

2. How do Metals Arise?

Alchemy is an art invented by [the] Alchemist: the name is derived from the Greek *archymo*, which in Latin is *massa*. Through this art, corrupted metals in minerals are restored and the imperfect made perfect.

It should be noted that metals differ from one another only in their accidental form, not in their essential form; therefore the stripping of accidents in metals is possible. Hence, it is also possible, through this art, to bring about a new body, since all species of metals are produced in the earth from a commixture of sulphur and quicksilver² or because of foetid earth. Just as a boy in the body of his mother contracts infirmity from a diseased womb by reason of the accident of location and of infection, though the sperm is healthy, yet, the boy becomes a leper and unclean because of the corruption of the womb. Thus it is in metals which are corrupted, either because of contaminated sulphur or foetid earth; thus there is the following difference among all the metals, by which they differ from one another.

When pure red sulphur comes into contact with quicksilver in the earth, gold is made in a short or long time, either through the persistence [of the contact] or through decoction of the nature subservient to them. When pure and white sulphur comes into contact with quicksilver in pure earth, then silver is made, which differs from gold in this, that sulphur in gold will be red, whereas in silver it will be white. When, on the other hand, red sulphur, corrupt and burning, comes into contact with quicksilver in the earth, then copper is made, and it does not differ from gold except in this, that in gold it was not corrupt, but here [in copper] it is corrupt. When white sulphur, corrupt and burning, comes into contact with quicksilver in the earth, tin is made, [as is indicated from the fact that] it crackles between the teeth³ and quickly liquefies, which happens because the quicksilver was not well mixed with the sulphur. When white sulphur, corrupt and burning, comes into contact with quicksilver in foetid earth, iron is made. When sulphur, black and corrupt, comes into contact with quicksilver, lead is made. Aristotle says of this that lead is leprous gold.

Now sufficient has been said about the origin of metals and how they differ from one another in accidental but not in essential form. It remains now to examine the proofs of the philosophers and authorities, to see how they demonstrate that this is the true art, so that we may be able to contend with those who maintain that it is not true.

3. The Proof that the Alchemical Art is True.

Some persons, and they are many, wish to contradict us, especially those who neither know anything about the art nor are acquainted with the nature of metals, and who are ignorant of the intrinsic and extrinsic properties of metals, understanding very little about their dimensions and densities. To these, when they set against us the words of Aristotle, who says, "let the masters of Alchemy know that the species of things cannot be changed,"⁴ we must answer that he said this about those who believe in and wish to effect

² Albertus follows the popular sulphur-mercury theory of the origin of metals identified chiefly with Geber. These were not the common, ordinary sulphur and mercury but "principles of causation" related to the subterranean smoky and vaporous exhalations posited in Aristotle's *Meteorology*. The alchemists held that the philosopher's stone resulted from the conjoining of philosophical (or "sophic") sulphur and mercury.

³ Cf. Avicenna's reference to the "shrieking" of tin in *De Congelatione*.

⁴ Again, the reference is to Avicenna's *De Congelatione*.

the transmutation of metals that are still corrupt, but this, without doubt cannot be done. Let us, therefore, listen to the words of Aristotle which say the following: "It is true that experiment destroys the form of the species, and especially in metals, and this is the case when some metal is calcined and hence is reduced to ashes and calx, which can be ground, washed, and softened with acid water until made white and natural: and thus these bodies through calcinations and various medicines may lose the brown corrupt vapor, and acquire an airy, vivifying vapor, and the whitened calx will be reduced to a solid mass, which can be colored white or red." For this reason, Hermes says that spirits cannot enter bodies unless they are purified, and then they enter only through the instrumentality of water. Aristotle says: "I do not believe that metals can be transmuted unless they are reduced to prime matter, that is, purified of their own corruption by roasting in the fire."

To those still dissenting and unbelieving, I wish to make myself clearer because we know whereof we speak and have seen what we are asserting: we see different species receive different forms at different times; thus it is evident that by decoction, and persistent contact, what is red in *arsenicum* will become black and then will become white by sublimation; this is always the case.

If, by chance, someone should say that such species can easily be transmuted from color to color, but that in metals it is impossible, I will reply by citing the evident cause through various indications and proofs, and will thoroughly destroy their error.

For we see that azure, which is called *transmarinum*, is produced from silver; since, as is more easily seen, when it is perfected in nature losing all corruption, the accidental is destroyed rather than the essential. We see, furthermore, that copper receives a yellow color from calamine stone,⁵ and yet neither the copper nor the calamine stone is perfect, since fire acts on both.

We see that litharge is made from tin, but tin through too much decoction turns a golden color; however, it is possible to convert it to a species of silver, since it is of this nature.

We see iron converted to quicksilver, although this may seem impossible to some; why it is possible I have already stated above; namely, that all metals are made from quicksilver and sulphur; wherefore, since quicksilver is the origin of all metals, it is possible also for iron to be reconverted to quicksilver. Do you not perceive, for example, that water solidifies in the winter time through excess cold, and becomes ice, and that ice melts by the heat of the sun and returns to water as before? Thus from quicksilver, wherever it is in the earth, and from sulphur, if this also is present, a union of these two comes about and through a very mild decoction over a long period of time, in which they are combined and hardened to a mineral stone, from which the metal may be extracted.

Likewise, we see that cerussa is made from lead, minium from cerussa, and lead from minium.⁶

Behold, now, it has already been sufficiently proved how species are changed from color to color even to the third or fourth form. From this it must not be doubted at all, that corrupted metals can become pure by their own medicines.

Since the foundation for this art has now been laid, let us see what we shall build upon. For if we build upon hay or wood or straw, fire will consume all. Therefore, let us

⁵ Ores of zinc (Heines's note).

⁶ For details of these preparations, see sections 27-29 (Heines).