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INTER-SOCIETY COLOR COUNCIL

NEWS LETTER NO. 94

MAY 1951

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WIDE AREA COVERED BY CALIFORNIA COLOR SOCIETY

In a recent letter from Louisa A. King, secretary of the California Color Society, she explains why they are late in getting their records in order to let us know the number of News Letters needed for the year. This group has been regularly subscribing for 40 News Letters and this year is increasing the number to 70. They have 58 active members at present. She says "Due to Los Angeles' great area it has always been difficult for us to get together for executive meeting with any regularity. The last treasurer lived in La Canada (approximately 15 mi.). Miss Patterson lives in Palos Verdes (20 mi.), which problem we have overcome by having her live with us!

"Since I mentioned the area we cover, you may be interested in the fact that we have two very active members in San Diego (150 mi.), one in San Francisco (400 mi.), one in Santa Barbara (90 mi.), one in Fort Morgan, Colorado (? mi.), and a great many who come from fifteen to thirty miles to the meetings."

Our congratulations to the California group for their interest, as shown by travelling such long distances to attend meetings.

CCS MEETINGS

The March meeting of our affiliate, the California Color Society was held on March 28, at 6:30 p.m. at the Art Center School Cafeteria. It was a buffet dinner and discussion meeting whose theme was "Find the Answer". It was arranged to give an opportunity for all members to present problems and questions for an open discussion with experienced workers in many color fields.

The "April" meeting was held on May 2 at 8 p.m. at Art Center School, 5353 W 3rd Street, Los Angeles. The meeting dealt with some applications of color photography in scientific and educational films. Three short films were shown: "Wonders in a Country Stream", "Introduction to Aphasia" and "Social Adjustment for the Aphasic." Three speakers discussed the use of color in these films. They were Ted Parmelee of United Productions of America, Sy Wexler and Bob Churchite of Churchill-Wexler Film Productions.

PHILADELPHIA-WILMINGTON GROUP AND AATCC OF PHILADELPHIA

The Philadelphia-Wilmington Color Group, affiliated with the ISCC, and the Philadelphia Section of the AATCC cooperated in their second joint meeting, in sponsoring a talk on "What's New in Spectrophotometry" by Dr. E. I. Stearns. The meeting was held at 7:00 p.m. in Kugler's Restaurant in the Widener Building, Philadelphia.

Dr. Stearns is a Sectional Director of Application Research in the Calco Chemical Division of American Cyanamid. He is a past chairman of the Color Committee of the AATCC, and an active member of the Optical Society of America, ASTM, TAPPI (all four of these participating in the ISCC), and in the Color Council itself. His publications in the color field have been numerous and well known. Dr. Stearns' talk had special reference to the textile and dyestuff fields; and was designed to assist persons pondering the question whether he would find it an economic advantage to have a spectrophotometer in his mill. Dr. Stearns treated the instrument not as one to replace the dyer or his eye, but as a tool to assist the textile dyer, as a physician uses the X-ray. He pointed out that in the past three years 39 articles dealing with spectrophotometric data had appeared in the American Dyestuff Reporter. He considered altogether 32 applications of the instrument to problems in the textile industry. Dr. Stearns' talk was given with his usual facility and charming delivery.

The February Meeting of the Philadelphia-Wilmington Color Group was devoted to Color Problems in Multi-Color Printing. The Group met for dinner and then heard lectures by two experts from Edward Stern & Co. who are leaders in the application of scientific methods to color printing processes. The practical aspects were explained by Mr. Walter A. Kaiser who emphasized the many and varied problems involved in creating precise reproductions rapidly. He discussed the effects of mechanical variables and the influence of paper and ink qualities on the printer's problems. Mr. Philip E. Tobias discussed very ably instrumental methods of color correction and color control. The meeting was the first the group has held on a printing topic; it was well attended especially by members of the industry.

Dr. Peter C. Goldmark spoke before the Philadelphia-Wilmington Color Group March 15 on the subject of "Color Television." The group met at the Alden Park in Germantown for dinner and at the Philadelphia Textile Institute for Dr. Goldmark's lecture. Dr. Goldmark is Vice President, Engineering, Research and Development Department, Columbia Broadcasting System. He presented an unusually well integrated story of the basic color problems involved in the development of the field sequential system. This covered (1) the factors which determined the selection of the additive system of color mixing, (2) the significance of the scanning cycle on flicker-brightness relationship, (3) a few of the complex problems in selection of primaries to give high visual contrast with available phosphors and freedom from current noise, and (4) other factors of control which have bearing on the accuracy of color reproductions. Color movies of kinescope test productions were shown in order to demonstrate the approximate color accuracy of the C.B.S. system.

Most impressive was the "three dimensional" quality which color contributes as against the present black and white. It was further apparent to those present that the skill which Dr. Goldmark and his associates have blended the sciences of color and electronics has played no small part in the well recognized success of the C.B.S. color television system.

PHYSICAL SOCIETY COLOUR GROUP

An after-tea meeting of the Colour Group of the Physical Society (of London) was held at 5:30 on February 23rd in the Lecture Theater of the Science Museum, Exhibition Road, London S. W.7. Dr. W. D. Wright of Imperial College, London, internationally known as an authority in color research, delivered the 17th Thomas Young Oration on Modern Problems in Colorimetry. Surveying the present development of the field, he contrasted it to the picture presented by Guild in a well-known survey published in 1926. Many of the needs indicated by Guild have since been met, in particular the "1931 I.C.I." standard observer and coordinate system. But on the other hand, developments have not been as widely understood nor as fully exploited as might have been expected. New photoelectric instruments have reduced color measurement to a purely physical procedure. But "the more abstruse problems of the present day" are more concerned with correlations of the measurements with "what we see."

The Sixtieth Science meeting of the group was held at 3:30 on April 18th at the Lighting Service Bureau, 2 Savoy Hill, London W. C.2. It was addressed by Mr. A. Dinsdale, of the British Ceramic Research Association on "Some Colour Problems in Ceramics." The paper dealt with the extent to which quantitative methods of colour measurement have found application in the pottery industry. Suggestions were made as to the directions in which the use of such methods could most usefully develop.

AMERICAN INSTITUTE OF DECORATORS

This member-body of the ISCC, which began life at about the same time as the Council, held its 20th Anniversary Convention at Grand Rapids from April 30th to May 2nd, followed by a Trade Exhibit continuing through May 4th. The program was designed to be one of "basic, provocative discussions." The meeting place was in the Furniture Museum of the Grand Rapids Furniture Mfrs. Association. Members of the AID presented a series of rooms. A gallery was arranged also to show photographs of work of AID members, displays of student work, and photographs of 1931 interiors to trace the progress of two decades. Three competitions were also scheduled: 1950 design, student redesign of a specified room, and 1950 Film Set Decoration competitions.

This issue goes to press a trifle too early for a more complete story, but we hope to persuade Gladys Miller, alert and capable delegate of the AID to the ISCC, to give us a few paragraphs about the meeting, with some notes on the winners and decorative trends.

I.C.I. MEETINGS AT STOCKHOLM JUNE 26 - JULY 5

Dr. Deane B. Judd and Dr. I. A. Balinkin, ISCC Chairman, are leaving shortly to attend meetings of the International Commission of Illumination to be held on the indicated dates in Stockholm, Sweden. Dr. Judd is Chairman and Dr. Balinkin a member of Technical Committee No. 7, Colorimetry and Artificial Daylight. Mr. Ralph Evans, former ISCC Chairman, is scheduled to give one of his illustrated lectures as a special feature of the meetings. Unfortunately, because of an accident last December which continues to keep him on crutches, Mr. Evans will not be able to attend. His lecture will probably be given by Dr. Judd.

Reprints of reports of Technical Committees No. 7, Colorimetry and Artificial Daylight, and of No. 26e, Color Specifications for Light Signals, are now available either from Dr. Judd (for No. 7) or from Mr. F. C. Breckenbridge (for No. 26e). Both may be addressed at the National Bureau of Standards, Washington 25, D. C.

U. S. INDUSTRIAL DESIGN 1951

Announcement is made of the second issue of an authoritative annual survey of U. S. Industrial Design, compiled by the Society of Industrial Designers, an ISCC member-body. Their publicity calls attention to the fact that every manufacturer has a design problem: to make his product compete successfully in appearance, efficiency, and price range in the market. The book contains sections devoted to household equipment, equipment for personal use and recreation, commercial and professional equipment, transportation, industrial apparatus and machinery, packages and general identification programs, and commercial interiors and exteriors. Each section has a leading article on the markets, the problems, and interesting trends of the past year. In no other one place, they tell you, can the influence of conscious design thinking on all these phases of industry be studied. Design as a means of solving problems rather than as a mere application of beauty is the basic theme of U. S. Industrial Design. Copies of this book, Design 1951, may be purchased from the Thomas Y. Crowell Company, 432 Fourth Avenue, New York 16, N. Y. at $10.00 per copy.

SMPTE 1950 ANNUAL REPORT

Following is the annual report of SMPTE for 1950, received too late for inclusion in the annual report mailed to delegates and members with the March News Letter.

Report of the Delegates of the Society of Motion Picture and Television Engineers, Ralph M. Evans, Chairman.

Interest and activity in the field of color has increased steadily in recent years. With the present inclusion of television interests and the publicity which color television systems have received there has been a still further tendency in this direction. The activities are best described in terms of the papers published in the Journal during the last year. The list includes the following:

Badgley, G. J. with Fraser, W. R. "Motion Picture Color Photography of Color Television Images," June SMPTE, p. 735.

Bowditch, F. T. with Harrington, R. E. "Color Measurement of Motion Picture Screen Illumination," Jan. SMPTE, p. 63

Capstaff, J. G. "An Experimental 35-Mm Multilayer Stripping Negative Film," April SMPTE, p. 445

Gundelfinger, A. M. "Cinecolor Three-Color Process," Jan. SMPTE, p. 74

Herrnfeld, F. P. "Printing Equipment for Ansco Color Film," April SMPTE, p. 154

Kendall, O. K. "16-Mm Film Color Compensation," April SMPTE, p. 164

Linko, M. C. "Color Cinematography in the Mines," Feb. SMPTE, p. 199

Miller, O. E. "Color Temperature: Its Use in Color Photography," April SMPTE, p. 435

Sweet, M. H. "An Improved Photomultiplier Tube Color Densitometer," Jan. SMPTE, p. 35

Crandell, F. F. Freund, K. and Moen, L. "Effects of Incorrect Color Temperature on Motion Picture Production," July SMPTE, p. 67

Dunn, L. Mosser, A. "35-Mm Ansco Color Theater Prints from 16-Mm Kodachrome, Dec. SMPTE, p. 635

Gopal, Krishna, "New Laboratory for Processing Monopack Color Film," Dec. SMPTE, p. 639

Inglis, A. F. and McIntosh, F. H. "Color Television," Oct. SMPTE, p. 343

Jennings, A. B. Stanton, W. A. and Weiss, J. P. "Synthetic Color-Forming Binders for Photographic Emulsions," Nov. SMPTE, p. 455

Szegho, C. S. "Color Cathode-Ray Tube with Three Phosphor Bands,"Oct. SMPTE, p. 367

Mr. Boyce Nemec of our Headquarters Staff has accepted the chairmanship of the subcommittee on Exhibits for the 1952 ISCC meeting.

It is expected that the year 1951 will show even more interest in the field of color in general.

HONORS TO OUR SECRETARY

After this issue had already gone to press we received information that our Secretary, Dorothy Nickerson, in ceremonies attended by about four thousand people, was honored by the U.S. Department of Agriculture, to which belongs the color laboratory over which she presides. She was presented, along with others, with a certificate entitled "Award for Superior Service." She also received a silver medal (quite large) and a small lapel pin. The citation read: "For notable contributions to the development and application of the new automatic colorimeter for cotton, an invaluable aid in the grade classification and standardization programs, to the Department's cotton classers and researchers, and to industry."

WATCH FOR JUNE ISSUE OF FORTUNE

We have a note from the publishers of FORTUNE that they expect to publish in June an article on Color in Industry. We note it in this brief fashion since you may wish to look for it while it is still on the news stands.

I. E. S. COLOR REPORT DISTRIBUTED TO ISCC

In 1949 Dean Farnsworth, as chairman of the I.E.S. Committee on Color in Light and Illumination, appointed Ralph M. Evans to study and present to the committee an outline of psychological factors concerned in lighting and illuminating engineering. Mr. Evans, now chairman of the I.E.S. color committee, did this. He presented his report in the form of a list of concepts and questions, selecting three of these for the subject of an illustrated lecture that was presented at the 1949 annual meeting of the Illuminating Engineering Society. The full report, published in the April 1951 number of Illuminating Engineering, is extremely thought-provoking. If we could get our ISCC members to start thinking about these questions, it might be possible to develop more definitive answers than is possible today. Mr. Evans suggests that a major task of the IES committee is to collect, analyze, study and publish as much as possible of answers to the questions he proposes, in order that even our present knowledge may be reduced to practice in the form of a true engineering approach to color lighting.

We include with this News Letter a reprint of Mr. Evans' report. At our request he was kind enough to provide a sufficient supply for this purpose. We offer him many thanks. We wish also to express the hope that a study of his report will stimulate among our members important activity in this field.

ERRATA

Two letters have been received calling attention to a need for minor corrections in the APA report published in the ISCC minutes and in a recent paper. Robert W. Burnham of Kodak graciously assumes responsibility for a misstatement in Professor Helson's APA report to the ISCC, stemming from some ambiguity in the former's statement of a problem. Accordingly, the following correction to the minutes of the 20th Annual Meeting, ISCC, February 28, 1951, page 15, line 38 ffl. should read: "Effect of area and luminance on saturation (Burnham); Psychophysical studies of whiteness and whiteness constancy, and the significance of "binocular yellow" for color theory (Hurvich and Jameson)."

The following minor corrections should be made in the very useful article, Tables for Use in Computing Small Color Differences, by Dorothy Nickerson, American Dyestuff Reporter, August 21, 1950, an article which has been widely used by color workers:

In line 11 of the second full paragraph, column 2, page 542, the first word, "small" should be "large." In line 9, column 3, page 542, for the phrase "as little as 0.1" should be substituted "near to one."

The headings marked Y in Table II should be X, those in Table III should be Z; e.g. V_X and X; V_Z and Z.

On page 546, when substituting in the third portion of formula (1), 0.4 (V_Z - V_Y), the figures should read: 0.4(0.04).

BLOND OR BROWN GREEK VS. GREEK

The recent appearance of the book "Studies in Ancient Greek Society," from the pen of the British scholar, George Thomson, recalls some discussion of color terms in the more classical work, "Who Were the Greeks?" The latter was written some years ago by Professor J. L. Myres. Traditionally, the Hellenic Greeks, primarily of the Battle-axe or Corded Pottery variety of the Mediterranean race, were made up of so-called Aeolians, Dorians and Ionians. Later writers added on the Acheans. The three former groups, were supposed to be descended respectively from the sons of Hellen called Aeolos, Doros and Xouthos, father of Ion. Hellen, of course is not to be confused with Helen, the fair Greek whose beauty, some time between 1210 and 1180 B. C., "launched a thousand ships" toward Troy.

When the Hellenes invaded Greece, the earlier Pelasgians of Boeotia and the Peloponnessus survived in many places. Though non-Hellenic, they were also a variety of the Mediterraneans, but a more slender and shorter type. Xouthos was the ancestor not only of the Ionians, through Ion, but also of the aggressive Achaeans, a fourth branch of the Hellenes. But Xouthos is merely a term, says Myres, which means brown hair, fur or plumage, while the Dorians were commonly regarded as blond, and the Aeolians "mixed." Myres says that "Aeolic" means "variegated" or "patchy." Thomson has suggested that the people who made the unpainted gray pottery, no doubt imitating silver vessels, were not Hellenic, as generally assumed but originally dark Pelasgians. They were immigrants, he thinks, from somewhere east of Troy.

Orchomenos in Boeotia was destroyed after 2000 B. C. and refounded by Minyas, a contemporary of Hellas who came from another Orchomenos, in Thessaly, heading the Minyai clan supposed to have made the gray Minyan ware. But also known as Minyans were the kin of Jason (1260 B. C.), the leader of the Argonauts, who sailed from Iolkos on the most famous voyage of Greek tradition in an attempt to obtain the

Golden Fleece. Jason's clan, the Tyroidai, were descended from Tyro, a granddaughter of Aeolus; and Thomson suggests that the Minyai and the Tyroidai were intermarrying clans. The Minyai had been regarded as Ionian Greeks; but Thomson regards the Minyai of Orchomenos as Pelasgians and those of Iolkos as "Minoanized" Greeks, that is to say, of Greeks who had assimilated Cretan culture. Iolkos was not far from Sesklo and Dimini, the typical sites of the first two cultures of Thessaly, which were notable for their painted potteries. Thomson attributes the Dimini culture to the Tyroidai and a related group (the Lapithai of northern Thessaly). The Early Helladic cultures of mainland Greece and the early culture of the Cycladic islands Thomson rather confidently attributes to the Carians and Leleges, peoples closely related to the Cretans and the Lycians and Lydians of Asia Minor.

Cadmus, the founder of Thebes, was variously regarded as a Cretan, a Phoenician or an Egyptian. By one tradition, he stemmed from Hellen and Deucalion. The latter, a king of Thessaly, with his wife constituted the only human couple of an iniquitous race who survived a great deluge visited on Greece by Zeus, their ark coming to rest on Mt. Parnassus (the Greek version of the legend of Noah). An oracle commanded the couple to restore the human race by "throwing the bones of their mother behind them." Regarding the earth as their mother they cast behind them stones, from which sprang the new race of men and women. Tectamus, a great grandson of Deucalion, came from Thessaly with Aeolians and Pelasgians and founded a new regime in Crete. It was Cadmus who slew a dragon and sowed its teeth in the ground; from them sprang armed warriors. They fought each other, as Greeks were wont to do, until only five survived to found the Theban royal families. A great grandson of Cadmus was Oedipus, who slew his father and married his mother, thereby lending his name to a special complex of the modern psychoanalyst.

The sister of Cadmus was Europa, made famous by several of the great painters. Zeus, in the form of a bull, carried her off to Crete, where he begot by her Minos, the legendary king of Crete. She married Danaüs, grandson of Zeus and Io, an early member of the "long pedigree" of Perseids established at Argos. In this line was Pelasgos. Unfortunately, we have no space for the legends of Io, the fifty daughters of Danaüs and the fifty sons of Aegyptus. A great, great granddaughter of Danaüs was Danae, who when imprisoned by her father in a brazen tower was visited by Zeus in the form of a shower of Gold. Ruben's picture of this colorful event came to the Ringling Museum at Sarasota, Florida. Danae was the mother of Perseus. The wife Leda of a grandson of Perseus was the mother of Castor and Pollux, the twins who, as the Gemini, were placed among the stars and in the zodiac; also of Helen "of Troy." Leda and her story have been painted by Sodoma, Veronese and Corregio. It would be digressing too far from our subject to tell the story of another "long pedigree", that of Theseus and the kings of Athens.

Shorter pedigrees were those of the "divine-born dynasties of foreigners", who descended from Zeus about 1300 B.C., who married the heiresses to Greek thrones. These included a number of the Greek heroes of the Trojan war. These were probably of Phrygian derivation, or from a related people, and were mostly blonds. The hero Odysseus (Ulysses), in his wanderings after the fall of Troy, visited the Utopian and semi-mythical kingdom of Phaeacia. Here were "friezes of cyanus," a purple ball thrown into the air and caught at a leap by young dancers in time with the music, and the queen by the fireside spinning "sea-purple wool."

Thomson had much to say (pp 237-41) about the use of red ocher, a custom we have often dealt with, the legends connected with the brilliant red fruit of the

pomegranate, which gave the Greeks a word for scarlet; and about the symbolism of red generally. It was Myres who made archaeologists most conscious of the "red-ware" provinces of the Near East. He tells us that the son of the "yellow-haired" Achilles was a "red-head" (pyrrhos). His friend Phoenix was a "redskin." But the word was also applied to apples, to a bay horse, and to the orange-flowered palm tree. The "phoinix" of Homer meant blood-colored, but was used for tanned sailors and "red-skinned" Phoenician merchants. In a subsequent issue, we shall have more to say about the hair and eye coloring of the Greek heroes and gods, whom the Greeks probably made after their own image.

A.S.A. STANDARDS FOR COLOR APPROVED

American Standard Methods of Measuring and Specifying Color, Z58.7.1 to 3, 1951, approved April 13, 1951, have been published by the American Standards Association. They consist of three parts, each one numbered differently so that workers concerned with separate phases may refer to each part separately. This Z58.7 set of standards is a revision of War Standard Z44-1942, taken over for revision by the recently formed ASA committee Z58, Sectional Committee on Standardization of Optics, Francis W. Sears, Chairman, sponsored by the Optical Society of America. The revision was handled by a subcommittee of which David L. MacAdam of the Eastman Kodak Company served as chairman. The three standards are titled as follows:

Z58.7.1-1951, American Standard Mathod of Spectrophotometric Measurement for Color;
Z58.7.2-1951, American Standard Method for Determination of Color Specifications;
Z58.7.3-1951, American Standard Alternative Methods for Expressing Color Specifications.

The first standard states the scope, then sets up seven provisions that relate to spectrophotometric measurement of color: 1, wavelength range; 2, band width; 3, stray radiant energy; 4, nominal wavelength; 5, photometric scale; 6, spectral reflectance; 7, spectral transmittance. This is followed by a discussion, with nine numbered paragraphs.

The second standard sets up procedures for computing color specifications from spectrophotometric measurements in terms of the well-known and widely used tristimulus values X, Y and Z which are based on values for the equal-energy spectrum (and the "Standard Observer") adopted in 1931 by the International Commission on Illumination (380 -780 mμ). Tables of values I.C.I. Standard Source C (380 - 770 mμ) are included for use both by the weighted ordinate (10 mμ interval) method and the selected ordinate method of calculation. Trichromatic coordinates (x, y, z) are given for the spectrum (380 to 780 mμ in 5-mμ intervals). The usual ICI (x,y)-chromaticity diagram is presented as the American Standard Chromaticity Diagram. All illuminations other than ICI Standard Source C are referred to as "nonstandard," and while it is pointed out that sometimes it may be important to use other sources in computation, the result "should not, however, be designated American Standard."

The third standard establishes alternative methods for expressing color in terms of Dominant wavelength, Purity and Luminance; and secondly, in terms of Munsell hue, Munsell chroma and Munsell "value," "by interpolation in tables and charts prepared by the Subcommittee on the Spacing of the Munsell Colors of the

Colorimetry Committee of the Optical Society of America, 1943." It is noted that these two sets of terms specify quantities that correlate more or less satisfactorily with hue, saturation (chroma) and lightness (value), defined as "features of color sensation and perception," but that the Munsell terms correlate somewhat better than Dominant wavelength, Purity and Luminance for opaque, reflecting materials under usual conditions of observation.

There are many things in these standards that need to be studied. In some respects they are wordy and less clear than Z44-1942 which they are intended to replace. In other respects they are an improvement. The limitation they set,* that to comply with American Standard Methods one must do all colorimetric measurement and specification through spectrophotometry, is so extreme and so impracticable, in the opinion of the reviewer, that it will certainly lead to revisions in the standards if they are to become as usuful in American practice as they could be. Omission of direct and full reference to the internationally adopted resolutions of the 1931 (and other) meetings of the International Commission on Illumination, as the basis for these American Standards, is an omission that is confusing. American acceptance of so much of the ICI recommendations for colorimetric practice is so very general that it would have clarified the meaning of some of the American Standards provisions if more direct reference were made as to those parts adopted, and those parts omitted, of the ICI recommendations. (A typographical error in the heading of the last section of the third standard should be noted: "Deflecting" is written for Reflecting.)

However, the committee has worked long and hard to reach a point of agreement and of ASA approval and publication. Dr. MacAdam served as chairman of the sub-committee, and he had on the committee many members who served as representatives of ASA member-associations, firms, or cooperating governmental organizations. Among them were: Carl Z. Draves (for the AATCC); I. H. Godlove (for the Ansco division of General Aniline and Film Corp.); S. M. Newhall (for APA); M. Rea Paul (for ASTM); A. J. Werner (alternate for Corning Glass Works); Wm. F. Little (for Electrical Testing Laboratories); Norman F. Barnes (alt. for General Electric Co.); C. L. Crouch (alt. for IES); W. R. Brode (for OSA); Fred E. Altman (for SMPTE); D. B. Judd (for National Bureau of Standards); and E. K. Kaprilian (for Dept. of Army Signal Corps). (Initials have been used for ISCC member-bodies.)

Later it may be useful to publish a critical review of these standards, but at present it seems enough to let all color workers know that we now have available a set of ASA standards for use in measuring and specifying color. Copies of the set of three standards (15 pp) may be purchased at fifty cents per set direct from the American Standards Association, 70 East 45th Street, New York 17, N.Y.

D.N.

* The standards set this limitation, although the Foreword states that any method may be used for sections 1 and 2 that will provide equivalent results. Specific note is made, however, that "This Foreword is not a part of the American Standard Methods....." Either the note is incorrect, so that the Foreword should be a part of the standard, or only specifications arrived at through spectrophotometry comply with the standard methods.

USE OF MASS MARKET COLOR NAMES

From Spencer Stuart of The Martin-Senour Paint Company we have a copy of a recent letter written to Miss Florence Byerly of Better Homes and Gardens concerning use of the mass market color names compiled by Helen Taylor, Lucille Knoche, and Walter

Granville in the Descriptive Color Names Dictionary recently published by Container Corporation of America. (See News Letter No. 92 for a description). He says:

"We used the Container Corporation Descriptive Color Names Dictionary in naming the new colors in our packaged paint line which we announced this spring.

The reason we used this particular source of color names is that they are commonly understood -- they have a meaning to the average person. We find that other sources of color named . . . . . tend to have "authoritative" color names which the average person or consumer would find it difficult, if not impossible, to pronounce and understand.

Secondly, the Descriptive Color Names Dictionary is based on the Ostwald Color System. Having a systematic coverage of the maximum color gamuts enables us to arrive at a reasonably descriptive name for any color we might ever choose in any line of paint. That is of course a great advantage.

From the standpoint of merchandising, our names are not completely selected from the Descriptive Color Names Dictionary for two reasons. First, some of our colors remained unchanged and the problem of having the paint material changed in name and not in color is too staggering to make the effort worthwhile. Second, certain of the descriptive terms that we found were felt to be unsuitable for particular products. Specifically, some of the names that were appropriate in describing the color of our exterior house paint colors seemed too feminine or dainty or unrelated to the end usage of the product.

For instance, we had to change our number 508, Sand Gray, from the term Bisque and number 528, Shadow Green, was changed from the term Pistachio. This is a very minor factor in my own opinion, but nevertheless it did play a part in our use of the Descriptive Color Names Dictionary and that was what you wanted to know.

The last factor you asked about was whether manufacturers had any feeling about the exclusiveness of the use of certain descriptive terms as color names. Speaking for the Martin-Senour Company, we are not at all concerned about how many people use the same term as long as there is some correlation between the term and the color the term is supposed to describe. We recognize that this correlation must be very general because of the diversified aspect of the paint industry and the home furnishings industry in general. The greater the understanding of the public in general, the more we all shall prosper and benefit through the elimination of mistakes and errors on our part and on the part of the public.

The Martin-Senour Company has over a period of years been very careful to relate our color names to something that is published and recognized. Prior to using the Decriptive Color Names Dictionary, we have used the Maerz and Paul Dictionary of Color, a new edition of which has been published recently.

In 1938 the Martin-Senour Company published its own color dictionary based on our original color system of 1500 samples. That particular dictionary gave color names, the date and place of origin and other descriptive information about the history of the term. It was a widely used item in connection with our own color system of which many thousands are still in use today.

We shall always continue to follow some published and recognized method for naming our new colors. To date the most helpful method is the Container Corporation of America's Descriptive Color Names Dictionary."

Later, Mr. Stuart forwarded to Miss Byerly the following paragraph from a letter written to him by the ISCC secretary in commenting on the more general usefulness of this names work than is implied by the statement that it is "based on" the Ostwald system.

"One thing I might point out is the fact that the names in the Color Names Dictionary are not actually based on the Ostwald system but rather are referred to the samples of the Color Harmony Manual. This is true for this dictionary just as the names in the Maerz & Paul Dictionary are referred to the M & P charts, or as the limit specifications of the ISCC-NBS names are referred to the Munsell notation. In each case the names can be applied to colors without regard to the individual reference charts, although usually it is more convenient to refer directly to the chart used as a reference in preparing each list. Once the several series of charts are interrelated one can use whichever set he has available to understand the names referred to in other series. I raise this point because it really would simplify the color-names work if the interrelationship between samples on various color charts were clearly understood."

Copies of the Descriptive Color Names Dictionary are available without charge to those who own copies of the Color Harmony Manual, and are on sale to others at $2.00 each.

TCCA AGAIN VERY ACTIVE

In our January issue, we described the 1951 Spring Rayon colors, the Spring and Summer 1951 Millinery colors and the men's and women's shoe-leather colors, as announced by Margaret Hayden Rorke, Managing Director of the Textile Color Card Association. During January, the Association released to its members advanced information on the new 1951 Fall Silk and Rayon Colors. These were known as Jewels of Elegance, and highlighted White Diamond, Pink Pearl, Star Ruby, Radiant Sapphire, Cabochon Emerald, Romantic Amethyst, Magic Turquoise and Charm Topaz. In a more subtle and "muted" color note were six Parisian Pastels, named in honor of the French capitol, which celebrates its 2000th birthday this year. The colors, shown in rayon, are: Bonbon Mauve, Aqua Frappé, Étoile Gold, Dragée Green, French Pink, and Paris Haze. Of great interest to stylists is the exposition, Two Centuries of Elegance, spanning the epoch 1715 to 1915. The basic rayon "tone-on-tones" include new developments in the violine range; included are Rose Grape and the lighter harmonizing Camellia Rose. A mauve type is Muted Violet, while a deeper purple is Wild Huckleberry. The 38 fall colors also include Vintage Claret, Appleglow, Maple Fudge, Tropic Beige, Golden Brandy, Viennese Coffee, Orange Paprika, Sienna Spice, Italian Olive, Seamoss Green, Green Clover, Planters Green, Horizon Aqua, Ocean Fog, Minorca Blue, Blue Meteor, Sunrise Blue, Nocturne Blue, and the neutral grays, Slatetone and Charcoal.

Two bulletins were also released during January on the TCCA 1951 Spring Hosiery colors, being issued in a novel new format. These comprise Sunbloom, a "light glowing sunblush"; Dreambeige, a light "animated suntan"; Toujours, a beige; Piquant Beige, a rich "toasty shade"; Moontaupe, a versatile neutral, and Tangola, a warm "spicy tan." The Hosiery Card indicates how the hosiery and shoe colors can be tied together. During the same month the Advance Collection of 1951 Fall Wool colors were issued. Of this group, the Autumn Sun colors contribute a brilliant note. Included were Aspen Gold (a foliage shade); the violine types, Cerise Glow and Purple Leaf; also Orangeberry, Autumn Flame, Forest Aqua, Sunlight Green and Blue Twilight. In a softer register are the Cloudy Pastels: Blushdawn, Cloudy Sky, Mauve Dusk, Moongold, Foggy Green, Ivory Frost, Smoky Pink and Watermist. Of the basic "tone-on-tones," the violines include Capri Violet, Wild Plum, Pink Fuchsia

and Violine Red; others are Burgundy Grape, Red Mulberry, Chateau Claret, and Red Radiance. Other colors, including neutrals, among the 40 shades of the collection embrace Florentine Bronze, Malachite Green, Shadowpine, Russet Ember, Indies Spice, Tawny Ginger, Ink Brown, French Mocha, Blond Sand, Graybirch, Winter Smoke, Chameleon Blue, Blue Amulet, Havana Blue and Flotilla Navy.

Early in February the Association issued to its member-bodies four pages of detailed fashion coordination notes for the women's shoe and leather colors for Fall 1951, grouped as colors for suede and for smooth leathers. Detailed suggestions were given for harmonious combinations with each of a score of colors. We regret that our available space does not permit reproduction of these useful notes. During the month was announced the Revised 1949 Fifth Edition of the U. S. Army Color Card for the Official Standardized shades of Sewing Threads, with two new colors requested by the Quartermaster General of the U. S. Army. These were "Shade B" (U.S. Army Light Taupe) and "Shade C" (U.S. Army Medium Taupe). Also issued in February were the 16 shades of the 1951 Fall Colors for Women's Gloves. From the advance wool collection came the new glove colors French Mocha, Shadowpine, Chateau Claret, Red Mulberry, Capri Violet, Graybirch, Ink Brown, Russet Ember, Ivory Frost, Smoky Pink, Moongold, Autumn Flame and Sunlight Green. Repeat colors were Admiral Blue, Maple and Country Beige.

In March came the collection of 18 Fall Millinery Colors for 1951. All of these, except four repeated ones, came from the Association's 1951 Fall Woolen Card, five from the Cloudy Pastels, four from the violine range; also Red Radiance, Ruby Claret, French Mocha and several others. Of these 18 colors, half appeared also in the fall glove collection. The latter made their appearance in a distinctive new format. Besides black, white and chamois, the following colors were included: Ivory Frost, Smoky Pink, Graybirch, Country Beige; French Mocha, Shadowpine, Red Mullberry, Capri Violet; Maple, Ink Brown, Chateau Claret, Admiral Blue; Moongold, Russet Ember, Sunlight Green, and Autumn Flame. Here semicolons mark the separation of the groups into pages, each containing harmonizing colors. In this month came also the regular edition of the 1951 Fall Silk, Rayon and Woolen Cards, following up the advance confidential information released earlier to members.

Late in March we received announcement of the election at the annual meeting on March 29, of the 1951 officers and directors of the Association. Previously reported directors who were re-elected, all presidents or executives of textile or dyestuff organizations, were: J. Diephuis, J. L. Foreman, C. F. H. Johnson, Jr., W. R. MacIntyre, J. F. Marble, R. A. Ramsdale, A. Schwab, R. E. Tilles, Sr., H. C. Van Brederode and J. F. Warner. Newly elected directors were Wilfred J. Fullerton, Director of Fabric Development, Dan River Mills, Inc., and Henry A. Hafner, President, Hafner Associates, Inc.

The Directors at the same meeting elected the following officers: President, Roy E. Tilles, Sr.; 1st Vice-Pres., Armand Schwab; 2nd Vice-Pres., John F. Warner; Treasurer, Henry C. Van Brederode; Secretary and Managing Director, Margaret Hayden Rorke. The interesting summary of Mrs. Rorke's annual report would require more of our space than we have available. We note there, however, the steady growth from less than 100 members in TCCA's first year (1915-16) to 2126 at the close of 1950. During the year, 193 new members were gained, 95 of them in foreign countries. Mrs. Rorke paid tribute to the "Color Guard," the 26 firms who were in the vanguard of the Association's early and continued progress.

COLOR IN GARDNER APPARATUS

The recently released catalog, "Testing Instruments for the Paint and Other Industries," issued by the Gardner Laboratory Inc., Bethesda, Md., contains besides material on many instruments of the paint industry, several pages of descriptions, illustrations of color and appearance instruments. Two pages are devoted to portable gloss and reflection meters. Other items include the Hunter Multipurpose Reflectometer and accessories, the Hunter Color and Color-Difference Meter, the Hunter Pivotable Sphere Hazemeter, the Hunter Goniophotometer, the Nickerson-Hunter Automatic Colorimeter for Cotton, Gardner Color Standards, and Chromatic Porcelain-Enamel Standards.

A MEDICAL COLOR PROBLEM

An interesting approach to a psychological as well as a color problem is illustrated in a paper by Bernard Appel, M.D., in Archives for Dermatology & Syphilology, Sept. 1950 (vol. 62, p. 370). Dr. Appel is not satisfied with "decadent descriptive terms" for colors - incidentally also, for sizes (as of lesions). He tells his confreres how badly their descriptions lack "scientific specificity." Exhibits used by him at a medical meeting in Chicago in 1948 are reproduced as evidence for his thesis. He also reproduces in full color the 5R (red) page of the Munsell Book of Color. He then goes on to show that the answer to the problem, whose conventional solution he decries, is the ISCC-NBS system of color names (color descriptions). In doing so, Dr. Appel demonstrates that he is a good "practical psychologist" as well as a progressive dermatologist.

REPRODUCTION OF COLOR

We recently received under this title reprints of two papers by (Professor) Arthur C. Hardy and F. L. Wurzburg, Jr., beautifully illustrated in color. These articles appeared in Interchemical Review, vol. 9, nos. 1-2 and 3, published by The Research Laboratories of Interchemical Corporation. These are interesting members of the series of papers which began in 1935 with Interchemical's fine "Three Monographs on Color." Already in 1937 appeared a paper on "The Theory of Three-Color Reproduction," in J. Opt. Soc. Amer., by the same two authors. Two other papers by them appeared in the same journal in 1948; and a paper by Hardy and E. C. Dench, on an electronic method for solving simultaneous equations, of interest in connection with the presently reported work, appeared in the same year. Shortly after the final draft of the papers under review was completed, it was announced that the RCA Victor Division of Radio Corp. of America was entering the field of precision color reproduction equipment for the graphic arts. RCA will undertake a comprehensive program intended to perfect and make available to the industry the precision-reproduction and time saving advantages of the electronic correction apparatus described in the articles. The program includes the development of the "flying-spot" scanning techniques mentioned by the authors.

The 1935 monographs marked the beginning of Interchemical's extensive investigation aimed at placing color reproduction in the printing field on a scientific basis. The authors and their collaborators apparently believe that, by the use of the methods described in the paper, four-color process plates of high fidelity can be made "almost automatically," thereby avoiding the difficulties and uncertainties of conventional procedures.

It would be folly for the Editor to attempt to review for our readers the scientific principles and methods of the papers, for even the experts cited above rely greatly upon their excellent illustrations to put across their ideas to the uninitiated. And color, like the children of past generations, must be "seen and not

heard" (by spoken- or written- words). The reviewer will content himself with an abbreviated table of contents and brief description of illustrations, referring readers to the original articles.

The first article begins with the historical development of the subject; it goes on to the first color plates, the impact of photography, the first and second types of "correction" along with Maxwell's ideas. It ends with masking techniques. The front cover demonstrates the additive mixture of Maxwell's three "primaries," red, green and blue. Where they overlap in pairs are seen the "subtractive primaries," minus red (cyan), minus green (magenta), and minus blue (yellow). In Figure 1 are shown yellow, magenta and cyan impressions along with the full 3-color reproduction of a scene. In Fig. 2, absorption of red, green and blue light by process inks is shown; where they all overlap, the color seen is nearly black. Fig. 3 shows "black-and-white" negatives and positives of the method of color photography proposed by Maxwell. On page 8, it is pointed out that even Maxwell recognized the inaccuracy of his over-simplified analysis, sensing the need of some sort of color correction. Fig. 5 shows schematically the spectral reflectance of three ideal inks for color reproduction. A fold-over insert shows illustrations of electronic color correction. The plates used to print them were prepared from electronically color-corrected separation images (without any handwork at any stage). Opportunity is given to compare the original colors with their reproductions. Examination of the progressive proofs shows that black is carried (by the black plate) only where it is required in the final reproduction, and that, wherever black is to appear in the reproduction, the proper amount of chromatic color has been automatically removed from the color plates.

Fig. 6 (second article) shows how photoengravers reproduce continuous tones by means of structural (dot) images. Figures 7 - 11 show the light component colors of a 3-color process, and the text of pages 14 - 15 explain the process, giving the fractional areas of each which are required (expressed in simple algebraic formulas). The next section deals with the electronic device which controls the ensuing steps: it is called the "simulator" or a "sort of electronic proofing press." The function of the black plate is next explained, and illustrated in Figures 12 and 13. Finally, a typical procedure and the scanning machine are described briefly. The back cover gives a 20.X enlargement of a small section of the 4-color reproduction in the fold-over or "pull-out." Viewed close, one does not "see the forest because of the trees" (the individual dots); but viewed at a distance of 15 to 20 feet, the head of an Indian is revealed in the carnival scene. We believe that a perusal of these articles will cause readers to want to investigate the process further.

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