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INTER-SOCIETY COLOR COUNCIL

NEWS LETTER No. 83

JULY 1949

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NEW INDIVIDUAL MEMBERS

We are glad to welcome the following whose applications for individual membership in the Council were accepted at a meeting of the Executive Committee held June 9:

Sidney Blumenthal & Company, Attn. Mr. J. Boyko, Shelton, Conn., textiles, particularly interested in problems of measurement and specification, spectrophotometry. Mr. Boyko is a member of the AATCC and the OSA;

J. Woolson Brooks, of Des Moines, Iowa, architect, interested particularly in fluorescent light sources which do not distort color, museum art lighting, availability of dependable colors in paints, a simple universal specification for color;

Elwin Marg, Berkeley, Calif., graduate student working for Ph.D. in physiological optics at U. of California, optometrist, interested in theories of color vision, member OSA;

John W. Power, Jr., International Printing Ink, Cambridge, Mass., interested in controlling color uniformity of printing inks and printed materials, member OSA.

MEMBERSHIP LIST ADDITION

Enclosed with this News Letter is a supplement to our membership list. It includes a list of the five newest member bodies with their appointed delegates, also all individuals who have become members since the April 1948 membership list was published. This, with the 1948 list, will serve until January 1, 1950 when a new list will be prepared for the 1950-51 period.

LETTER BALLOT ON COLOR NAMES

As authorized at the 1949 annual meeting, the report of Dr. Judd's committee on I.S.C.C. Problem 2, Color Names, was submitted to letter ballot by the voting delegates. These ballots were opened and counted on June 9 at a regular meeting of the Executive Committee. Out of a possible 60 ballots (19 member bodies, and the Individual Member Group, each with three voting delegates), 47 were returned, all affirmative, at least one delegate voting from each member body. Three letters with suggestions were turned over to the chairman of the subcommittee on Problem 2 for consideration.

The vote gives approval to the 1949 method of designating colors, as reported by the subcommittee, to be published as the ISCC-NBS method of designating colors in place of the method published in 1939 as a research paper of the National Bureau of Standards by Judd and Kelly. This revision, to include appendices of useful color names information collected by the subcommittee, will be ready soon for publication. It is expected that copies will be made available for distribution to Council delegates and members.

EXECUTIVE COMMITTEE MEETS NEW MEMBER BODY REPRESENTATIVES

The Executive Committee met in New York June 9-10, 1949. On June 9 they adjourned for a 3 o'clock meeting at the Architectural League with representatives of four of our newest member bodies. The purpose was to get acquainted with each other so that we might be better able to lay a foundation for making plans for integrating these newly represented color interests into the activities of the Inter-Society Color Council. Present at the meeting were the following from:

ADI (American Designers' Institute): Miss Ann Franke, Mr. Paul Wrablica
AIA (American Inst. of Architects): Mr. Walter Taylor, director of AIA department of education & research
AID (American Inst. of Decorators): Mrs. M. M. Girard, Miss Gladys Miller, Mr. Theodor Muller (Chairman of AID Board of Directors)
SID (Society of Industrial Designers): Mr. Egmont Arens, Mr. J. G. Everett, Mr. Philip McConnell

Members of the ISCC Executive Committee and ISCC committee chairmen in New York for the executive committee meeting, were joined by Mr. C. L. Crouch, technical director of the Illuminating Engineering Society.

Following brief opening remarks regarding the reasons for the meeting, the early history of the Inter-Society Color Council, its aims and purposes, the meeting was turned over to Dr. I. A. Balinkin, Vice Chairman. In turn, members of the older and newer groups introduced themselves, told something of the color interests of the group each represented, and of his own particular interest and work in color. Before adjournment at six o'clock there was such spirited interest in particular phases of discussion, that several times we found ourselves all talking at once. That, however, was almost to be expected, since informal discussion on color among delegates and members of the ISCC is perhaps one of the surest ways of promoting an exchange of information that cannot help but lead to an increase in our knowledge of this subject in which we have a mutual interest.

COLOR SYMPOSIUM AT I.E.S. FRENCH LICK MEETING

As announced previously, the 1949 Technical Conference of the Illuminating Engineering Society, French Lick, Indiana, Sept. 19-23, 1949, will include a symposium on color arranged for the I.E.S. by the I.S.C.C. under the chairmanship of Norman Macbeth, chairman of I.E.S. delegates to the I.S.C.C. This color session, to be held on Thursday afternoon, September 22, will include three lecture-demonstrations:

COLOR TERMS AND CONCEPTS ..... Deane B. Judd
PSYCHOLOGICAL FACTORS OF COLORS IN I.E.S. PROBLEMS ..... Ralph M. Evans
DEMONSTRATIONS IN COLOR ..... Isay Balinkin

Lt. Comdr. Dean Farnsworth, chairman of the I.E.S. Color Committee, will be chairman of the meeting.

The Lighting Service Forum meets on Monday, September 19. On Tuesday there will be a general meeting in the morning, with reports of officers and presentation of the I.E.S. Medal to Dr. Ward Harrison. The afternoon session will consist of six papers on Sources, one by G. B. Buck, II, on color preference studies in fluorescent lamps. On Wednesday there will be two morning sessions, one a general session, the other a Residence Lighting Forum. A full sports program is scheduled for Wednesday afternoon, with a Lighting Progress Report for 1948-49 by Samuel G. Hibben in the evening. On Thursday there will be two sessions, one on street lighting, the other on residence lighting, the latter to include a paper on Lighting and Color in the Home by Gladys Miller and Janet S. Reynolds. The Color Symposium is scheduled for Thursday afternoon, with the President's Reception and Banquet on Thursday evening. The morning session on Friday includes five papers, one on daylight control at windows, another on modern photometry of fluorescent luminaires. The Friday afternoon session is again on Sources, the first paper being one on the determination of color parameters of fluorescent lamps.

There are facilities for many vacation activities at French Lick, swimming, sun bathing, golf, tennis, archery, horseshoes, volley ball, badminton, billiards, ping-pong, skeet shooting, and bowling. The surrounding woodland offers scenery, hikes, and horseback trips.

In view of the fact that a number who are not I.E.S. members may plan to attend the color session, the Conference Committee has generously made arrangements so that there will be no registration fee for members of the I.S.C.C. or the A.I.D. who are interested in attending the Technical Session Color Symposium. Such guests will be able to purchase special tickets, charge $5.00, if they wish to attend the reception, banquet, and entertainment Thursday evening. This special ticket will be available also to I.E.S. members who drive over from nearby points.

For I.S.C.C. and A.I.D. members who do not expect to register for the full I.E.S. Conference, the committee suggests that these guests make advance reservations at the West Baden Hotel, which is 3/4 of a mile from the French Lick Springs Hotel. If hotel space is available at French Lick when they arrive, word will be waiting at West Baden and they can go directly on with only the inconvenience of the stop.

Many I.S.C.C. members are also I.E.S. members. Such members should register in the usual manner through the I.E.S. Registration Committee, on the forms that have been sent to them by mail.

REPORT OF A.O.C.S. COLOR COMMITTEE

A report of the American Oil Chemists' Color Committee appears in the Journal of the American Oil Chemists' Society, June, 1949. The report, as published, covers work carried out by the Committee since November 1948. The chief objective of the work completed was:

(1) To study the reproducibility of the Coleman Junior spectrophotometer.

(2) To relate spectrophotometric measurements at a single wavelength to Lovibond red colors.

(3) To set up a spectrophotometric method for incorporation in the methods of the Society.

Results obtained on a 20% nickel sulfate solution indicated that the single

wavelength calibration recommended by the manufacturer of the instrument was not sufficient to insure correct calibration for the purpose of reading oil colors. Twelve instruments which responded correctly to the nickel sulfate standard used gave results on the oil samples studied with a degree of accuracy considerably better with that obtained by using a Lovibond colorimeter.

Curves are shown relating Lovibond red readings to optical densities obtained on a large number of oils read on the spectrophotometer at 550 and 525 mμ.

The committee concluded that a nickel sulfate standard was desirable for calibrating the spectrophotometers used for reading oil colors and recommended a method to be adopted by the Society.

Proctor Thomson

THE I.S.C.C.
A SUMMARY
BY M. REA PAUL

Under the title, "The Inter-Society Color Council and the American Institute of Decorators," M. Rea Paul of the Rahr Color Clinic -- formerly secretary and chairman of the I.S.C.C., and at present chairman of A.S.T.M. delegates to the Council -- was invited to address the 18th Annual Conference of the American Institute of Decorators on March 23 in New York City to tell them briefly something about the Inter-Society Color Council. Mr. Paul's report sums up so very well the purposes and activities of the Council that we give it in full.

****

The Inter-Society Color Council of which the American Institute of Decorators has become a Member-Body, has been in existence for about 19 years.

AIMS: Its aims and purposes are to stimulate and coordinate the work being done by the various societies, organizations and associations leading to the standardization, description and specification of color, and to promote the practical application of these results to the color problems arising in science, art and industry.

MEMBERSHIP: The membership of the Council is divided into three classes:

Member-Bodies: Any organization not operating for profit that is national in scope. The authority and responsibility for policies and affairs of the Council are vested in the Member-Bodies each appointing at least three delegates, but not more than 10 accredited delegates to represent them. Three of the delegates are designated as Voting Delegates to act for their Member-Body.

Individual Members: Any person interested in color and desirous of participating in the activities of the Council for the furtherance of its aims and purposes.

Sustaining-Members: Any person, society, association or Corporation who contributes substantially to the financial support of the Council.

The objective has been to place responsibility for Council affairs in the hands of its Member-Bodies. These are nineteen in number as follows:

American Artists Professional League
American Association of Textile Chemists and Colorists
American Ceramic Society
The American Designers' Institute
Federation of Paint and Varnish Production Clubs
Illuminating Engineering Society
National Association of Printing Ink Makers

American Institute of Architects
American Institute of Decorators
American Oil Chemists' Society
American Pharmaceutical Association, National Formulary
American Psychological Association
American Society for Testing Materials
Optical Society of America
Society of Industrial Designers
Society of Motion Picture Engineers
Technical Association of the Pulp and Paper Industry
The Textile Color Card Association of the United States, Inc.
U. S. Pharmacopoeial Convention

OPERATION: The manner in which the Council operates is to receive problems pertaining to color, more especially those brought to its attention by Member-Body representatives, and determine the method by which each should be given consideration. Then the Council develops specialized subcommittees to study such problems as may, by their nature, invade fields lying properly within the domain of more than a single Member-Body in order to provide coordination of activity. Still another is to attempt to bring together individuals having color problems with those who might through individual or cooperative study provide the solution.

PROBLEMS: These problems have covered such items as Color Names, Development of Theatrical Filter Designations for Colorimetry, the Illuminant in Textile Color Matching, Color Aptitude Test, and even a published listing of Who's Who in color.

MEETINGS: In addition to regular Business Sessions the Council has made it a point to hold Popular Sessions wherein practical applications of color for commercial and industrial use are offered; Technical Sessions where summarizing results of studies are presented, generally limited to a single phase of color that would be of interest to Member-Body delegates; Discussion Sessions to provide an opportunity for delegates to express their views on all aspects of current problems.

SYMPOSIA: These are Technical Sessions that are held jointly with individual Member-Bodies from time to time in order to bring before the different societies information pertaining to color of special interest to that particular organization. To date, over 70 papers have been published as a result of these meetings. In addition there have been many discussion sessions and exhibits on special aspects of color.

NEWS-LETTER: Every two months the Council publishes a News-Letter that is distributed to all delegates and individual members without charge. Subscriptions are available to others who may be interested to receive the News-Letter.

DISCUSSION: The question has often been raised as to why the Council does not establish itself as an independent organization in the interest of attracting a larger membership and thus contribute in greater measure to the advancement of color. Many excellent proposals to this end have been offered. In this connection it is well to point out that the Articles of Organization and Procedure of the Council were very deliberately written by Dr. L. A. Jones and the writer of this paper to insure that the interests of color would be advanced in a properly coordinated manner without the necessity of establishing a new society or association. The Inter-Society Color Council has been, and will continue to remain, a meeting ground for all societies and associations having color as a common interest.

In becoming a member-body of the Council, the American Institute of Decorators brings a viewpoint that is stimulating and earnestly desired since the Institute members are more closely in touch with the color needs of the public than are many

of the other member-bodies. This advantage permits a reflection of one viewpoint of extreme importance that has too often been overlooked, namely, the wishes of the consumer with respect to color, and the attendant problems so necessary of solution.

The Council in welcoming the Institute sincerely believes that in the forthcoming association much can be accomplished toward a better understanding of a mutual problem, achieved thru different approaches but with the common subject -- color.

DR. JUDD LECTURES IN MADRID

At the invitation of Prof. José Otero, Director, four lectures on color and color measurement were delivered in May at the Instituto de Optica "Daza de Valdes" in Madrid by Dr. Deane B. Judd, our Editor for Science. The lectures, given on separate days, were: The ICI System of Color Specification, Colorblindness and Color Theory, Discrimination of Chromaticity Differences, and Color Tolerances and Specification in Commerce and Industry. The Instituto de Optica in Madrid has been carrying out research in optics for several years, but is expected soon to move into larger quarters with an expanded program of research and testing. A part of this program is the establishment of a section on photometry and colorimetry that will develop, maintain and issue standards of light and color for Spanish industry. Dr. Judd's lectures were planned to supplement the background information of the staff members who are to carry on this work. One of them, Mr. Lorenzo Plaza, is stationed at the National Bureau of Standards in Washington as a guest worker in colorimetry for nine months under Dr. Judd.

LETTER FROM PROF. VILLALOBOS

In acknowledging receipt of the review copy of the Villalobos "Colour Atlas" reported in our May News Letter, Professor Villalobos was informed that Dr. Godlove, our editor, had requested Carl Foss to review it. It was suggested, however, that if there were any details or information he would like to send us, we should be glad to incorporate them in its review. A letter did come, but too late for the May News Letter. His comments on a number of points are of such interest that we include the entire letter. (Professor Villalobos expresses a point of view regarding glossy colors that a number of us would like to see more widely recognized.)

* *

Buenos Aires, April 28th, 1949

Dear .....:

We are, my son and I, very much pleased with your kind letter of April 14th about our Colour Atlas. Your good appreciation is very worthly for us.

Indeed I have been working on this problem for a long time, not less than 30 years intermittently, accumulating books and experiments. I have had the advantage of knowing since my youth drawing and painting and photographic, engraving and printing processes (I am a retired professor of Design for architects and Natural Sciences students); notwithstanding my hobbies are the Social Sciences and the Science of Color. My son, an architect, is my constant collaborator and counsellor in these and other matters.

With respect to your questions I must say that we have used the same screen (133 lines an inch) for all the plates, but the patterns are different for different sets of plates.

Of course the charts resemble the Munsell type of organization inasmuch the saturated color is ever at a level with the gray of same value, and in the type of notation, similar to that of Ridgway; but we have departed from Munsell in rejecting the triangular pattern for tables because it is not well adapted to facts and conveniences; in not taking into account possible intrinsic differences in chromatic strength of different hues; in adopting the trichromatic basis and in making glossy the dark colors.

Our pattern derives from two parallel scales; neutral and straight colors, making equal number of gradations between every couple. The resulting rectangular pattern provides to every color correspondence with those of equal value and chromatic degree in all the charts (transpositions are so possible) and also correct value position for every saturated color. Munsell pattern has not the first advantage, and Ostwald pattern misses the indispensable second condition.

You think that in our type of organization "the degrees, especially toward extreme saturations for very light and very dark colors, are certainly not equal to those at maximum saturation." In other times I myself thought so, intending that equal horizontal steps would result in the triangular pattern. But this is not true. If taking, for example, a chart with a saturate color of medium value(*) i.e. the chart R, we trace upon it the triangle B, R-10-12°, W, we see that at level 18 the straight (rose) color of value 18 would be located approximately in the point 18-2°, leaving place only for one color (R-18-6°) between that rose and grey N18. Similarly the color R-2-12 would be located at 2-2°, and R-2-6° between them. Now we see that the differences between each pair of these colors are evidently much greater than any differences on the line N10, R-10-12°. The facts do not warrant the assumption of equal differences in the triangular scheme.

It is true that owing to the smallness of the holes some allowance in matching is required, as equally by the smallness of the samples themselves, but in many cases the match can be made on top of the sample by diagonal juxtaposition of a border and isolating the observation by the perforated screen. A great lens used unfocussed can help.

I must say that the selection of simple colors (Scarlet, Green and Ultramarine) has been made choosing the mixings of permanent printing inks that gave us a sample that when seen with its borders over a black hole, through a prism, proved maximum purity. The saturate main double colors, Y, T, M. has been found on rotating disks as complementary to each simple, and purest through prism. On graduating by disks the six vertical master series of straight colors (according to data from curves of luminosity, and controlling its values with respective greys) all the straight colors of intermediate hues were derived.

For me the Hering theory and Ostwald system of four "primaries" are discarded; and the partition of the "circle of colors" in five principal hues has no substantial basis, being only true and natural basis of coloration the Young theory. The arguments on behalf of four seems to me futile; and nobody has made for example a moving picture color film with four "primaries".

The scale of greys has been made according the pseudo-logarithmic curve whose terms I sent to you some two years ago, found by trials with stepped white sectors rotating on black background, seeking equal differences at normal natural illumination.

The particular values of straight colors to be printed solid were copied from

espective obtained disks and delivered to ink makers to prepare the inks according-y; but every personal check and adjustment in the printers shop was necessary. I ave been constantly near the press for one hundred eighty days.

he making of originals for engraving, the control of halftone blocks, etc., was a atter of peculiar procedures that could not be explained briefly.

ou can see that making the dark colors glossy gives a powerful result. This is ot an obstacle to finding in the Atlas colors that match with "saturate" (or other) att colors. These are located at the left hand and above our saturate colors. We dmit not that there are two modes of a color: glossy and matt (or other). For us hey are two colors. The gloss is a material accident apart of color itself. When e see the gloss, we see not the color; and when we see the color, we see not the loss. A matt color is a greyed color.

I will have pleasure in answering any other questions you wish to ask me, and awaiting anxiously the review of Mr. Foss. Maybe my poor handling of English writing has ade obscure some explanations in this letter. I beg you to excuse me, hoping you sk for elucidations if you find them necessary.

ith greetings to Dr. Godlove, hoping he is healthy,

I am sincerely yours

(S) C. Villalobos-Dominguez

* We adopt the term "saturation" only in an absolute sense to express the maximum ossible chromatic quality, as in Chemistry and Physics "saturation" is plainly used or the maximum possible content or charge of substance in a liquid solution, suspension in gases, energy accumulated etc. For other straight colors we can say, if onvenient, "maximum relative chromaticity."

IMPORTANT BOOK BY ARTHUR POPE

THE LANGUAGE OF DRAWING AND PAINTING, by Arthur Pope, Harvard University Press, Cambridge, Mass. 1949. $5.00.

Professor Pope's brilliant revision of his long standard earlier ork comes as a more than welcome addition to our small store of worthwhile books on olor and visual representation. The almost startling ease with which he traverses he maze of the different manners or modes of representation of the external world ives the reader an intellectual pleasure akin to that produced by the art of which e treats. Years of teaching, lecturing and thinking on the subject and an excellent command of the language have produced a lucidity of expression which compresses nto one small book the material formerly published in two. In less skillful hands t might have been very large.

he subject matter covered is adequately indicated by its table of contents. Under art I, "The Terms of Drawing and Painting" he considers:

1. The Terms of Vision and of Drawing and Painting. The Working Tone Solid.
2. Qualifications and Limitations of the Working Tone Solid. Other Tone Solids. A True Tone Solid. Purity and Brilliance.

nder Part II "Modes of Representation":

3. The Visual Images and Visual Concepts

4. The Visual Effect
5. The Modes of Drawing
6. The Modes of Painting
7. Variations in the Representation of Detail and in the Treatment of Tone Relations in Painting
8. The Use of Limited Palettes or Limited Tone Sequences
9. Conclusion--The Use of Different Modes in Recent Painting

The reader coming to this book from the sciences will probably have to spend a little time learning the meaning of the six main color terms which he defines. If the writer may presume on the intimacy of the group who will see this notice, it may be helpful to present here a synopsis of these terms. "Color" as the word is often used in ordinary speech he calls "tone." This is a psychological term referring to what the observer actually sees but is restricted to the three OSA attributes "hue", "saturation" and "lightness", which he calls "hue", "intensity", and "value." In the Munsell system they are "hue", "chroma" and "value." All three of these are exactly equivalent.

He describes a "tempered" color solid, so designed as to be convenient for the users of pigments and laid out according to these psychological attributes of color. He further defines two other terms, "purity" and "brilliance" which can also be used with hue to define a tone. In so doing, he comes to grips on page 28 with one of the most difficult problems in the description of color. In order to describe psychological attributes it is necessary that reference be made to some physical or psychophysical system which displays these attributes. Thus the Munsell system is psychological but is defined as the visual attributes seen in a definite physical system. This system has been spaced by psychological procedures according to these attributes. No such system yet exists for the concepts underlying these terms "purity" and "brilliance" and hence no system displays them accurately. The psychophysical system by which he describes them is essentially the OSA dominant wavelength, purity and luminous reflectance system. "Purity" (Pope) is defined as the variable attribute in the series produced by changing the relative luminance of a deposit of constant chromaticity--or the equivalent produced by pigments. He assumes that hue may be taken as constant in such a series. "Brilliance" is the variable which appears in a series of deposits of constant dominant wavelength from the spectrum point to white with maximum possible luminous reflectance at each purity or series parallel to this in his space at a constant ratio of values at each purity. He thus defines a psychological color solid with attributes much the same as those seen in the Ostwald system. His triangles are not equilateral, however, because he makes equal values of all hues lie in the same horizontal plane. This changes the spacing of the colors involved to more realistic quantities.

Professor Pope is entirely correct in pointing out as he does that the distinction between the two systems "has constantly produced confusion of thought as well as of terminology in connection with the general consideration of tone or color."

A large part of the book is devoted to a consideration of representational techniques. This, as well as the parts on color, is handled in such an illuminating manner that, without exaggeration, any non-artist who ever hopes to understand the intentions of art as exemplified in drawing and painting must read this book--it is suspected that artists themselves should do likewise.

Ralph M. Evans

THE LIMITATION OF COLOR

Dr. W. D. Wright of London has recently contributed a series of articles to the Rayon Textile Monthly. Because of their

particular interest to the textile man, we asked Dr. E. I. Stearns, as chairman of A.A.T.C.C. delegates to the I.S.C.C., to review the series for the News Letter. Dr. Stearns' review follows:

The maximum luminous reflectance which is possible for various colors has been discussed in a series of articles by W. D. Wright which appeared under the title, "The Limitation of Color" in the Rayon Textile Monthly, 27, 313-6, 558-9 (1946); 28, 337-8 (1947); 29, 92-4 (November 1948); 91-2 (December 1948). This is somewhat similar to the study of MacAdam reported in the Journal of the Optical Society of America, 25, 249, 361 (1935). It also brings to mind the work of Vickerstaff in his study of the approach of present-day dyes to the production of maximum high chroma—high luminous reflectance swatches, and the work of Nickerson in her study of the approach of Munsell chips to theoretically maximum high chroma—high value chips. However, Wright is not so much concerned with the spectral reflectance curve of the sample, as were Vickerstaff and Nickerson, as he is with the limits imposed by the human eye and visual processes themselves.

For a perfectly white surface under a given illumination, all the incident light is reflected. Wright divides the spectrum into ten consecutive parts, each to contribute 10% to this total white reflection. He finds that seven of these divisions fall along the straight line part of the chromaticity diagram from green to red. He points out that the tenth part of the spectrum locus which is a highly chromatic yellow can have its luminous reflectance increased by adding the adjacent tenths and this will not destroy its chroma because of the straightness of the line on which the adjacent tenths fall. When, however, the tenth which is a highly chromatic green has its luminous reflectance increased by including adjacent tenths, the chroma is reduced because of the curved nature of the line in that region. Thus it is possible to have yellows of high luminous reflectance and high chromas but not greens. It is not possible to do anything about this by changing dyes or pigments, the different behavior of these colors is a consequence of the color vision mechanism in the eye.

The theory is somewhat oversimplified and, therefore, has to be interpreted with caution when applied to actual dyeings. For instance, in considering the dye concentration effect of a green, he ignores the additive function of dye mixture and concludes that as the concentration of green increases the chroma increases. Actually, the chroma first increases with concentration and then decreases with many green dyes.

The effect of concentration, the effect of width of absorption band, the effect of reflection of light unchanged in color from the surface of materials, and the effect of geometry of illuminating and viewing conditions are discussed. The effect of these factors in decreasing the desired high luminous reflectance — high chroma condition varies with different colors.

It is a very thought-provoking series of articles and should be understood and kept in mind by dye or pigment manufacturers or anyone considering the possibility of increasing the luminous reflectance of a color.

NEW BOOK BY
EGBERT JACOBSON

BASIC COLOR, by Egbert Jacobson, published by Paul Theobald, Chicago, 1948, $14.75.

In the long and varied history of color, the work of Wilhelm Ostwald has been eminent indeed. A great scientist, he has enriched the subject for all of us and has brought clarity to many oft-befogged issues and aspects.

Ostwald was himself a prolific writer. Though he could express himself and his ideas lucidly, most translations into English suffered noticeably. Too, a man's own works and his own greatness need the judgment of time. They need perspective, interpretation and critical analysis.

In the literature of color, Wilhelm Ostwald now has a suitable monument styled and designed by Egbert Jacobson of Chicago. In appearance and format, "Basic Color" i one of the finest books on color ever published. And because it pays tribute to t remarkable achievements of a remarkable man, the result is both happy and worthy.

Jacobson has simplified the principles of Ostwald in a splendid and understanding way. Ostwald's theories, so notably exemplified by his double-cone solid, have be well set forth and profusely illustrated in black-and-white and full-color. There are ably written pages on the physical and psychological aspects of color, and goo conclusions expressed for the artist.

As a basic system of color, the Ostwald doctrine has had wide acceptance, particul ly in the field of art and education. Jacobson's volume should add further glory Ostwald's posterity and provide a "classical" textbook for many years to come.

Faber Birren

(Addendum to review of Jacobson's "Basic Color")

The Editor would like to add to the above review, additional appraisal of Jacobson work.

The first thing to be noted is the fairness of the author's estimates of the value of Munsell and Ostwald; that is, in the relative advantages of the two methods in the fields of design, colorimetry, etc. This is evident particularly in the answe to questions stated on pages 192-4. Here Jacobson has met possible objections to use of the Ostwald system, and has not dodged his responsibility for rational answers to such questions.

In the Ostwald analysis of the harmonious relations of the colors of twelve paintings by masters, Jacobson has introduced a fine feature; and the apparent care wit which this work was done is to be commended. It carries on a method and tradition begun over two decades ago by Margaret McAdory, who in her "Color in Painting" utilized the Munsell system to analyze eight paintings by seven masters. In his "introduction" Jacobson admits that there is "much more to a great painting than color harmony"; and in this connection he quotes Albert C. Barnes, whose book "The Art in Painting" we have praised in these pages.

Birren calls attention to the fine format and beautiful execution of the book. To these remarks we may add only that Basic Color is sound didactically; its development constitutes a very teachable exposition of the Ostwald system.

I.H.G.

PLOCHERE-MUNSELL CONVERSION

The Plochere Color System: A Descriptive Analysis, by W. E. Knowles Middleton (Canadian Journal of Research, 27 Section F, 1-21, January 1949) is now available in reprin form. The collection of 1248 painted papers in The Plochere Color System of syste atic pigment mixtures (see News Letter No. 77, pp. 13-14) are relatively inexpensi for such a large number of color samples (3x5 size in a card file, or chips bound chart form, each less than fifty dollars per set). For some purchasers their

fulness is greatly increased by the availability of Munsell book notations now plied in this report. Following a brief presentation of the Plochere System and the method used in making the comparison, a table gives the Plochere number and .e for each sample, and its corresponding Munsell notation, as obtained from ual observations. When the Plochere colors fall within the limits of samples on Munsell charts, it was felt that the accuracy of the matches was probably ± 0.5 hue, ± 0.2 for value, and ± 0.4 for chroma.

:ause of the wide margins in the Plochere book, this reviewer found it very con- ıient to enter the Munsell notations on the outer margin, thus making all the in- rmation available in one place.

e Canadian Journal of Research is published in sections A to F (each with its own gination) by The National Research Council of Canada. This report appears in ction F (Technology).

CIENT EING In an extraordinary summarizing article in the January-March 1949 issue of the American Journal of Archaeology, entitled "Moravia in Paleolithic Times," by Karel Absolon, your Editor was amazed to find ferences to dyeing and dyes in a context so old as to violate all classical chaeological and chronological traditions.

solon's reputation is too good to pass lightly over his several unorthodox attri- tions, such as that of ceramics to an Upper Pleistocene stratum, rather than to e much later Neolithic of the places in question (before 15,000 rather than after 00 B.C.). Possibly this reviewer has misread the paragraphs on pages 25-26, fol- wing the description of certain ceramic animal sculptures. In 1934, heads of ve-bears, called a "pair of sisters" because modelled alike in size and fashion, re found next to each other, "together with some dyestuffs." One was no doubt rposefully disfigured on the left side, with a wound and deep holes in the place the eye and temple. Similar acts in drawings and paintings are well known to chaeologists, who generally attribute such disfigurement to a "mystical hunters'" lt; this the hunters believed enabled them to catch their prey more readily by a ear thrust in left eye or temple. Large numbers of sculptured animals are men- oned in the article.

ese were found among many other places at the gigantic "station" near the village Vestonice. Moravia, a portion of Czechoslovakia, is at the very center of Europe d on the great Eurasian migration route along the southern edge of the glaciers ich fossil man (and animals) followed from a hypothetical center of creation in ia. Moravia was the "Promised Land" in Pleistocene times, the Eldorado of the mmoth hunters.

page 26, Absolon states that in an area of about 400 square meters were found an nazing number of stone, bone and ceramic objects, dyestuffs and scrapers, neck- ces and perforated teeth, a beautifully ornamented spoon of mammoth ivory 40 cm. ng, and other implements." There were also several of the well-known "venus atuettes," as well as a male figure (rare in early art). In connection with a replace, about which were scattered ten complete ceramic pieces: bears, lions, mmoths, horses, etc., Absolon said: "I emphasize that rubbing stones with red and llow dyes lay in the center of the fireplace, which is always significant." Many the bone objects were dyed red. Our readers may recall our emphasizing in these es the importance of red to ancient man.

Incidentally, it was stated that geometrical line drawings were also found in the giant station, though they were few, simple in execution and not as good in quality as the sculptures. Children are now thought to start with plastic toys; and only later talented ones develop inclinations for drawings. Change of emphasis from sculpturing and engraving to painting, which occurred not long before our day, first took place, so says Absolon, in the transition from Aurignacian to Magdalenian cultures and times.

Turning to far later periods and to Palestine and Phoenicia, whose names we recently stated meant the Land of the Purple (the industry centering at Tyre), we checked our memory against Millar Burrows' "What Mean These Stones?" Here we learned that, while spinning and weaving were a family home affair in earlier periods, there was a tendency to industrialization in the Bronze Age. Spinning whorls of stone and bone, and loom-weights of stone and clay appeared commonly from the Early Bronze Age on (3000-2100 B.C.). A business document of about 1500 B.C. found at Nuzu in northern Mesopotamia mentions Canaanite wool. By the Middle Iron Age (900-530 B.C.) weaving and dyeing of cloth had become an important industry at certain places. Elaborate installations of dyeing vats were found in a great many houses of this period at Kiriath-sepher (now Tell Beit Mirsim - "tell" meaning mound). At Lachish also a similar weaving and dyeing establishment has been uncovered. These towns are in southern Palestine, between the Dead Sea and Gaza.

Linen was known quite early in Egypt and Assyria. A Gezer (Palestine) calendar of the 10th century B.C. mentioned a "month of pulling flax." Cotton, though imported from India, was not grown in Egypt or western Asia till quite late, though Sennacherib claims to have introduced into Assyria "trees bearing wool." Silk was unknown until much later times. Egyptian representations in reliefs and pictures on the walls of tombs, temples and palaces show the colors of dyed textiles, "the colors still almost as bright in some cases as if they had been painted a decade instead of several millenia ago (Burrows). (An article on Egyptian textiles by L. M. Wilson may be found in Univ. of Michigan Studies, vol. XXXI, pp. 11-2; 1933).

In view of the Arab-Israelite quarrel, it may be interesting to note that the Arabic "qubbah," the portable sacred tent, in which images or symbols of the tribal gods were kept, was of leather dyed scarlet. But the word qubbah occurs also in the Hebrew Old Testament, referring to a sanctuary. Thus the pavilion into which Zimri took the Midianite woman (Numbers 25:8) was called a qubbah; and the Israelite tabernacle had a "covering of rams' skins dyed red" (Exodus 26:14). The connection of red with magic and religion is very old. Traces of red paint are still visible on at least one of the pictures of a qubbah from Palmyra. On page 25, Burrows pictures a "mysterious group of tubs or vats" in the Hellenistic level of the excavation of Beth-zur (between Bethlehem and Hebron).

Thyatira is a garrison city mentioned in the Book of Revelation; it lay between Syria and Pergamum. The smiths of Thyatira were united in a rather celebrated guild or labor union, and "doubtless this was true also of the manufacturers of garments and the dealers in purple cloth such as Lydia sold (Acts 16:40); for there were more trade guilds in this city than in any other in Asia. The famous purple garments in which Lydia dealt were not made with Phoenician dyes, as was once supposed, but rather without doubt, with a Thyatiran product, probably the "Turkey red" made from the madder root." (C. M. Cobern's "The New Archaeological Discoveries and their Bearing Upon the New Testament; 1920).

In the September 1948 issue of the News Letter, pages 7-8, we gave the connection of

Phoenicia, Canaan and Palestine with (the Land of the) Purple. We added some notes from Marcus Aurelius of Hierapolis (200 A.D.) on guilds of "purple dippers" (purple) dyers); also the legend of the discovery of Tyrian purple, Plutarch's estimate of the condition and character of dyers, and the Persian legend that Jesus was a dyer.

COURSE IN COLOR MEASUREMENT

Announcement is made of a course in color measurement to be held at Union College, Schenectady, New York, July 18 to July 29. This is offered in cooperation with the General Engineering and Consulting Laboratory of the General Electric Company. The course will consist of 20 lectures by men prominent in the field and 20 laboratory periods. It will deal with the principles of color measurement and color specification and the application of these principles to industrial purposes. The laboratory work will include exercises to give experience in taking spectrophotometric data and applying it in various typical situations. Students registering for this course are expected to have completed two years of college work in science or engineering, or have an equivalent background of training.

While it is too late for this notice to do our readers any good for this year, it is suggested that anyone interested in a future course of similar nature might write to Dr. Harold E. Way, Department of Physics, Union College, Schenectady 8, New York.

HILER SCHOOL OF DESIGN

Announcement has been received of the opening sessions of a school recently established in Santa Fe, New Mexico, by Hilaire Hiler. The Hilers, who left Los Angeles about a year ago to go back to their favorite New Mexico, have established with a few associates, Hiler College, Department of Fine Arts. The 1949 Summer Session is scheduled for opening on June 10, with the Fall Term September 12, 1949 -January 28, 1950; Winter Term, February 1 -June 12, 1950; Summer Session, June 12 -August 5, 1950.

As listed in the announcement, the faculty consists of Hilaire Hiler, Walter W. Taylor, Jr., Elliot Porter, Frances Lowry, Will Shuster, Mariam Davis, Ramon Shiva, Vernon Young, and Calvin von Hinzman.

HOUSE & GARDEN COLORS

The September number of House & Garden - release date August 19 - will present 22 colors to be promoted by leading retailers all over the country. There are to be two groups of colors, 12 Current Colors, selected on the basis of Rahr Color Counts of consumer preferences, and 10 Decorator Colors, introduced to high fashion by decorators and designers. Merchants are invited to cooperate by using color chips supplied by House & Garden to represent these 22 colors to plan new merchandise.

According to the announcement, House & Garden colors are planned annually as a service to readers, stores, and manufacturers. To make the service effective, they indicate that it is important that their name be used to identify only colors which match theirs exactly. The definition of match, with House & Garden editors to be the final authority is as follows: "By 'match' we mean that colors so labeled must be the same hue; although it is certainly not necessary that they be the same value - they may be lighter or darker than the House & Garden color chips."

We believe many readers may be interested in this activity. Those who want further information, including samples of the color chips, might write directly to Lucrecia Andujar, Merchandising Editor of House & Garden, The Condé Nast Publications Inc., 420 Lexington Avenue, New York 17, N.Y.