |
| 3. Purification | 9. The Cycle       |
| 4. Putrefaction | 10. Tria Prima     |
| 5. Solution     | 11. Multiplication |
| 6. Conjunction  | 12. Calcination    |

BASILIUS VALENTINUS, 15<sup>TH</sup> CENTURY ALCHEMIST,  
CANON OF THE BENEDICTINE PRIORY OF SANKT PETER IN ERFURT, GERMANY



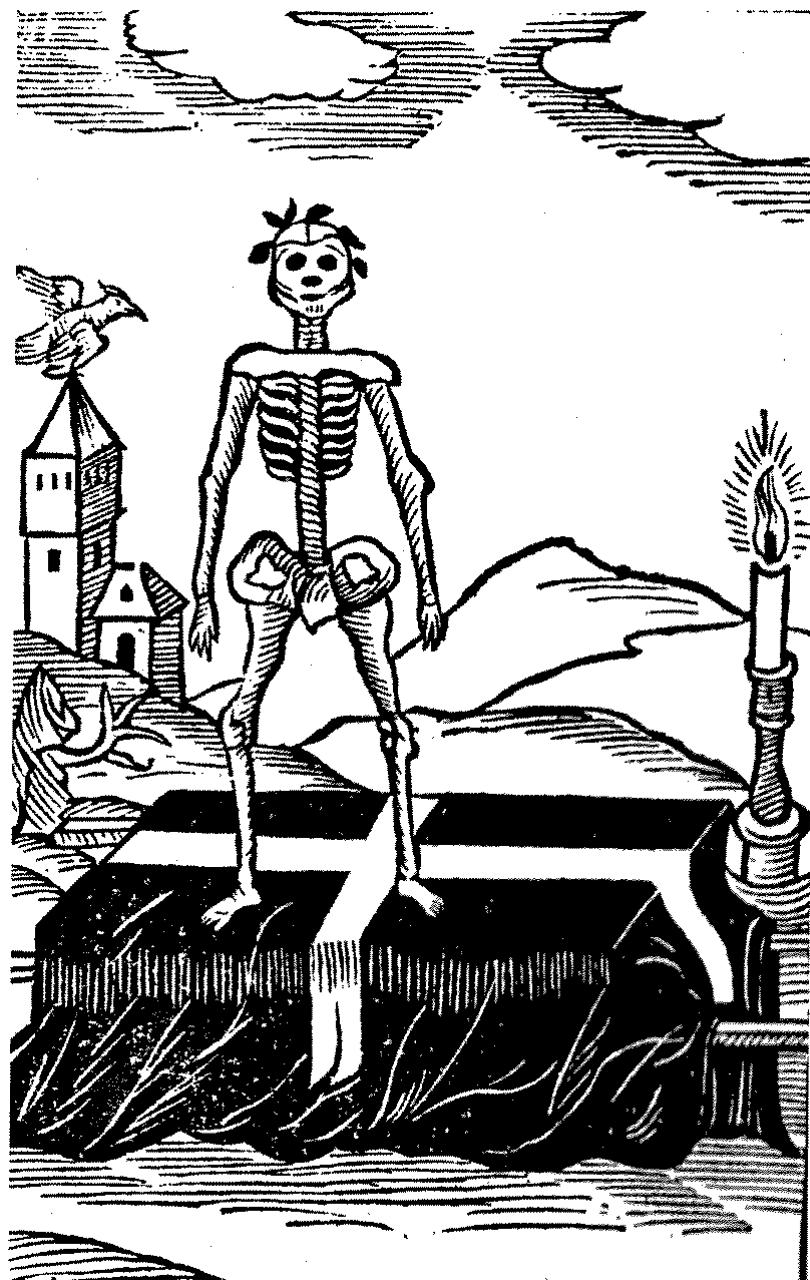
Amalgamation



Separation



Purification



Putrefaction

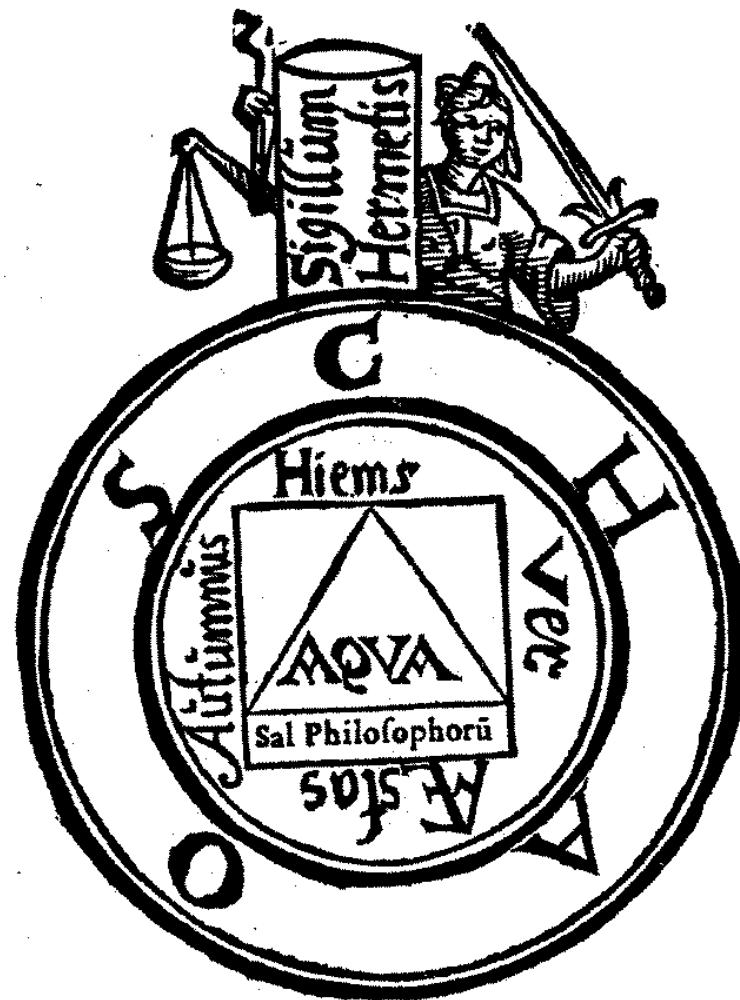


Solution

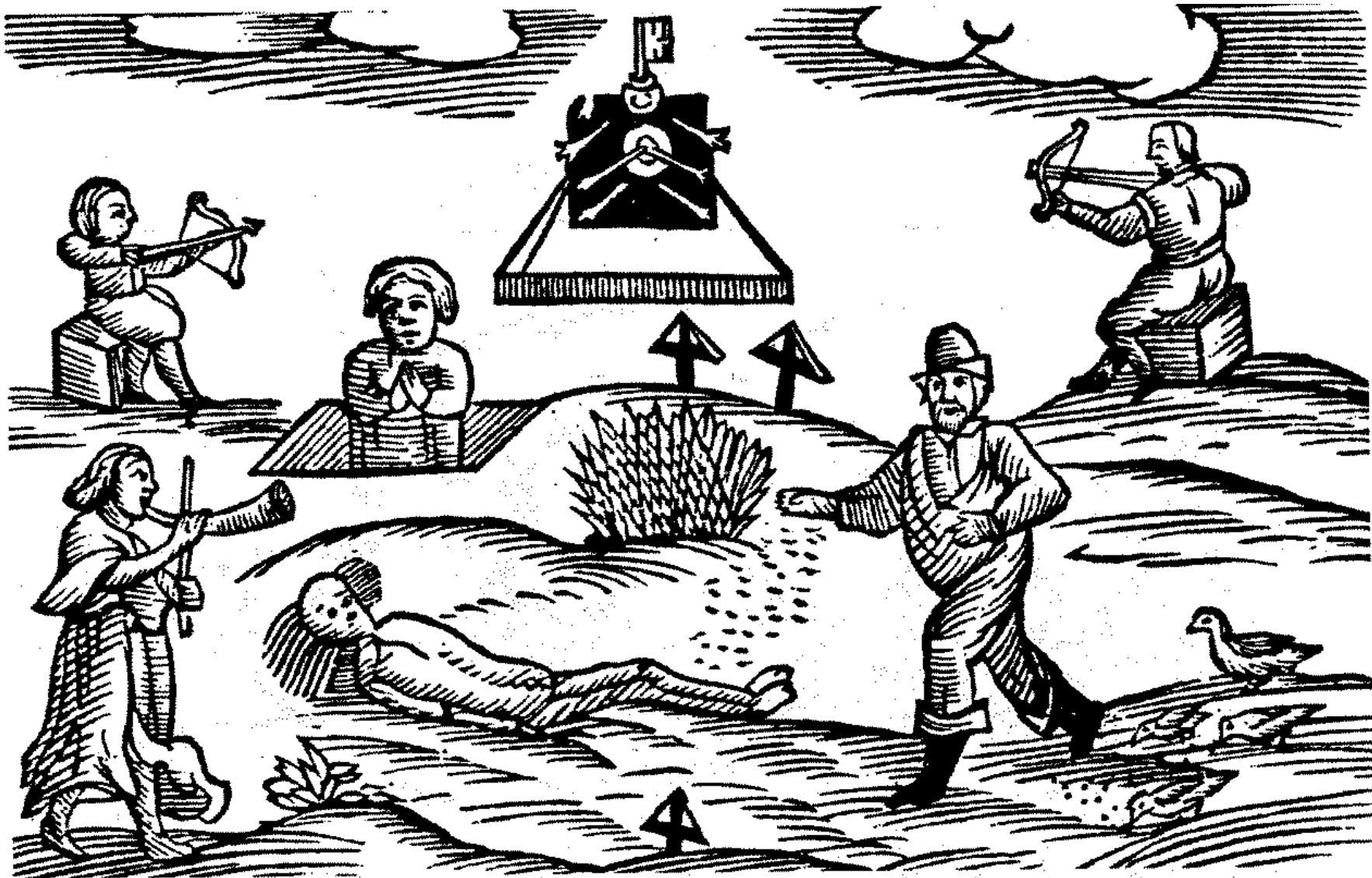


Conjunction

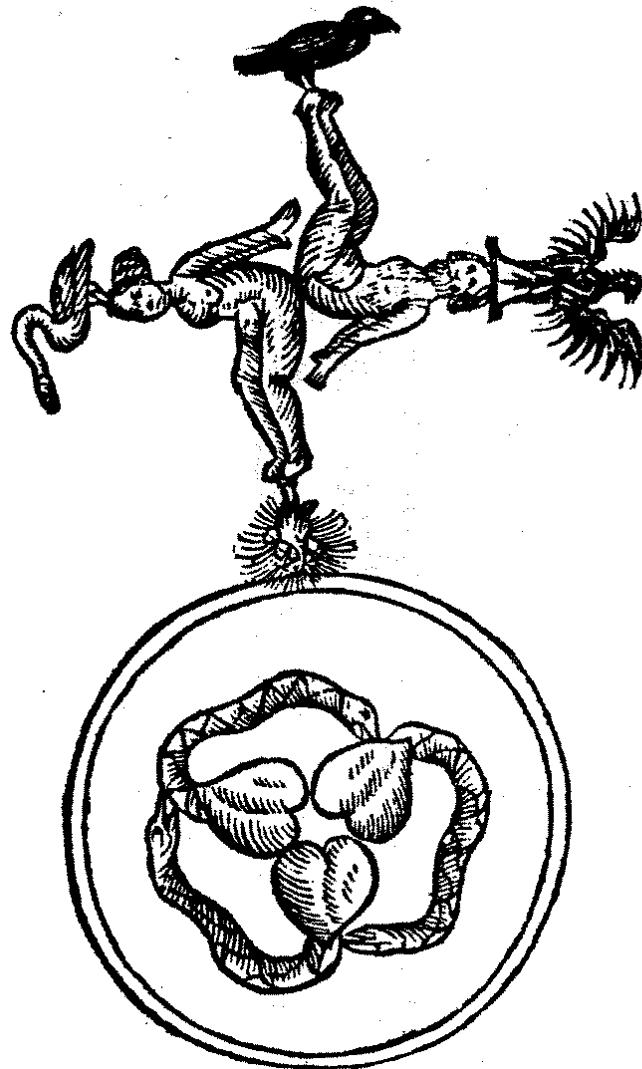
der uhralten Weisen.  
**Der Siebende Schlüssel.**



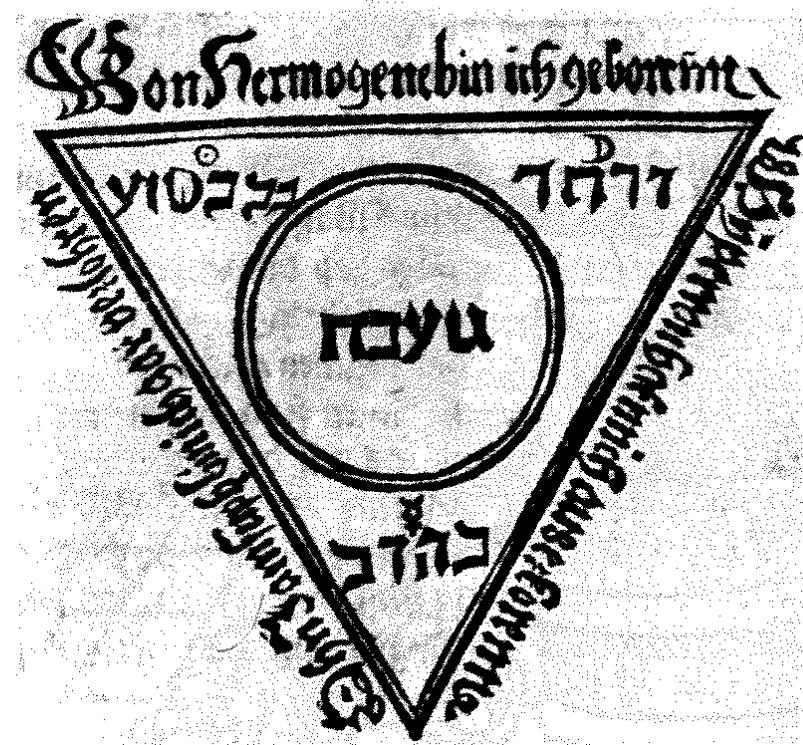
Gestation or  
Interconnection



## Fermentation



The parts of the Cycle



Tria Prima



## Multiplication



Calcination



Summary?

# Another version of the Keys



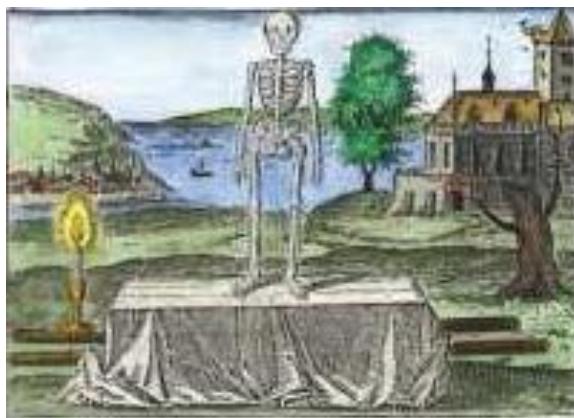
AMALGAMATION



SEPARATION



PURIFICATION



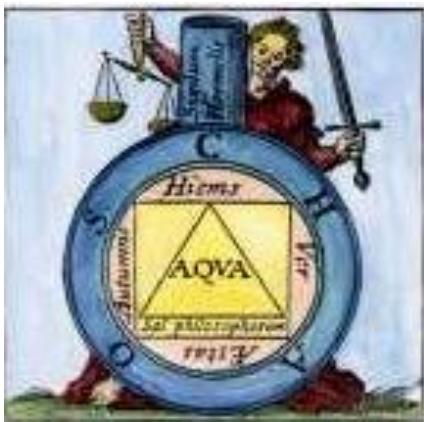
PUTREFACTION



SOLUTION



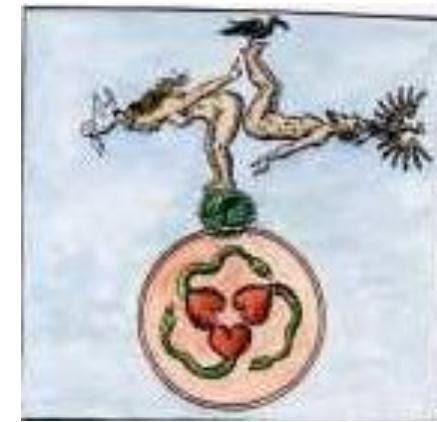
CONJUNCTION



GESTATION?



FERMENTATION



THE CYCLE



TRIA PRIMA



MULTIPLICATION



CALCINATION

# Correspondences?

- |                    |           |
|--------------------|-----------|
| 1. Amalgamation    |           |
| 2. Separation      | Scorpio   |
| 3. Purification    |           |
| 4. Putrefaction    |           |
| 5. Solution        | Cancer    |
| 6. Conjunction     |           |
| 7. Gestation       |           |
| 8. Fermentation    | Capricorn |
| 9. The Cycle       |           |
| 10. Tria Prima     |           |
| 11. Multiplication | Aquarius  |
| 12. Calcination    | Aries     |

# Multimedia Alchemy – 1617

Michael Maier's *Atalanta Fugiens*

Included: 50 emblems, epigrams, discourses and fugues



Source: [http://en.wikipedia.org/wiki/Michael\\_Maier](http://en.wikipedia.org/wiki/Michael_Maier)

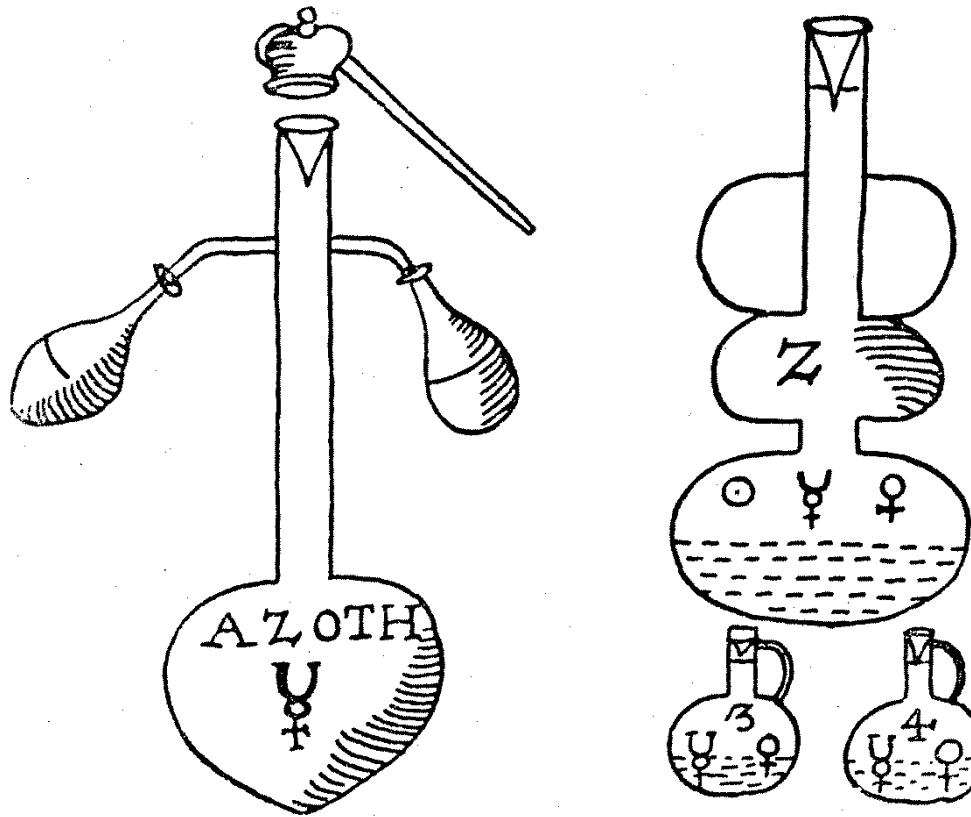
# Emblem 1

THE WIND HAS  
CARRIED IT IN HIS  
BELLY.



THE FOETUS, HIDDEN IN BOREAS' WOMB,  
SHALL ONE DAY RISE UP, LIVING, TO THE LIGHT;  
HE ONLY SHALL SURPASS ALL HEROES' DEEDS  
WITH ART, WITH HAND, WITH BODY'S STRENGTH AND MIND.  
LET YOURS NOT BE A COESO, AN ABORTION ,  
AN AGRIPPA, BUT BORN BENEATH GOOD STARS.





APPARATUS FOR TRANSMUTATION DESCRIBED BY PARACELSIUS  
From woodcuts of the sixteenth century

Theophrastus Paracelsus

REPUTED AUTOGRAPH OF PARACELSIUS  
From a manuscript preserved at Salzburg

# Other Infamous (and Fictitious) Alchemists



The Alchemist



Dr. Alchemy



Mr. Element

(villains from the comic book The Flash)

Images from <http://www.hyperborea.org/flash/>

# Resources

**“A Chemical History Tour: Picturing Chemistry from Alchemy to Modern Molecular Science”**

by Arthur Greenberg

**“The Golden Game: Alchemical Engravings of the Seventeenth Century”**

by Stanislas K. De Rola

**“Lure and Romance of Alchemy”**

by C.J.S. Thompson

**The Alchemy Web Site**

<http://www.levity.com/alchemy/index.html>

Adam McLean

**Ambix**

The Journal for the Society for the History of Alchemy & Chemistry