On Wednesday, January 19, the Colorists of Washington and Baltimore met at the Cosmos Club (Washington) for dinner. Dr. L. A. Jones, of Eastman Kodak Laboratories, Chairman of the Colorimetry Committee of the Optical Society of America, spoke on the subject: The Inter-Relationship of the Various Aspects of Color. This was his subject when he opened the 1936 M.I.T. Conference on Color, a subject in which he is an outstanding authority. Following his talk, he showed his Kodachrome colored motion pictures of the growing of crystals under polarized light, films which the National Academy, the Optical Society and a few other groups had already been fortunate enough to enjoy seeing, and which the Color Council members and guests expect to enjoy at the Council annual meeting. Needless to say the meeting was an interesting and pleasurable one indeed.

As might have been expected, the Association for Color Research of Chicago, has picked up the challenge implied in the last paragraph on the Boston Color Group in News Letter No. 19. In the person of W. C. Granville, Secretary, they not only picked up the gauntlet, but came flying back at us with a whole assortment of weapons for color education and interest. To wit: A letter giving a long program of meetings with talks of interesting titles; the announcement of a Color School, continuing weekly from October 12 to November 30 (6 meetings); a tastefully printed application for membership listing nine standing committees, with notes on each; four numbers of "ACR News," containing 14 pages of bibliography on color; and two more numbers including chiefly a report on the Munsell System by De Forest Sackett. The News and Mr. Granville's letter also report several lectures, too numerous to list here. He states that in October the paid membership was about eighty persons.

All this brought us only up to October; what the Chicago group did after being peppe up by the winter has not yet been reported. We think that the next time we throw down the gauntlet, it will not be our heavy winter driving glove; instead we'll borrow a lady friend's daintiest hand coverage. Our budget wouldn't permit abstracting all the ACR reports of activities.
We have likewise not been able to keep up with the Boston Colorists. We had a report late in November which described a dinner meeting, on October 13, at Wellesley Inn, Wellesley, Massachusetts. In addition to an excellent dinner, and pleasant and interesting discussions, the group was entertained by Professor Zigler and Dr. A. H. Holway, who demonstrated apparatus used at Wellesley for investigating the psychological effects of color.

THE COLORQUERY AND VISIONNAIRE

Question I I. Why is the crest of a wave greener than the rest of the wave? See answer below.

In the preceding three articles we have introduced the first artist. We have described a geological time scale, and we have placed the dawn artist on a rung of this chronological ladder. We cited legends of the origin of the first people and of the first painting. We found that the first artist was by no means the first man. Hundred of thousands of years intervened between the Aurignacian artist and the first man (the first member of the anthropoid-human group who was definitely on the human side of the forkl; if we accept as fact the human origin of certain artefacts ("eoliths"), we may say millions of years.

After going to some lengths to delineate our conception of the meaning of painting, we discussed a few names important to painting – Leonardo, David, Zeuxis, Courbet, Daumier, Delacroix – but only insofar as they contributed to that delineation. In order to understand fully the origins of art and painting, we found it necessary to point out some of the early relationships of art to magic and religion. We cited the common theory of the magical origin of most cave art, a theory which seems valid to us, in spite of the contrary arguments in a recent book, which was so interesting to us that we added it to our library. This was Russell's translation of Luquet's The Art and Religion of Fossil Man. We included in our conception of painting not only the easel and mural painting of today, but also mosaic, embroidery, the polychroming of statuary, arrangement of decorative glazed tiles, the decoration of pottery and even, in the earliest stages, of tools, weapons and ceremonial objects.

We have described in its general outlines, the paintings of the Aurignacian artists. We stressed the realism which was not mere photographic literalness. We pointed out that this art possessed some of the qualities which characterize great art. The art of the Aurignacian culture flowered in Magdalenian times; and we shall describe the close relation of the peoples responsible for these two cultures. This art may be considered the apex of the first of the four great cycles of painting, which we have already introduced. We have called it Ancient Painting. We include in this term another, much later, period of the flowering of art; more properly, these are two cycles, and we have already implied that the great fifth century B.C. Greek painting differed from cave art in its mastery of exact literalness.
We have stated our belief that it is impossible to appreciate fully the art of a people without understanding the people and their origins. We mentioned a very little of the great hybrid race responsible for the Aurignacian and Magdalenian cultures, suggesting the connection of hybrid vigor to the flowering of art and culture. We implied that the bearers of earlier cultures (listed in bare outline with the old, incorrect, dates, in Article III) were not of the species Homo sapiens, though human.

The Old Stone Age is commonly divided into Lower, Middle and Upper Paleolithic periods. The cultures we have just been considering belong to the last period. The Lower and Middle Paleolithic periods left no works of art. It is probable that the "fine arts" (the dance, music, architecture, and personal decoration) all existed in paleolithic times, but by "art" we refer especially to painting, sculpture and engraving. All of these began at the beginning of Aurignacian times. Consequently, we shall sketch only very hastily the cultures and peoples of lower and middle stone age times. We shall leave to specialists like Luquet the tracing of the relations of art, magic and religion. All writers on the stone age and its art devote much space to these connections. Here we shall state that, though art began in upper paleolithic (Aurignacian) times, the first funerary practices of the cult of the dead began in middle paleolithic times; and the first signs of religious practices in even earlier, lower paleolithic, times. In so stating, we accept Luquet's distinction of the cult of the dead, which is addressed to the survivors of ordinary men, and religion in a broad sense, which is characterized by devotion to beings considered essentially non-human. He distinguishes magic, wherein the worshiper's, magician's or sorcerer's devotion compels and dominates the divinity upon which he depends, and pure religion, which is utilitarian in that the devotion directs divine will along favorable channels, both from piety, which leaves divinity indifferent, but renders thanks and love when divinity happens to be well disposed, reverence and fear when not. We accept Luquet's conclusion that we are unable, from the remains of the works of paleolithic man, to discern his religious attitude, in spite of Luquet's theoretical analysis; so that we cannot say whether it is magic or religion.

The outstanding exponent of the magical origin of paleolithic art was S. Reinach; the chief exponent of "art for art's sake" was the archaeologist M. Boule. Neither adopted an extreme position; and Luquet concluded that Aurignacian figured art is neither magical nor decorative, while Magdalenian art included both magical works and others purely artistic or disinterested. He believes that sorcerer-artists "were inevitably preceded by artists pure and simple," but quotes another archaeologist as follows:
"If art for art's sake had not come into being, magical or religious art would never have existed. But if magical or religious ideas had not permeated this "art for art's sake," including it in the more serious preoccupations of real life, art, insufficiently esteemed, would have remained primitive in the extreme."

After reading scores of books in the voluminous literature of this subject, it seems to us that two aspects of the situation have not been sufficiently stressed, though we are in sympathy with the view just quoted. These are, first, the inherent mental and imaginative capacities of the races responsible for the artistic and non-artistic cultures; and, second, the opportunities afforded by the life of the times for the practice of art. We know a good deal about the brain size of the various races; and we know also considerable about temperature, moisture and other atmospheric and geological conditions. From their implements and weapons, we know much of the life of the times. Equally important with gross brain capacity is the structure of the convolutions, as revealed by the work of such experts as Sir Grafton Elliot Smith.

Until recently, the middle stone age was supposed to be characterized by one culture, the Mousterian, and one type of man, the Neanderthal. The picture is now more complicated. Neanderthal man did not die off for lack of brains. Neither did he lack leisure for works of art. He lived during the very cold period of the Wurm glaciation, when he spent the long cold days in the fastnesses of the limestone caves. But art appeared only with modern or "neanthropic" man, Homo sapiens, who had no more leisure. One needs only to note the details of several Neanderthal burials, to see that, though art was absent, the quality of imagination was not lacking. Space does not permit our citing this evidence.

Why this difference between races? What constituted the genius of those "palaeolithic Greeks," the Aurignacian and Magdalenian artists; and why did the brainy, muscular Neanderthals lack it. We do not know; but we have forecasted perhaps a part of the answer. Maybe that same hybrid vigor which, on the physical side, enabled the artists, with their Aurignacian culture, to overcome the Neanderthals, also caused to flourish art, which must have had rude earlier beginnings. Aurignacian and Magdalenian cultures are generally ascribed to that branch of Homo sapiens called the great Cro-magnon race or variants of it. Because of our tentative and partial hypothesis, in subsequent numbers we shall dwell a little on the racial strains which go to make up this composite race.

The chief goal of these articles is the exposition of the colors used from age to age by man, and the way in which these colors are combined to depict his conceptions and his ideals. We could dash off in a few lines a list of pigments used by paleolithic man, and the colors of these pigments; or at least of those which
have survived. But we have a much broader conception of the purpose of these articles. We wish to trace back to very early beginnings many of the great principles of painting, and art in general, so that these may be viewed in a truer perspective. We will hope also, by understanding the peoples, to understand their artistic ideals.

Speaking of painting and religion, the good Bishop Benjamin Moore used to tell a good story on himself after he sat for a portrait to John Wesley Jarvis, who was known for his quick wit. The Bishop, during a sitting, introduced the subject of religion, and asked Jarvis embarrassing questions as to his beliefs. The painter, with an arch look, but as if merely intent upon catching the facial likeness of the sitter, at once said: "Please turn your face that way, Bishop," indicating with his hand, "and close your mouth."

II. Why is the crest of a wave greener than the rest of the wave?

Ans. All through the past and future answers to our questions in The Colorquery and Visionnaire will be found scattered references to light scattering. The present one is no exception. We suggest you concentrate your scattered attention for a moment on answers 6 and 7, in the July, 1937, News Letter. Here we discussed the blues of skies, scattered broadly above us, eyes of Irish colleens, babies eyes, smokes, haze and some feathers, which are also widely scattered. In answering question 7, we dealt with the "residual color" (blended of yellow, orange and red) due to non-scattered light which is transmitted. Even a landlubber can guess that if this light is blended with the blue of deep layers of water, we will see a greener blue. It has been claimed that the fine suspended particles which act as scatterers are buoyed up by the froth of the wave crest so that more scattering occurs here than nearer its trough. Moreover, the ordinary (blue) absorption color is already less homogeneous here because of greater reflection and refraction from the surface of the bubbles, which results in less absorption and a less "pure" blue. In fact, this has been given by some as the chief cause of the varying color. If so, this is an example of "dichroism," that is, a greater change of absorption, with varying concentration, in the yellow than in the blue. If the buoyancy-and-scattering explanation is correct, lake and river water should be greener near the shore. Is it? You've guessed it; it is. The converse is not a logical necessity; but it may be interesting to compare the green Rhine, having much suspended calcium carbonate, with the blue Rhone. We refrain from nasty cracks about some greenish swimming pools.