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## Appendix C: The four elements and the origins of fixed colors

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## APPENDIX C.

### THE FOUR ELEMENTS AND THE ORIGINS OF FIXED COLORS:

#### AN ATTEMPT TO JUSTIFY AN ANCIENT PHYSICS OF LIGHT-DARK IN RELATION TO COLOR (BY J.L. BENSON).

**Characterization of the most advanced state of *krasis* with the elements progressively dominant:** In earth: fire, air and water *solidified* In water: earth, air and fire *liquefied* In air: water, earth and fire *rarefied* In fire: earth, water and air *burned*

#### AXIOM I

Light comes from an extraterrestrial source and illuminates each of the states of *krasis*. Comment: this corresponds to normal human perception that light itself is invisible but *reveals* a colored world.

#### AXIOM II

In reaching any of these states the light itself becomes subject to the appropriate functionalities of the four elements themselves, that is, to warming, aeration, liquefaction and condensation. This constitutes the fate of light in the terrestrial milieu.

#### AXIOM III

Light illuminates *inter alia* the pigmentary colors black and white. Both of these have full earth character: opaqueness. Yet the opacity of black is harmonious with the non-material darkness of outer space, while the intensification of light by white is harmonious with the dynamic activity of light itself (as an illuminant). Hence, pigmentary black and white in their color-referrent polarity (color sphere) symbolize the color-precipitating activity of light in contact with darkness as this can be experienced in boundary observation with a prism.

On the basis of the foregoing reasoning, it is possible to postulate that the color properties which were summed up by Newton as the definition of light belong instead to the elemental world. By this reversal of standpoint we leave light undefined as to its composition but clearly defined in a functional sense: it is purely and solely an

illuminant of the utmost sensitivity as it absorbs and reflects the functionalities of the four elements.

Light could then be, as supposed by Goethe, indivisible. Since it has been found to have a speed of movement incommensurable with terrestrial circumstances and is therefore measurable only in a non-physical medium: (abstract) time, the historically consistent microcosmic perception of light as metaphysical is justified. By the same token, the persistent microcosmic reaction to (pigmentary) black and white as having religious-moral significance in a symbolic sense is justified. One may recall Aristotle's statement that "light is the entelechy of the Transparent" (*de anima* 418b, 419a).

The first possibility for a rational explanation of color in objects is given by this postulate. As an inevitable result of the conjunction of light and the four elements, the stability of color varies greatly. In the least physical of the elements color is the most volatile, apparently created and vanishing on the spot. In the most physical of the elements it is obviously a persistent quality (fixed color). While the impression of color may be continuously recreated for the viewer in varying nuances depending on changing circumstances, the rational mind knows that the basic color remains, even in the absence of light, just as the basic shape of the object remains when it is not seen or touched. Just as the origin of other perceptible qualities has to be sought in the history of the earth and cosmos, so that of fixed color: it is the agglutinative result of perhaps innumerable confrontations of light and *krasis*—states of the elements in which color has been woven into the earth phenomenon in the same way as other perceptible qualities.

Comment: the usual explanation that the cause of color in objects is the absorption and reflectance of wave-lengths by the surface equally requires—*if thought through to the end*—the color determining property to reside in the object. For the selectivity of the surface in respect to these two processes is, in ordinary circumstances, constant. It would, therefore, be necessary to postulate that the particular selectivity of a particular surface is objectively fixed within the total nature of that surface (or its interior) and hence is a permanent quality as much as shape, weight or any other measurable feature. This would be a corollary of the isomeric phenomenon. It is, therefore, a non-sequitur to claim that color exists only in the perception in the sense that it is different from any other objective property of matter.

It is a short step from this to the concept that absorption and reflectance refer to (but do not necessarily exhaust) the lawful processual relationships of the earth (opaque) element to the other three elements at the second of their being illuminated (i.e., precipitated) by the light. Other processual relationships among the same elements are perhaps precipitated ("illuminated") by the darkness (i.e., infra-red and ultra-violet).

#### **AXIOM IV**

There is no white in the atmosphere corresponding to pigmentary white. But light reveals its illuminating power in the atmosphere and may therefore be called the prototype of white. Complete atmospheric darkness may in the same sense be called the prototype of pigmentary black.

Comment: atmospheric black can be said to exist, as in an underground cavern or in a darkroom. To define this simply as the absence of light is to ignore the difference between a blind and a sighted person, for the latter of whom this is a visual experience. Such a definition would be true but irrelevant, just as it would be true but irrelevant to define light as the absence of darkness. The opposite of true atmospheric black is not atmospheric white but full daylight, which is colorless. Artificially produced atmospheric light—insofar as it approaches the quality of daylight—is also colorless. Light and Dark are therefore best described as simply the two polar conditions of our atmosphere, both of which exist.

### **AXIOM V**

Given the principle of *krasis*, the symptoms of any elemental process involved in a synthesis can be pried out of it by appropriate means.

*Example:* if reduction to particles is typical of earth as element when it is subjected to drying, the action of particles (rays) should be detectable in pigmentary colors. By the same token, if wave action is typical of earth as an element when subjected to moisture, wave lengths should be detectable in pigmentary colors. Warmth should also be detectable in various syntheses, etc. Moreover, it is obvious that detectable functionalities of several syntheses which are considered together must impinge on one another, e.g., a fixed color object illuminated in atmospheric light.