

ist in the different metals: to shew, for instance, that those metals which possess malleability in a greater ratio than ductility, or ductility in a greater ratio than malleability, are of infinitely greater value than if the converse were true: and so with respect to the property of fusibility. Thus gold, being comparatively scarce, and principally valuable on account of its colour, its resplendency, and its remarkable power of resisting the action of the air, and of various agents which readily tarnish or rust the more common metals, (all which properties reside on the mere surface,) a given quantity of such a metal is consequently more valuable in proportion to the degree of its malleability; because it may be extended over a greater surface: and no metal possesses this property in so high a degree as gold; so that, as far as the eye is the judge, the most ordinary substance may be made to represent the most costly, at a comparatively trifling expense: while in the degree of its ductility, which in gold would be, for general purposes, of little moment, it is inferior to most of the metals^c.

^c It should be kept in mind that this observation is applied to unalloyed or pure gold; for, when alloyed, this metal is capable of being drawn out into a comparatively fine wire. Dr. Wollaston indeed suggested a method of drawing out even pure gold into an exceedingly fine wire, by enclosing it in a mass of a highly ductile metal, drawing out the mixed metal into fine wire, and disengaging the gold from the metal in which it was enclosed, by