

Francis Bacon - The Making of Gold

This section on the making of gold is included Century IV of Francis Bacon's *Sylva Sylvarum, or a Naturall Historie in ten Centuries...* London, 1627, which was part of Bacon's unfinished *Instauratio Magna*.

This text was transcribed by Marcus Williamson.

Experiment Solitary, touching the *Making of Gold*.

The World hath been much abused by the Opinion of *Making of Gold*: The *Worke* it selfe I judge to be possible; But the *Meanes* (hitherto propounded) to effect it, are, in the Practice, full of Errour and Imposture; And in the Theory, full of unsound Imaginations. For to say, that *Nature* hath an Intention to make all *Metals Gold*; and that, if she were delivered from Impedients, shee would performe her owne *Worke*; And that, if the Crudities, Impurities, and Leprosities of *Metals* were cured, they would become *Gold*; And that a little *Quantity* of the *medicine*, in the *Worke* of *Projection*, will turne a Sea of the *baser Metall* into *Gold*, by *Multiplying*: All these are but dreams: And so are many other Grounds of *Alchymy*. And to help the Matter, the *Alchymists* call in likewise many Vanities, out of *Astrology*, *Naturall Magicke*; Superstitious Interpretations of *Scriptures*; *Auricular Traditions*; Faigned Testimonies of *Ancient Authors*; And the like. It is true, on the other side, they have brought to light not a few profitable *Experiments*, and thereby made the World some amends. But we, when we shall come to handle the *Version & Transmutation of Bodies*; And the *Experiments* concerning *Metals*, and *Mineralls*; will lay open the true Wayes and Passages of *Nature*, which may lead to this great Effect. And we commend the wit of the *Chineses*, who despaire of *Making of Gold*, but are Mad upon the *Making of Silver*: For certain it is, that it is more difficult to make *Gold*, (which is the most Ponderous and Materiate amongst *Metalls*) of other *Metalls*, lesse Ponderous, and lesse Materiate; than (*via versa*) to make *Silver* of *Lead*, or *Quick-Silver*; both which are more Ponderous than *Silver*; So that they need rather a further Degree of *Fixation*, than any *Condensation*. In the meane time, by Occasion of Handling the *Axiomes* touching *Maturation*, we will direct a *Triall* touching the *Maturing* of *Metalls*, and thereby turning some of them into *Gold*: For wee conceive indeed, that a perfect good *Concoction*, or *Disgestion* or *Maturation* of some *Metalls*, will produce *Gold*. And here wee call to Minde that we knew a *Dutch-man*, that had wrought himself into the Beleeve of a great Person, by undertaking that he could make *Gold*: Whose discousse was, that *Gold* might be made; But that the *Alchymists* Over-fired the *Worke*: For (he said) the *Making of Gold* did require a very temperate *Heat*, as being in *Nature* a Subterrany *Worke*, where little *Heat* cometh; But yet more to the *Making of Gold*, than of any other *Metall*; And therefore, that he would doe it with a great Lamp, that should carry a Temperate and Equall Heat: And that it was the Work of many Moneths. The Device of the Lampe was folly; But the Over-firing now used; And the Equall Heat to be required; And the Making it a *Worke* of some good Time; are no ill Discourses.

We resort therefore to our *Axiomes of Maturation*, in Effect touched before. The First is, that there be *used a Temperate Heat*; For they are ever *Temperate Heats* that *Disgest*, and *Mature*: Wherein we meane *Temperate*, according to the *Nature* of the *Subject*; For that may be *Temperate* to *Fruits*, and *Liquours*, which will not Worke at all upon *Metalls*. The Second is, that the *Spirit of the Metall* be *quicken*ed, and the *Tangible Parts* opened: For without those two Operations, the *Spirit of the Metall*, wrought upon, will not be able to digest the parts. The Third is that the *Spirits* doe *spread themselves Even*, and *move not Subsultorily*; For that will make the Parts Close, and Pliant. And this requireth a Heat, that doth not rise and fall, but continue as *Equall* as may be. The Fourth is, that *no Part of the Spirit* be emitted, but detained: For if there be *emission of Spirit*, the Body of the *Metall* will be Hard, and Churlish. And this will be performed, partly by the Temper of the Fire; And partly by the closenesse of the Vessell. The Fifth is, that there be *Choice made of the likeliest and best prepared Metall, for the Version*: For that will facilitate the Worke. The Sixth is, that you give *Time enough for the Worke*: Not to prolong Hopes (as the Alchymists doe;) but indeed to give *Nature* a convenient Space to worke in. These Principles are most certaine, and true; We will now derive a direction of *Triall* out of them; Which may (perhaps) by further Meditation, be improved.

Let there be a *Small Furnace* made, of a *Temperate Heat*; Let the *Heat* be such, as may keep the *Metall perpetually Moulten*, and no more; For that above all importeth to the Work. For the Materiall, take *Silver*, which is the *Metall* that in Nature Symbolizeth most with *Gold*; Put in also, with the *Silver*, a Tenth Part of *Quick-silver*, and Twelfth Part of *Nitre*, by weight; Both these to quicken and open the Body of the *Metall*: And so let the Worke be continued by the *Space of Sixe Monthes*, at the least. I wish also, that there be, at some times, and Injection of some *Oyled Substance*; such as they use in Recovering of *Gold*, which by Vexing with Separations hath beene made Churlish: And this is, to lay the Parts more Close and Smooth, which is the Maine Work. For *Gold* (as we see) is the Closest (and therefore the Heaviest) of *Metalls*: And is likewise the most Flexible and Tensible. Note, that to thinke to make *Gold* of *Quick-silver*, because it is the heaviest, is a Thing not to be hoped; For *Quick-silver* will not endure the Mannage of the *Fire*. Next to *Silver*, I thinke *Copper* were fittest to be the *Materiall*.

Gold hath these *Natures*: *Greatnesse of Weight*; *Closeness of Parts*; *Fixation*; *Pliantnesse*, or *softnesse*; *Immunitie from Rust*; *Colour* or *Tincture of Yellow*. Therefore the Sure Way, (though most about,) to make *Gold*, is to know the *Causes* of the Severall *Natures* before rehearsed, and the *Axiomes* concerning the same. For if a man can make a *Metall*, that hath all these *Properties*, Let men dispute, whether it be *Gold*, or no?