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# Introduction: A cosmological interpretation of Greek color theory

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# **INTRODUCTION**

## **A COSMOLOGICAL INTERPRETATION OF GREEK COLOR THEORY**

### **WHY COSMOLOGICAL?**

For the unimpaired human being, color is the most constant, inescapable and omnipresent of the sense impressions. The world is simply always colored, even at night, even in outer space. Therefore, any systematic attempt at explaining the phenomenon of color necessarily presupposes a world view and thus has real cosmological implications, whether these are recognized and spelled out or not. By the same token, such an attempt is in itself a symptom of considerable intellectual sophistication. We find this precondition in Greece at the time Empedokles provided the culmination of the philosophical speculation which had been carried on by the so-called Ionian School. In a poem (or poems) he undertook to explain the nature of the world as consisting of the four elements called earth, water, air and fire, each one being the expression of a deity as the divine force behind its dynamic manifestation in the visible world.

There is written evidence that he and other thinkers of the time associated four colors: black, white, yellow and red with those elements, although the pairing off is not immediately clear. They also took black and white to be the primal colors, all remaining colors being mixtures of these two in some way. That is approximately the extent of what one can compare with the modern physics of color which, with some historical distortion, is generally referred to as Newtonian color theory.

Leaving aside Newton's own, not inconsiderable cosmological speculations, which proved to hold little interest for those who accepted his physics, we find the irreducible core of his theory in the claim that all colors (excepting black and white which were not regarded as colors) are contained in light. A very real cosmological implication of this view—surely not foreseen by Newton himself nor articulated in the scientific tidal wave that followed upon his work—is that denial of a role to darkness in the genesis of colors devaluates darkness in all its other manifestations to a state of non-being. It may not be immediately apparent, but I believe it is inevitable, that acceptance

of this hypothesis has come with a heavy philosophical price: it obfuscates the role of the tragic, the dark, side of human existence. This might be apparent in the oft heard reaction to tragic events: if there were a God, he would not would have let this happen. The Greeks were under no such preconceptions about the role of divine powers, as Gertrud Kantorowicz and others have pointed out. That ancient people, perhaps more than any other, accepted the dark side of life as an integral part (rather than as a senseless interruption) of reality, just as they accepted darkness (black) as an integral part of color. It cannot, therefore, be surprising that it was they who invented the tragic drama as an artistic expression of the way human beings live, learn and die.

Even if one senses the importance of the gulf between the Greek and the modern orientation to color discussed above, it may seem an intellectually daunting task to try to use it as a basis for interpreting Greek painting. Thus it was not until, in the pursuit of my own avocation of painting, I became aware of the depth of the color theory (*Farbenlehre*) of J.W. Goethe (and began, as he recommended, to experiment with a prism), that I started to understand how that scanty tradition mentioned above can be focused, as it were, onto a fully intelligible image of reality out of which the Greeks seem to have worked.

Nevertheless, in order to pursue such a goal, which by its own terms has to be approached in an unusual way, I had literally to invent new methods and new concepts which may at first sight seem strange. But the operative question is, would these methods and concepts have seemed strange to the ancient Greeks themselves? While, of course, no answer to that question is possible, it at least suggests what I have tried to do, that is, expunge from consideration all of our own preconceptions (many of which might well seem outrageous by the standards of ancient peoples) and follow carefully what clues exist. Yet this does not need to be tantamount to abandoning the perspective we enjoy by being so far away from the ancient world in time.

Written documentation is not abundant and what exists is to a great extent incomplete or even fragmentary. The corpus of terracotta colored materials, especially pottery, offers many specimens for consideration, but there is a dearth of evidence in most other media, especially painting on panels and walls, at least until the later fourth century B.C. From this evidence in its totality I succeeded in making certain inferences which came together in the form of various diagrams and charts. I strove for a *theoria* in the ideal sense of philosophical speculation which might lead directly to empathy with the philosophical and artistic concerns of creative Greeks; for the mere fact that philosophers and artists associated each of the elements with its own specific color bespeaks an objectivity which is totally foreign in our age of individualism and subjectivism. The reader ought to bear this in mind in judging my efforts at color interpretation (of works of art). This factor, and all it implies, is surely the reason why ancient artists, in contrast to some contemporary artists, neither could nor would have explained why they used this or that color; they (and everybody) knew at some level why they did. If we are disappointed with the apparent vagueness of references to color in ancient poetry and even (in late times) treatises on color, that is surely to be explained on the basis of different cultural expectations.

In this latter respect my hope is that this study will complement and supplement the best of modern color studies, in which one will certainly include Vincent Bruno's *Form and Color in Greek Painting*: this has been an indispensable companion to my own wrestling with the subject of color. To go from that book to mine requires, I think, not so much any "leap of faith" as a willingness to go on reasoning on a different level, but one that was prepared for.

My suggestion, therefore, is that readers not turn at once to my interpretation of the meaning of colors in specific works of ancient art, but rather at first give some attention to my systematic examination of the color qualities of each of the four elements (see illustrations 12 and 13, Chapter II) and to my discussion of the polaric nature of spectral phenomena (see Chapter III, *The Two Spectra of Goethe's Color Theory* and *An attempt at a Holistic Interpretation of Color Meaning*). Since even classicists, let alone general readers, may not be accustomed to think in terms of the strict polarity which is implicit in much of Greek thought, it would be appreciated if readers would consider this before passing judgment on my application of the polarity principle. I have provided various inducements to do this in the text, in sometimes lengthy notes, and in the Appendix.

## **A MODERN APPROACH TO FOUR ELEMENTS PHILOSOPHY**

So far I have discussed the relation of the canonical four colors to the four elements. But what about the elements themselves? What do the words earth, water, air and fire mean to the person of our era? Let me assume, for the moment, that these constituents are not registered as parts of a philosophical system but as figments of fifth century lore. In that sense, at least, they do survive in modern consciousness and might justifiably be regarded as ghosts of once living concepts, their vitality having been dissipated. The reason is not too far to seek. Elite academic thought, as reflected by historians of ancient science, has a world view that is unaware of, or else discounts, the dynamic quality of the microcosmic aspect (that concerning organisms) of Four Elements philosophy, an aspect that interacts at every level with the macrocosmic aspect (environment in the widest sense). Yet it is precisely this microcosmic aspect that has lived on just below the surface, as it were, of western consciousness. This will be explained in detail in Chapter I, but there is an easy way to form a preliminary impression of the dynamic interaction between the macrocosmic/microcosmic spheres. Instead of thinking about earth, water, air and fire as four substances, we can regard them as four principles basic to existence: the material (nourishment), the liquid (irrigation), the gaseous (atmosphere), and warmth. If an organism (a microcosm) is deprived of all food, it will normally consume itself and starve; if totally deprived of liquids, it will dehydrate quickly and die; if deprived of air, it will suffocate in a very short time; and if totally deprived of heat (as in technologically produced extreme refrigeration), it would die almost instantly. In an anthropocentric world view like that of the Greeks, the relevance of reasoning of this kind (not this particular reasoning is being ascribed to them) would be at once apparent.

It may perhaps also provide a starting point for an understanding of the macrocosmic/microcosmic orientation that led to the synthesis made by Empedokles.

Since we live in an age in which science (the equivalent of philosophy in ancient times), clothed in immense authority, undertakes to understand life as a system of chemical reactions steered by infinitely small microorganisms which have, from the human point of view, beneficent or hostile intentions (all of this in a universe which is openly regarded as baffling and the subject of constant new speculation), some readers may need some help in trying to grasp my detailed reasoning about actual qualities that can be associated with various levels of macrocosmic/microcosmic activity (summarized in Ills. 12–13). As this help I present in Chapter I a systematic explanation of how I understand both the historical and the derivative philosophy of the four elements, together with a single striking example of visual form (Figure 1) which shows how the views being developed here can be helpful in understanding the form and content of an early work of art.

That statement brings me to the subject of form, now mentioned for the first time (except in the title of V.J. Bruno's book). It is, of course, obvious that the core of Greek artistic activity cannot be reached on the basis of color alone: a way must be found to correlate color with form. The converse is also true: form cannot be fully grasped without color. Yet just this latter is constantly attempted. Art historians are generally disinclined to delve into color theory (although since the beginning of the 19th century various *artists* have done that). That disinclination probably rests on the abstractness of the Newtonian color theory with its mathematical concepts that have no obvious cultural connections. Again, fortuitously, Greek sculpture can and must be dealt with as pure form because whatever color it may once have had is gone. Despite this, form implies color and color implies form. This means that I should also look at Greek sculpture in the light of Four Elements philosophy, and I have indeed spent much time and energy doing so. It has turned out that the great problem involved in this is the nature of periodicity. The emphasis and methods required to deal with that subject are so different from those of color study that it must constitute a totally separate book: *Greek Sculpture and the Four Elements*. Suffice it to report here that, on the practical side, the terminology and dating listed below (and henceforth used) are fully explained and justified in that study.

<b>Early Archaic</b>	720–ca. 630
<b>High Archaic</b>	630–ca. 560
<b>Late Archaic</b>	560–ca. 525
<b>Protoclassical</b>	525–480
<b>Early Classical</b>	480–460
<b>High Classical</b>	460–430
<b>High Classical Reaction</b>	430–400

<b>Late Classical</b>	400–ca. 340
<b>Protohellenistic</b>	340–ca. 300
<b>Early Hellenistic</b>	300–ca. 230
<b>High Hellenistic</b>	230–ca. 160
<b>Late Hellenistic</b>	160–ca. 50 B.C.

To speak proleptically for the moment, it can be said that certain factors in the history of Greek color usage themselves have a strongly indicative effect on the problem of periodization and these will be discussed at the appropriate points in my text. However, the greatest benefit in concentrating specifically on color theory in one volume may be that the difference between the zeitgeist of the Greeks and that of our own time emerges in a particularly clear and untrammelled way (or at least so I hope). I refer with that term to what makes it difficult for us to get outside the assumptions of our own age and see them as time-bound (how will they look to the 27th century A.D.?), that is, not necessarily even on the right path. May we not gain something by looking back sympathetically at the experiences leading, as far as we can reconstruct them, to the quite different assumptions of an earlier age?