

INTER-SOCIETY COLOR COUNCIL

NEWS LETTER NO. 91

NOVEMBER, 1950

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ADI APPOINTS ADDITIONAL DELEGATES

Manderfield, Henry P.

We are glad to welcome as additional delegates the following persons to represent the American Designers' Institute: Bruce Kamp, Chairman Philadelphia Chapter; Stewart W. Pike, Camden, N. J.; and Paul MacAlister, National President, Mrs. Ellen Glass, and Harold Reynolds, all of Chicago.

NEW INDIVIDUAL MEMBERS

We are glad to welcome the following, who were elected to individual membership at a meeting of the Executive Committee on October 27, 1950:

Carolyn M. Baber, Veterans Administration, Washington, D. C., interested in color coordination of various building materials;

Jacob L. Barber, Jr., Engineer, Research and Development Laboratories, Fort Belvoir, Va., interested in problems of camouflage, color measurement, and systems of color specification, control and reproduction of color;

Thomas E. Blumer, Research Dept., of the Continental Can Co., Chicago, Illinois, interested in establishment of standards and tolerances for lithographic inks, in the study of the effect of processing upon the color of various foods and ultimately in the color matching of inks;

Ruth Kerr Fries, New York City, style analyst and director of the Calf Leather Division of the Tanners' Council of America, Inc., interested in all technical work concerned with changes in tanning methods, etc., application of knowledge of the nature of color in specific merchandise as related to production, selling, and consumer acceptance, also in industrial use of color for factories and in their products; member, TCCA and British Colour Council;

R. M. Hanes, Institute for Cooperative Research, Psychological Laboratory, the Johns Hopkins University, Baltimore, interested in effects of color on apparent size, distance; effects of contrast on visibility and acuity; effects of environment on performance and attitude; member APA;

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MMB
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RWH

Martha E. Jungerman, Philadelphia Textile Institute, interested in dye research and textile coloring, its theory and application;

Bernard R. Koenig, Philadelphia Textile Institute, interested particularly in better coordination between the aesthetic and the scientific approaches to color, member, AATCC, ASTM, OSA.

ISCC 1951 MEETING Deane B. Judd, Chairman of the Program Committee for the 1951 meeting, has reported preliminary plans for the Washington 1951 meeting to the recent meeting of the Executive Committee. A Discussion Session, to include committee reports will take place in the morning, to be followed with a brief Business Session at which reports will be received from chairmen of delegates from each of our member bodies. In the afternoon there will be a Technical Session: COLOR IN GOVERNMENT. This will consist of three parts, as follows:

I. Color Standards for Paint, under the chairmanship of E. F. Hickson, who is chiefly responsible for the new Federal card for paint. There will be discussions of four aspects of the paint work from different parts of the Government. Speakers will discuss such widely different subjects as the Federal Color Card for Paint, interior and exterior paints for public buildings, the specifications of color and gloss for paints, and color as used in Veteran Administration hospitals.

II. This part of the program will discuss color problems in the Armed Services and there will be brief discussions of problems met with at the U. S. Naval Submarine Base, by the Army Engineer Board, in the Air Force, and at the Bureau of Ships.

III. This part will cover a number of miscellaneous color studies in Government. They will cover discussion of color standardization in relation to agricultural products, the inspection of textiles for color, the NBS standard fading hour, and the color standards that are issued by the NBS. As far as possible the speakers will show by demonstration rather than by word description what the problem is and how it is being answered.

In the evening the National Bureau of Standards will hold "Open House" for the group, particularly in the Photometry and Colorimetry Section.

The program sounds as if it should be of particular interest to all of our delegates and members. We hope that by giving you the information this far ahead many more than usual will be able to attend this annual meeting of the Inter-Society Color Council. It is to be held in Washington at the invitation of the National Bureau of Standards in celebration of their 50th anniversary.

ISCC 1952 MEETING Under date of November 1, we received the following report from E. I. Stearns, Chairman of the Committee on Arrangements for the 1952 meeting: Color in Science, Art and Industry will be the underlying theme. This meeting, to be held in February of 1952 - year after next - in the Hotel Statler, New York City, will be a three-day session and will involve both talks and exhibits. It is planned to have a wide representation and this will be accomplished in the talks by inviting only one man from any one member group. Invitations will be sent to each member body to furnish an exhibit to illustrate the type of color problem, either solved or unsolved, which is found in its work.

The following committee has been appointed to make the arrangements and already has held one committee meeting to start planning: Elizabeth Burris-Meyer, F. G. Clark, C. L. Crouch, Norman Macbeth, Gladys Miller, Boyce Nemec, Oscar Smiel, E. I. Stearns and Scott Wilson, with I. A. Balinkin and Dorothy Nickerson serving ex officio.

E-12 TO HOLD MEETING FEBRUARY 1951 The American Society for Testing Materials, one of our member bodies, is organized into a great many committees. Many of these concern specific products, as D-1, Paints; D-2, Petroleum Products and Lubricants; D-12, Soaps and Other Detergents; D-13, Textiles; and D-20, Plastics.

A few years ago, M. Rea Paul, chairman of ASTM delegates to the ISCC, conceived the idea that a new committee should be organized that would cut across all groups within the ASTM that deal with appearance problems. The resulting committee, E-12 of ASTM, will hold its 1951 meeting at the National Bureau of Standards on February 27, the day before the ISCC meeting. All delegates and members of the Council are cordially invited to attend. Conversely, members of E-12 will be very welcome to attend meetings of the ISCC on February 28.

The theme of the meeting will be "Appearance; its Description, Measurement and Specification, a study of what is being done by others and what needs to be done." The morning session will open with a report by Richard S. Hunter, chairman of subcommittee 1 on terminology. He will discuss ASTM requirements for appearance terminology. His talk will be followed by reports of work now completed or well under way that should be taken into consideration in planning the work of E-12. These will consist of discussion of the following subjects, preferably by someone closely connected with the work of the sponsoring group: ISCC on Color Terms Report; OSA on the Colorimetry Committee Report; ICI, Terminology and Standards in the Materials-Appearance field; ASA, Standards Affecting the Appearance of Materials; IES, Nomenclature and Standards; AATCC, Methods and Standards for Appearance Properties of Textiles. In the afternoon the work of ASTM standing committees on appearance properties of materials will be discussed by representatives of various committees. There will be a brief business meeting to be followed by an illustrated lecture by Ralph M. Evans, "Some Psychological Factors of Appearance." This is the lecture Mr. Evans prepared and gave as a part of the IES Color Committee Report at French Lick in September 1949. The evening will be held open for committee meetings of both E-12 and of the ISCC.

PHILADELPHIA-WILMINGTON COLOR GROUP This group met for an informal dinner on November 9 at Alden Park Manor, Germantown, Philadelphia, Pa. After dinner the group adjourned to the Philadelphia Textile Institute, Henry Avenue and School House Lane, in Germantown, where they were treated to a talk on Color in Plastics by Mr. George W. Ingle, of Monsanto Chemical Co., (Plastics Division).

Mr. Ingle was graduated from Colgate University in 1938 and received his Master's Degree from the Institute of Paper Chemistry in 1940. Since then, he has been with the Plastics Division of the Monsanto Chemical Co., first as a cellulose chemist, later as Color Physicist, and Operating Superintendent of the Color Laboratory. In 1949 he organized their Color Research Group which he directs at present. He is well known throughout the color industries as a member of ASTM, AATCC, ACS, and the Inter-Society Color Council. His most recent publication is the chapter on Color Measurements in The Encyclopedia of Chemical Technology. For the meeting he

presented an informal review of some of the most interesting problems, technics and products he has met in his work on Color in Plastics. The group were indeed fortunate in this opportunity to meet and hear Mr. Ingle.

We understand, from a communication from Mr. S. C. Kelton, Jr., Secretary-Treasurer of the group, that the following meetings also have been planned. In mid-January, Color Television; for March 1, Printing-Ink Color Problems; for a Friday in April, Spectrophotometry (jointly sponsored with AATCC).

CALIFORNIA COLOR SOCIETY

This color society affiliate of the ISCC announced in September that, beginning with October, its meeting would be held on Thursday instead of Wednesday evenings, as in the past.

For Thursday, November 2, there was scheduled a demonstration of the Hardy-General Electric Recording Spectrophotometer by Mr. Phillip F. O'Brien, Asst. Professor and Junior Engineer at U. C. L. A. The demonstration and explanation of the use of the instrument in measuring absorption curves which lead to mathematical specifications of color, took place in the Gage Laboratory, Temporary Engineering Building, U.C. L.A. To better explain the I. C. I. system, widely used in the photographic, dye, textile, paint and other industries, Mr. O'Brien requested members to bring with them to the meeting flat paper and cloth samples which they wished to have measured.

RED EQUALS GREEN

If, as we learned in our early mathematics, "things equal to the same thing are equal to each other," this equation is justified by the evidence passed on by the New Yorker (of October 28, page 58) through Walter C. Granville, well known ISCC member. The item was headed "Our Forgetful Editors," with sub-head "Watch that Next Traffic Light Division," and came from Volume II of the "History of Modern Painting," edited by Albert Skira.

Thus, here, with the object of expressing anguish on this actor's face, he (Van Gogh) envelops it with green . . . green being for him the colour-equivalent of "those terrible things, men's passions." -Page 6.

Here the pageboy's red uniform is purposeful; thus for Van Gogh red signifies "those terrible things, men's passions." -Page 129.

COLOR TELEVISION

Broadcasts in color television, scheduled to begin on November 20 by the Columbia Broadcasting Company, have been delayed by Chicago court proceedings. It had been announced that Arthur Godfrey should be star of the first program, but this had to be postponed.

In fact, there has been so very much talk and misunderstanding about color television that we have prepared the present note and also have asked Dr. Peter Goldmark, long an ISCC member, to tell us in a future News Letter item just how best one can handle the practical details of converting to color - which manufacturers will cooperate, and what television service groups are ready to aid those who may wish to convert early - because of their interest in color. We asked this of Dr. Goldmark before the court injunction, and while the court proceedings change the immediate situation, we hope to have something from him once the situation is clarified.

Meanwhile, for any of our readers who may wish to have a concise but brief and non-technical story of the general status of color television, as it was up to the time

that the Federal Communications Commission issued its order No. 55725, dated October 10, 1950, licensing the Columbia Broadcasting Company to begin color broadcasts on November 20, 1950, we refer you to a report of the Advisory Committee on Color Television to the Committee on Interstate and Foreign Commerce of the United States Senate. The report was presented by Mr. Johnson, Senator from Colorado, to the Senate on July 14, 1950, and ordered to be printed by the U. S. Government Printing Office (Washington 25, D. C., 63 pages, 20 cents). It was prepared by a committee appointed by Dr. E. U. Condon, Director of the National Bureau of Standards, in reply to a request (May 20, 1949) by Senator Johnson to Dr. Condon for a report by a "small group of scientific persons of repute, none of whom are employed by or have any connection directly or indirectly with any radio licensee or radio-equipment manufacturer." Such a report should remedy "the woeful lack of authentic and dependable information on this subject."

The report represents, in its own words, an independent appraisal of the present status of color television in the United States and takes into account observations of the black-and-white television service now offered to the public as well as demonstrations of three color-television systems proposed for public use by Color Television, Inc., the Columbia Broadcasting System, and the Radio Corp. of America. The report is confined to technical factors, expressed so far as is possible in nontechnical terms. It is organized into six chapters: Chapter 1 outlines the activity of the committee, describes the committee's approach to its assignment, and sets forth some basic conclusions; Chapter 2 analyses color-television service in general and lists the apparatus and performance characteristics by which competing color systems should be judged; Chapters 3, 4, and 5 describe respectively the CTI, CBS, and RCA systems; Chapter 6 compares the three systems. The report is signed by the following committee members: E. U. Condon, chairman, S. L. Bailey, W. L. Everitt, D. G. Fink, and Newbern Smith.

Several auxiliary reports, Annex A through E are included. One of these is a report on tests of flicker in color television, prepared by T. H. Projector of the National Bureau of Standards, another is a report on the Fidelity of color reproduction of the CBS and RCA systems prepared by D. B. Judd, L. Plaza, and M. M. Balcom of NBS. In this latter report an index of color fidelity is developed which takes into account the average discrepancy between test color and its rendition. Kodachrome, correctly exposed scored 69 by means of this index, while CBS for normal transmitter operation scored between 71 and 72 for four tests made in January 1950, and RCA scored 63 and 59 on two tests made February and March 1950. At the time of the tests it was noted that the CBS was sufficiently developed to give trouble-free operation at this level of color fidelity, while the RCA system was not shown at that time to be sufficiently developed to yield these results without constant expert attention to the receiver.

For anyone really interested in color television it is suggested that the report of the Condon Advisory Committee on Color Television is well worth studying. We have checked with the U. S. Government Printing Office in Washington, and find that at present they have a good supply that may be purchased at 20 cents each from the Superintendent of Documents.*

D. N.

COLOR The following account of the demonstration and press conference in
HARMONY The Plaza, New York, on August 15 was written by color-consultant
MANUAL Faber Birren, who was present, at the request of the Editor:

*/ Note: See page 13 for P. S. on Color Television.

Announcement that the Martin-Senour Nu-Hue system, developed by Carl Foss, has been formulated to match the 943 colors of the Container Corporation Color Manual is real news. There has long been need for a line of paint colors geared to a scientific gamut of the world of color. And Ostwald principles seem to be the ideal conception for such an accomplishment.

The Color Manual, which is being used by more than 1000 industrial concerns, is based on a spectrum of thirty colors, each of which is broken up into about 30 more intensities and values. The Container Corporation has devised loose-leaf charts on which removable color chips are arranged for each color group. One side of the chip is glossy, the other, dull to show the effect of flat and enamel paints. Each card lists the number of a card of complementary color chips to enable the user to work out decorator harmonies at standard packaged prices. The paint dealer has a recipe file for each prescription and paint is electrically mixed right in the shop. Regardless of how many different orders are made for the same color, the hue value and intensity will always be satisfactorily exact.

Those who have employed the Color Manual recognize it as not only the most beautifully devised range of hues, but surely one of the most practical and well balanced. In the writer's own experience, all of his major accounts use the system. Thus in problems of color definition and color coordination there is remarkable simplicity and convenience. It is an easy matter to work from reliable standards and to carry out color projects, plans and correspondence with facility. And now that the same excellent colors may be duplicated with paints in matt, semi-gloss and gloss finishes, a lot of time, effort and expense may be saved.

In the specification of colors for industry, schools, hospitals -- and homes -- the writing of color specifications can follow good scientific practice. The theory of Ostwald is directly plotted. From here paints may be specified with little or none of the hazards of inaccurate matching. Nor does the color planner need to put up with the bother of creating swatches of his own -- always a time consuming and messy operation.

In consumer goods fields the same convenience are served in color choice and arrangement. The steps from conception to visualization to execution are in straight 1, 2, 3 order.

The writer extends his congratulation. To him, and no doubt to many others, the world of color has a new and broadly useful "instrument" to smooth the formerly devious routes of color organization.

F. B.

MACHINE REPLACES ARTIST'S PALETTE

This is the title of an account dated November 4, written by Ted Cox of Wm. R. Harshe Associates, Inc., of an artist's use of the Color Harmony Manual and the paint colors coordinated with them by the Martin-Senour Paint Company:

For the first time in history, a noted artist has completed a large-scale mural without mixing a drop of paint. The artist is George Harris. His mural in the lobby of the San Francisco Chamber of Commerce building was unveiled in September. Harris used the Ostwald color system as presented in the Container Corporation Color Harmony Manual, and obtained machine-mixed colors from the Martin-Senour Paint Company of Chicago.

The Chamber of Commerce building mural depicts the growth of San Francisco. Gold mining activities, ox carts and stage coaches at one end illustrate the early days of the city. The pony express, cable cars, Chinatown, Fisherman's wharf, and other landmarks appear elsewhere. Once the plans and designs are completed, Harris consulted the 943 chips in the Color Harmony Manual to select his hues, tints, tones, and shades. When his selections were made, he simply wrote down the formula numbers of the chosen color chips, along with the amounts needed, and ordered the oil paint from the Nu-Hue division of the Martin-Senour Company of Chicago.

Martin-Senour had just completed years of research to match the 943 color chips of the standard color system with precise paint formulas and was preparing to announce this pioneering coordination in New York and Chicago. Advance formula cards were flown to Ken Collins, the paint company's distributor in San Francisco. The paint was machine-mixed and delivered. It is apparently the first occasion in the centuries-old history of art where the machine age has supplemented the artist's palette.

Harris referred to a scale diagram of the mural dotted with numbers taken from the Color Harmony Manual. "The numbers correspond to specific colors. I'm using the Ostwald system of color so that all the colors are keyed to harmonize, somewhat similar to the composer's use of the piano keyboard, for musical composition."

"It was a great time saver," he said. He recalled an occasion when he was a student of Hilaire Hiler. Mr. Hiler was doing the San Francisco Aquatic Park murals. "Hiler spent half his time mixing the paints," he recalled. On another occasion, when Diego Rivera was doing his mural at the California School of Fine Arts, Harris recalled that, "as a student, I spent days grinding pigment for Rivera."

Harris reported that "having the paint mixed by the company saves time and you can depend upon greater accuracy in mixing."

The artist spent about two months working on the plans, but once the designs were completed the actual application on the wall took less than three weeks.

"We laid out the color areas with chalk and snap line," he said. "Then the details were superimposed over the color areas which had been already painted."

THE ARTIST'S Accompanying the preceding item, we add here the statement of
ACCOUNT the artist himself:

"There is no reason why the artist, today, cannot, and should not take advantage of the technical advances of science if he can use them to aid him in the creation of a work of art. He should be a pragmatist in the true philosophical sense of the word.

"I have been using the Container Corporation of America's Color Harmony Manual since I first acquired the 1942 edition. I have found the system invaluable in experimental and color construction, and especially useful as an ideal teaching aid. I used the Manual in teaching color in the Graphic Art Department at Stanford University and also when I taught design and the Ostwald color system at the California College of Arts and Crafts.

"In working out the color harmony for the San Francisco Chamber of Commerce mural, I used the 1948 edition of the Manual. I found the larger size chips of the 1948

edition to be a distinct advantage over the smaller size chips of the 1942 edition. It might be interesting to note the manner in which I acquired the 1948 edition. Three years ago or more I introduced the Ostwald color system to my students among the inmates at Alcatraz Island prison, using the 1942 edition of the Color Harmony Manual. Last Christmas I was greatly pleased to receive the 1948 Manual as a surprise gift from my students and Father Clark, chaplain of the prison.

"The Color Harmony Manual is as great a boon to the painter, as the modern piano keyboard is to the musician and composer; nor is it any more rigid for the creative interpretation of the painter than the piano was for Chopin or Ravel.

"The entire procedure of color planning and application went very smoothly for my mural in the San Francisco Chamber of Commerce thanks to the enthusiastic assistance given to me by Mr. Walter Granville of the Container Corporation of America's Color Standards Department and the prompt deliveries of the pre-mixed pigments by the Martin-Senour Company's San Francisco distributor, Ken Collins.

"Actually, the early stages of the color planning for the mural were conducted by air-mail correspondence with Mr. Granville in Chicago. With his aid I was able to count upon getting the specially-mixed pigment in time to meet the specified deadline."

(signed) George Harris

CANADAINK This is the title of a small (4 page) house-organ edited for Canada Printing Ink Co., Ltd., 15 Duncan St., Toronto 1, by long-time ISCC member Chas. R. Conquergood. We have found many items in this serial reflecting Mr. Conquergood's interesting personality. One of his recent bye-lines especially caught our attention; it is "Color makes the world go by." How true! Another interesting item embraces a series of blotters, on whose face the blended colors of the costumes of two human figures are shown in printing inks along with the individual colors. Examples are: "Combines Operations" (two wrestlers, one inverted, in Tyrian Purple #603 and Spectral #20); "They Blend Together" (two dancers in Poppy Red #42 and Lemon Yellow #5); and "A Harmonious Duet" (two singers in Emerald Green #8 and Lemon Yellow #4).

GARDNER The announcements sent to us in June inadvertently escaped our
ITEMS attention. They concerned the Hunter Pivotable-Sphere Hazemeter, for measurements of haze and luminous transmittance of transparent plastics and other materials according to ASTM Method D 1003-49T; and the Elcometer, a new light-weight vest-pocket size dry-film thickness gage. For information on these instruments write to the Henry A. Gardner Laboratory, Inc., 4723 Elm Street, Bethesda, Md.

CERAMIC During August to October, 1950, Ceramic Industry, a leading
INDUSTRY ceramic journal, featured a special section, "There Is More to
AND COLOR Color Than Meets The Eye." The articles, while having special interest to the ceramic industries, contain much up-to-date material on color uses, problems, fashions, preferences and acceptance.

SAFFRON The pre-Hellenic ("Pelasgian") Greeks came to Greece in two groups,
AND AMBER one overland, the other by sea. The first group worshipped Athena, while the second had a cult of the bear-and-bull goddess identified with Artemis. At Brauron, on the Attic coast, was a temple of Artemis Brauronia. Here, before marriage, the girls, clad in saffron performed a bear

dance. The legendary progenitor of the Arkadians was Arkas, the "bear man." Shortly before his birth, his mother, a companion of Artemis, had been changed into a bear.

Saffron enters too into an important legend of the period of the second (main) siege of Troy. When the Greek fleet of a thousand ships was assembled at Aulis, it was held up by storms, which a prophet interpreted to mean that Artemis was angry, and could only be placated by the Achaean king sacrificing his daughter. So Agamemnon prepared to slaughter Iphigeneia, who was clad in saffron; but at the last minute she was spirited away and replaced at the altar by a hind, bull or bear (according to different versions). This legend has been celebrated in the paintings of many masters. Iphigeneia was carried overseas to Tauris (bull-land = the Crimea), whose king, Thoas was in the habit of sacrificing to Artemis every stranger who landed on his shores. But Iphigeneia became the priestess of the goddess. Many years later her brother Orestes, arrived, in exile for the murder of his mother. The king handed him over for sacrifice, but his sister, discovering his identity, disguised him in the sacred saffron vestments of the goddess and on the pretext of taking the goddess' image down to the sea to wash it, embarked with him on his ship and sailed for home.

The worship of the god Apollo came to Greece from southwest Anatolia. In some manner, his worship was connected with the magical yellow amber, but in a way for which the Editor has not been able to detect the details. He suspects, however, that the priests and devotees of the god demanded offerings of amber, which came overland all the way from Denmark, hence was very scarce, to gain the favors of the god, using this means of supplementing the gains from barter of bronze articles, jewelry and brightly colored beads. The use of amber in later (Mycenaean) times, was a non-Mycenaean culture-element, which came from the north along with the megaron, short-sleeved tunics and the safety-pin (fibula).

FARNSWORTH We recently received offprints from the pen of our well-known member
ARTICLES Lt. Commander Dean Farnsworth. These form sections 10 (chapter II) on Illumination, and 48 (chapter VI) on Color Vision. These appeared in the "Handbook of Applied Psychology," Fryer and Henry; published by Rinehart & Co.; 1950.

The latter article is very brief ($2\frac{1}{2}$ pages) but is a straightforward and authoritative treatment of the subject, in which the author has done much good work. The former article is longer; and a good idea of its contents may be gained by giving a list of the section headings. These are: Measures of Light; Variables of Vision; Illumination Levels; Acuity Relations; Time Relations; Brightness Relations; Contrast Discrimination; Chromaticity Relations; Visual Defects; Reading; Factory Work; Brightness Contrasts; Distribution; Spectral Quality in Relation to Acuity; Chromatic Discrimination; Injurious Illuminants; Eye Protection; Achromatic Factors; Chromatic Factors and Optimum Conditions.

A.I.A. With this issue of the News Letter is a report of the color meetings of the American Institute of Architecture held in Houston, March 1949. These reprints have been made available through the Department of Education of the A.I.A., and contain, in addition to reports of the color sessions, a bibliography that we believe ISCC members will find useful. Additional copies of this A.I.A. report may be obtained by purchase from A.I.A. headquarters (1741 New York Avenue, N. W., Washington 6, D. C.) at one dollar each.

In regard to the bibliography, it is suggested that this could be kept up to date for possible future revision if News Letter readers would send to the ISCC secretary full references to any books or articles that they believe should be included. With cooperative effort we could keep this list up to date and be sure that any omissions in the present list are corrected in future revisions. References should be sent on 3" x 5" cards, one reference to a card, in the form used for the A.I.A. publication.

COLOR IN DESIGN REPRINT Also with this News Letter is a reprint of an article from Electrical Manufacturing, October and November issues, which has been supplied at our request by courtesy of the editors of Electrical Manufacturing, through Alex E. Javitz, associate editor. Sometime ago Mr. Javitz made contact with the ISCC secretary. His journal wished to carry an article on color that would provide authoritative basic information on the science of color, and a practical grounding in working color systems and methods of color specification, production control and tolerances. Dr. I. A. Balinkin, chairman of the ISCC, was persuaded to prepare such an article under the title Fundamental Approach to Color in Design. This paper was published in two sections, and has been reprinted as you will see from your copy. We wish to thank Electrical Manufacturing for these reprints, for we believe it is a service to our members to supply such information.

The News Letter editors will be glad to receive readers' comments in the material included in the A.I.A. and Balinkin reprints, and their opinions regarding the general usefulness of supplying copies of such reports to the ISCC membership.

ISCC-NBS COLOR NAMES CONTINUED We are continuing herewith a tabulation of the ISCC-NBS descriptions of the colors corresponding to common color names which was begun in the September 1950 News Letter (No. 90). For the principles utilized in these designations, please see that issue. For the following names, we have had the benefit of a September, 1950, editorial revision in some minor details accomplished by a subcommittee of the ISCC Subcommittee on Color Names, the subcommittee of the subcommittee consisting of Foss, Judd, Kelly and Nickerson. The Editor, a member of the main subcommittee, concurs in every case with the 9/50 editorial revisions.

Color Name	Source	Munsell Notation	ISCC-NBS Name
Baby blue	MP.35E2	4.5 B 6.5/1.7	pale blue
Baby pink	TC. 14	6 R 8.5/5	light pink to yellowish pink
Barium yellow	MP.10G2	5 Y 8.1/4.9	pale yellow
Bath blue	CS San. & Bth.*	3 PB 5.2/4.2	grayish blue
Bath green	CS Bath.*	2 G 6.0/4.7	moderate yellowish green
Battleship (gray)	MP.45A4	5 PB 5.7/0.3	medium gray
Bay	MP.7E11	4.1 YR 3.3/4.1	moderate brown
Bay	Hamly	10 R 2.6/6.0	moderate reddish brown
Beaver (brown)	MP.15A6	6.3 YR 4.1/1.3	grayish brown
Beaver of TC	TC.106	8 YR 4.0/1.9	grayish brown to grayish yellowish brown
Beaver, dark	MP.15A9	5.5 YR 3.7/3	moderate brown
Begonia Rose	Hamly	5 R 5.6/11.5	deep yellowish pink
Beige	MP.11C2	4.5 Y 7.8/3.3	grayish yellow

Beige of TC	TC.104	8.4 YR 5.4/3.0	grayish to moderate yellowish brown
Berlin Blue	--	5.2 PB 2.5/10	deep blue
Berlin Blue	Hamly	5 PB 2.6/5.0	dark blue
Beryl	MP.33K2	4 B 6.3/5.1	light greenish blue
Beryl blue	MP.33H2	5 B 7.2/3.7	light greenish blue
Beryl blue	Hamly	5 B 8.0/6.0	very light greenish blue
Beryl green	Hamly	7.5 BG 6.4/8.0	brilliant bluish green
Bice green	Hamly	7.5 GY 5.0/4.0	moderate yellow-green
Biscuit	MP.13B6	9 YR 5.7/2.7	light grayish yellowish brown
Bishop's violet (or purple)	MP.44J6	8.8 P 3.7/6	moderate purple
Bismarck brown	MP.14K9	9.7 YR 4.4/4	moderate yellowish brown
Bisque	TC.201	7.8 YR 6.3/3.2	light brown
Bisque of MP	MP.11A3	7.5 YR 7.6/1.7	brownish pink
Bister (bistre)	MP.15C9	8 YR 3.7/2.7	moderate brown to yellowish brown
Bittersweet	MP.3J12	9 R 4.3/12.7	deep reddish orange
Bittersweet orange	MP.3B12	1.8 YR 5.3/11.2	strong reddish orange
Black (U.S. Army)		9 B 1.7/0.1	black
Blond(e)	MP.13G6	0.7 Y 5.7/3.5	light yellowish brown
Blood red	MP.3L11	6.2 R 4.1/12.5	strong red
Blossom	MP.2F7	4.8 R 7.6/4.3	moderate pink
Bluebird	TC.211	2.9 PB 3.7/6.7	moderate blue
Bluebird of MP	MP.36J9	3 PB 3.7/7.5	moderate blue
Blue flower	TC.11	1.2 PB 6.7/4.6	pale blue
Bluejay	MP.38L12	3.5 PB 2.3/7	dark to deep blue
Blue spruce	TC.131	7.5 G 4.0/2.1	grayish green
Blue spruce of MP	MP.30H7	5 G 4.3/2.5	grayish to moderate green
Bluesteel	TC.112	3 PB 3.1/1.8	grayish blue
Blue turquoise	TC.21	1.9 B 6.2/6.0	light greenish blue
Blue turquoise of MP	MP.25K2	10 BG 6.3/6	light greenish blue to bluish green
Blush	MP.12A7	4.3 YR 6/4.2	light brown
Blush rose	MP.5G4	2 R 4.1/5	grayish red

ON THE GRAY-
NESS OF GREY

An interesting article by Rhys Carpenter in the July issue of the American Journal of Archaeology calls attention to the fact that "grey" in grayhound is not a color adjective. It is connected with Icelandic grey and Irish grech, which mean simply "hound" or "dog." A grayhound is therefore a doggy dog. Similarly, a cockleshell is a shelly shell. Webster says that "grey" is a variant spelling of gray, the former being more common in England; also that "gr^{ey}hound" is rarely written "grayhound," and that it derives from grehounde, grehund, from Anglo-Saxon grighund, akin to Old Norse greyhundr, from grey, a bitch.

Somewhat similar to these terms are "Dutch pink," "English pink," and "Italian pink," which are yellow lakes prepared from fustic or Persian berries with alum and whiting and used in distemper painting. The etymology of this word is unknown. Somewhat more distant are such pigment terms as "yellow carmine," which yields a saturated yellow-red, very unlike carmine. More distantly related still to such terms are words like "butterfly," so-called because the first-noticed species looked like butter when it flew; that is, like a fly of butter-color. Similarly, the "buttercup" has the shape of a cup and the color of butter. From here it is

not far to the classical linguistic paradox: that "blackberries are red when they are green." (See W. D. Whitney's "The Life and Growth of Language"; 1898). Green is here, of course, a synonym for "unripe," and is connected with a root meaning "growing."

It would be interesting to pursue color names and their origins further. We have available space here for only a few. "Night green" is the color of a dye which, unlike older ones, did not lose its greenness under gaslight. "Angel red" was not the supposed color of angel's flesh, but came back to English from the name English Red, which in French is Rouge d'Angleterre. "Buff" was the color of oil-tanned "buff" leather, and derived from Anglaced "buffalo," from Italian "bufalo" and Greek "boubalos," the common Old World ox. "Carnation" originally came from Latin carneus, flesh color. Late in the sixteenth century it was erroneously stated to be the color of the flower carnation, which previously had been called the coronation. "Crimson" and "carmine" came from the ancient dye from the Kermes insect, yielding the Latin kermesinus and carmesinus, from which came the variant cremesinus, later cremesin. "Citrine," like carnation, due to an error no longer has its original color. D. R. Hay gave the name "citron" to the "tertiary" prepared by mixing the "secondaries" orange and green (Brewster's terms). George Field in 1835 used "citrine" instead of "citron." Heather, now a bluish red, originally referred to a congeries of colors, that is, the mottled or speckled appearance of the heathers, the plants growing on a heath. "Khaki" originally meant "dust like." "Tan" was the color of oak-tanned leather from oxhide. While "Lime green" comes from the citrus fruit of the lime tree or the European linden tree, "Lime blue" is the color of a fresco pigment, essentially a mixture of copper hydroxide and calcium ("lime") sulfate. "Malachite green" came from the pigment, used along with rouge by the ancient Egyptians to color the face, whose name was derived from resemblance to the green color of mallow leaves, through Old French melochite from Greek malachē or molochē.

The origin of many other color terms may be found in Maerz and Paul's "Dictionary of Color" (McGraw-Hill). We see here, however, that many of the color names do not have their original meaning. Of course, in so changing they merely echo a common habit of language in general, which is a growing - shall we say "green" - organism; and we should not be disturbed that "cerise" (French for cherry) no longer has a cherry-red color. Thus, "paper" no longer comes from papyrus; a "bank" is no longer the simple "bench" of the money-changer in the market-place, and a "bankrupt" has worse trials and tribulations than having his "bench broken." Also, a "book" is not now a block of "beech"-wood; and "candidates" no longer all dress in white, though after election they may wish to be "whitewashed." A "lunatic's" failings can no longer be attributed primarily to the moon; copper no longer comes mainly from Cyprus nor muslin from Mosul. Perhaps we should not even be upset by Milton's use of "hue" as a synonym for "color," or by the dyer's use of "shade" to mean both hue and color, as determined by his enthusiasm of the moment. For "hue" came from Middle English hew or heow, meaning color or form, in turn from an Anglo-Saxon word akin to the Swedish word for complexion and the Gothic word for appearance.

In these changes of meaning, your Editor is reminded of a story of his college days. A "smart-aleck" (and why Alex and not Bill) student protested that our textbook contradicted the professor's remarks. "Well," retorted the Prof, "I'll have you know I wrote that book five years ago. You've got to give me credit for some progress in five years."

I. H. G.

F. S. ON Since most of the News Letter was already on stencils before we saw the original reports by the Federal Communications Commission, we add this postscript to give News Letter readers the references and let you know that the reports are available on request.

While the F.C.C. reports are mimeographed, and less handy to read or handle than the printed Condon report, they are really the most interesting and informative of the reports seen to date. The Condon report pales in interest and information beside the F.C.C.'s own reports. This is because the F.C.C. makes a detailed evaluation, which the Condon report necessarily does not attempt, of the three systems demonstrated and gives its reasons for adopting the CBS. An evening spent on the F.C.C. reports was for this reader a fascinating experience. Before anyone attempts to judge the situation, he should see these reports, particularly the first one. It will appear on reading them that the F.C.C. has very good grounds for its decision. Many of their reasons are glossed over or omitted in popular discussions.

Copies will be sent on request, without charge. Address: Federal Communications Commission, Washington 25, D. C.: (1) First Report of Commission, Color Television Issues, F.C.C. 50-1064, #54312-9/50. Contains the report itself, 59 pp., list of witnesses, exhibits, separate views of Commissioners Hyde and Hennock, and separate opinion of Commissioner Jones which includes 80 pages of Annex I. (2) Second Report of the Commission, F.C.C. 50-1224, #55725, 6 pp., plus 8 pp. (Sterling), 2 pp. (Hennock). Authorizes field sequential color system.

D. N.

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