INTER-SOCIETY COLOR COUNCIL

NEWS LETTER

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TWENTY-SEVENTH ANNUAL MEETING

Another ISCC Annual Meeting has run its course. Two of the older problems subcommittees and the three new ones met at the Sheraton-Park. The subjects of these subcommittees are all so interesting that one had a difficult time deciding which to visit.

The joint session with Committee E-12 ASTM "Measurement and Specification of Color for Building Materials" was well attended and the discussions (sometimes nearly arguments) were lively. Some panelists seemed vague, yes, even evasive, when questioned concerning color specification and color tolerance specification. Participants lined up on one side or the other of the fence; one taking the stand that they didn't want customers pinning them down that close, the other defending the virtue of unambiguous specification.

Those hardy souls who survived the arduous board meeting, the subcommittee meetings, the afternoon session and the waiters at the Sheraton-Park were treated to a delightful architectural tour by Walter Granville. The audience felt Walter's enthusiasm for "Color in European Buildings."

Committee and Delegate reports (printing industry excepted) preceded the symposia. After hearing the persuasive discussions of "Color in the Building Industry," I couldn't decide whether to use aluminum, porcelain enamel, or ceramics in my new home.

Julian Garnsey brought me sharply back to earth with his "Color for Modern Architecture." When Julian gave the color scientist his due credit I blessed him as the first color salesman who has not claimed to have invented color with all its phenomena and ramifications.

WLR

FOUR NEW BOARD MEMBERS Four new members were elected to the Board for 1958-1959. Only two of them are listed in the January News Letter, D. Noel Obenshain and Francis L. Wurzburg, Jr. Due to my oversight, W. J. Kiernan, duly elected board member was omitted from the list (my apologies, Mr. Kiernan). R. C. Stillman has been appointed to replace Estelle M. Tennis, who retired to California and resigned from the board. Waldron Faulkner suggested that we print a biographical sketch of the new board members in the News Letter. Therefore I introduce you to W. J. Kiernan, D. Noel Obenshain, R. C. Stillman, and F. L. Wurzburg, Jr.

Mr. William J. Kiernan, delegate to ISCC from ASTM. Member of the Technical Staff in the Bell Telephone Laboratories Incorporated.

Color control of organic finishes, plastics and other materials occupy a good deal of his time but he is also interested in the development of organic finishes, solvents and cleaning compounds. He received his Bachelor of Arts degree from New York University after majoring in chemistry.

Mr. Kiernan is a delegate to ISCC from ASTM. He is secretary of Subcommittee X, Optical Properties; of ASTM Committee D-1 Paint, Varnish and Related Products; and secretary of Subcommittee II on Color of ASTM Committee E-12, Appearance. He is Vice-Chairman-elect of the latter committee. Mr. Kiernan is a member of ASA Committees Z55, Gray Finishes for Industrial Apparatus and Equipment; and Z58, Optics; and is an advisory member of Electronic Industries Association Committee CN on Colors and Numbers. He is a member of the American Chemical Society and the Optical Society of America.

Mr. D. Noel Obenshain, delegate to ISCC from TAPPI. Project Leader of Research, Engineering and Design at the Luke Research Laboratories, West Virginia Pulp and Paper Company.

His work has been largely along the line of special apparatus and instrument design. Many of the testing instruments, including gloss meters, opacity meters, brightness meters, and an automatic model of the Chapman Smoothness test, the "Black Widow" bleaching controller, special high pressure, high temperature electrolytic conductivity apparatus and others are commercially available in the pulp and paper industry.

Following high school in 1925, Mr. Obenshain went to work with the West Virginia Pulp and Paper Company at the Covington, Virginia mill in the engineering department. In 1936 he was transferred to Luke, Maryland with the late Dr. Gerald Haywood to design an experimental paper coating machine. In 1944 he was given the job of designing the Covington Experimental Pulp Mill, one of the most complete pilot pumping layouts in the country.

He is vice-chairman of the Testing Division for the Technical Services Group, the Technical Association of the Pulp and Paper Industry. He has given several papers at the technical meetings of the Association.

His hobbies include a photoelectric organ, designed in 1932; a super streamlined automobile built in 1938; thirty years as a boy scout leader and currently the design and construction of a cottage on beautiful Deep Creek Lake in Western Maryland.

Mr. R. C. Stillman, delegate to ISCC from AOCS. Analytical Section Head, Procter and Gamble Company, Cincinnati, Ohio.

Mr. Stillman has spent 25 years on assignments in oil color measurement, color of bar soaps, granules, liquid and edible products. He graduated from Marietta College with an A.B. degree, Phi Beta Kappa in 1929 where he majored in chemistry and mathematics. He joined the Procter and Gamble Company in July 1929 where he worked in development until 1931. From 1931 to 1945 he worked in research, and from 1945 to 1951 in standards. He has been in factory service with the company since 1951.

He is a member of the American Ordinance Association and the Engineering Society of Cincinnati. He is Local Service Secretary, Treasurer, Chairman and Trustee of the American Chemical Society. In the American Oil Chemists Society, he is a member of the Governing Board, member of the Referee Board, member of the Fats Analysis Committee, member of the OCS-ASTM Committee, and chairman of the AOCS Delegation to Inter-Society Color Council.

The Stillman's have four children, three girls and one boy.

Mr. Francis Lewis Wurzburg, Jr., delegate to ISCC from PI. Director of the Interchemical Color Center.

Mr. Wurzburg has been associated with Interchemical's Printing Ink Division in the field of color standardization and color control and, more recently, with the Commercial Development activities of the corporation as a whole. He is now Director of the Interchemical Color Center, a new department in the process of being established to provide basic research, consultation, and information in the field of color for Interchemical's divisions and its customers as well as for others more indirectly allied to its fields of interest.

He has been associated with color, and particularly its use in the graphic arts industries, since his graduation from Yale University in 1932. After a few months with the Hilton-Davis Company in Cincinnati, he joined Interchemical early in 1933 as a chemist, and began work in 1937 as a physicist on an electro-mechanical color-correction device to reduce the hand correction necessary on process printing plates. This work was interrupted by World War II, when Mr. Wurzburg served in the Aerial Photographic Laboratory of the Army Air Corps at Wright Field, but was resumed in 1945 when he was appointed Manager of Interchemical's Precision Color Laboratory. Interchemical's electro-mechanical device, developed by Mr. Wurzburg in association with Dr. A. C. Hardy of M.I.T., was turned over in the Fall of 1950 to the Radio Corporation of America for electronic adaptation and further refinement.

A number of Mr. Wurzburg's inventions in connection with color reproduction have been patented. He is the author of several papers on color printing (mostly as co-author with Dr. Hardy) and is a member of several technical associations devoted to color and optics. He is Chairman of the Color Control Committee of the Packaging Institute.

In addition to the ISCC, he holds memberships in the Optical Society of America, Technical Association of the Graphic Arts, and the American Association for the Advancement of Science. He is also active in the Packaging Institute, the American Standards Association, and the Research and Engineering Council of the Graphic Arts.

TWO NEW MEMBERS ON THE NEWS LETTER COMMITTEE

President Walter Granville has appointed two new members to the News Letter Committee. They are Helen Taylor, Color Consultant, Tanners' Council; and Robert Burnham, Research Psychologist, Kodak Color Technology. Both have been very active in Council activities and both are chairmen of Problems Committees. Helen Taylor is chairman of Problem No. 23 "Expression of Historical Color Usage," and Dr. Burnham is chairman of Problem No. 20 "Basic Elements of Color Education." Both have been prolific contributors to the News Letter in past years. I welcome them to the News Letter not only because they will make my job a lot easier, but also because I enjoy working with both of them.

WLR

NEW MEMBERS

The following applications for individual membership were accepted at the last Board of Directors' meeting held on March 24, 1958.

Associate Individual Members	Particular Interests:
Mr. Fred W. Billmeyer, Jr. E. I. duPont deNemours and Co., Inc. Polychemicals Department duPont Experimental Station Wilmington 3, Delaware	Color Measurement, control and specification; colorimetry and spectrophotometry, coloring of plastics, optical properties of plastics.
Mr. Benjamin Bowden John Wood Company Iorio Court Union, New Jersey	Color in industry.
Dr. Robert W. Burnham Color Technology Division Building 65 Eastman Kodak Company Rochester 4, New York	Color vision research.
Mr. Gordon J. Chamberlin Managing Director Tintometer Limited Salisbury, England	Colorimetry.

Mr. George F. Coady Barrett Division Allied Chemical and Dye Corporation 2112 Sylvan Avenue Toledo, Ohio	Application of spectrophotometry for the objective specification of color, the development of new colors and the matching of competitive material in the Melamine-Urea Molding Compound field. Color difference measurement and specification. Association of color difference to pigment concentration for control and development.
Mr. Roger L. deMontebello 480 Lexington Avenue New York 17, New York	Color photgraphic material, sensitometry, illumination, projection and vision. In addition to color; panoramic stereoscopy, non-topographic photogrammetry and roentgengrammetry.
Dr. Richard O. Edgerton 104 Alameda Street Rochester 13, New York	The use of color in photographic applications.
Miss Ann Franke 446 East 66th Street New York 21, New York	The dyeing of yarns and fabrics. Also color in photography.
Dr. Sylvester K. Guth Radiant Energy Effects Laboratory Lamp Division General Electric Company Nela Park, Cleveland 12, Ohio	Effects of light and color upon visibility, seeing, visual performance, plant growth.
Mr. A. F. Kunze, Jr. 2808 North Orange Avenue Orlando, Florida	Obtaining maximum color correction by efficient methods in printing reproduction.
Mr. Norman Macbeth Macbeth Corporation Post Office Box 950 Newburgh, New York	Color Matching and colorimetry.
Mr. Joseph R. Mango Room 2204, Merchandise Mart Chicago, Illinois	Appreciation of color to consumer home furnishing products.
Mr. Max Saltzman B. F. Goodrich Chemical Company Post Office Box 14 Hawthorne, New Jersey	Small color difference measurement, physical specifications for color, spectrophotometry.
Mr. Hayes G. Shimp, Jr. 866 Willis Avenue Albertson, Long Island, New York	Measurement of color or lack of color in liquids and of reflecting and non-reflecting surfaces.

Miss Estelle M. Tennis 6100 Margarido Drive Oakland 18, California	Interested in all phases of fashion, home furnishings and industrial application of color.
Mr. Scott Wilson 54 East 58th Street New York 22, New York	Volatility of tempera paints, control of dyes used in printing, color trends in the home furnishings field, permanence of dyes, etc.

Affiliate Individual Members	Particular Interests:
Mr. W. C. Brinson 1741 Oakhurst Avenue Winter Park, Florida	Reproduction of color originals by various printing processes.
Mr. Charles D. Cole Specialties Inc. Skunks Misery Road Syosset, New York	Color matching in manufacture.
Mr. Webster H. Edwards E. I. duPont deNemours and Company 3500 Grays Ferry Avenue Philadelphia 46, Pennsylvania	Improving reproducibility of tristimulus colorimeter.
Miss Nettie Hart Raymond Loewy Associates 444 North Michigan Street Chicago, Illinois	Color in interiors, on products.
Mr. William J. Morgan Owens-Illinois 1700 North Westwood Avenue Toledo, Ohio	Evaluation of ceramic colors in respect to durability, color, etc., as supplied by the several vendors, under both laboratory and production conditions. Also, the same, for organic types or decorating materials for glassware.
Mr. John W. Ward Project Engineer Specialties Inc. Post Office Box 888 Charlottesville, Virginia	Industrial applications of electronically aided colorimetry.

THE GODLOVE BIBLIOGRAPHY

Calvin Hathaway, Director of Cooper Union expressed our reaction so well that we have taken the liberty of reproducing his letter.

"April 24, 1958

Mrs. Margaret N. Godlove
ISCC-Godlove Bibliography
Care of Braden Sutphin Ink Company
3650 East 93rd Street
Cleveland 5

Dear Mrs. Godlove:

The Bibliography on Color has just come to me, and I am so overwhelmed by its range and its usefulness that I do not want to put the book on our shelves here without expressing my admiration and gratitude to you, for having conceived and followed through with such a remarkable compilation.

Many, many people will be under great obligation to you, and I know that the consultants and designers who use this Museum will be helped by your work.

Very sincerely yours,

s/t/ Calvin S. Hathaway
Director, The Cooper Union for the Advancement of Science and Art"

AID HOMEFURNISHINGS DESIGN AWARDS

Mr. Harold W. Grieve, National President of the American Institute of Decorators, announced today that 22 awards were presented at the 12th Annual A.I.D. Homefurnishings Design Competition. The awards for outstanding designs made available to the consumer public during 1957 were presented at the 27th Annual Conference of the American Institute of Decorators, at the Sheraton Plaza Hotel, Boston, May 19th through May 21st.

Awards were made in the following categories: floor coverings, wall coverings, furniture and fabrics.

In the floor coverings category (hard surface) Paul R. MacAlister and Flolydia Marie Etting received first award for a translucent, 3-D Vinyl floor covering executed by American Biltrite Rubber Company. Henry J. Muller also received first award for his chips and shavings of cork with vinyl surface, executed by Armstrong Cork Company.

Estelle and Erwine Laverne received first award in the wall coverings category for their vinyl, three dimensional wall covering which was executed by Laverne Originals.

In the furniture division Eero Saarinen was awarded first award for his arm chair in molded plastic impregnated fiberglass shell, cast aluminum pedestal base and foam rubber cushion, executed by Knoll Associates, Incorporated.

Estelle and Erwine Laverne and Laverne Originals also won first award in the fabrics category for "Regatta" handprinted Fortisan fabric.

COLOR ASSOCIATION SPRING AND SUMMER COLORS

The Color Association reports that rich, luscious colors will highlight the Woolen and Worsted and Man-Made Fibers and Silk Forecasts for Spring 1959.

The growing influence of blue and red is reflected in both collections. The vibrant orange and citron tones of Spring 1958 have mellowed, with fresh interest centered on peach and coral, geranium, raspberry and cherry. Blues are clear and bright, ranging from fair sky to true blues. New greens have a delicate blue cast. Both pink and yellow beiges are included and the growing importance of gray is cited. Following the spice tones of Fall are apricot, topaz and copper hues for Spring. Yellows are golden and butter cast. Lilac shades are of secondary interest.

Pastels are refreshing flower tones - light but not pale. The accent colors are vivid and less acrid than those of the current season. Spring 1959 promises to be a very pretty season colorwise.

OPTICAL SOCIETY OF AMERICA 1958 SPRING MEETING

The Optical Society obligingly scheduled the papers on color for the first part of their Spring Meeting to follow the ISCC Annual Meeting ". . . for the convenience of persons belonging to both organizations."

Dr. Isay Balinkin was chairman of one of the Thursday morning sessions and Walter Granville was chairman of one of the Thursday afternoon sessions.

The following is a partial list which may be of interest to ISCC members:

"A Wedged Ultra-Narrow Interference Filter for a High-Resolution Rapid-Scanning Spectroradiometer," Alfred E. Mann and Frank C. Rock, Jr.

"Characteristics of the Phase-Dispersion Interference Filter," P. W. Baumeister and F. A. Jenkins

"Colorimetry from Precision Spectrophotometry," Harry J. Keegan

"A New Color Projection System," W. E. Glenn

"A Colorant Mixture Computor," H. R. Davidson and Henry Hemmendinger

"A MacAdam Color-Difference Computor," S. G. Frankin and H. R. Davidson

"Evaluation of Metameric Colors," Günter Wyszecki

"Effects of Shadowing on Surface-Color Perceptions," S. M. Newhall, R. W. Burnham, and R. M. Evans

"Effect of Luminance Level on the Red/Green Ratio," Forrest L. Dimmick and Richard E. Wienke

"Changes in the Perceived Color of Very Bright Sources," T. N. Cornsweet, H. Fowler, R. G. Rabedeau, R. E. Whalen, and D. R. Williams

"Color Temperature and Scotopic Thresholds," Alice J. Fielding

"Comparative Predictions of Color Appearance with a Change from Daylight to Tungsten Adaptation," R. W. Burnham

"Psychophysical Study of a Case of Congenital Tritanopia," H. G. Sperling

"Dependence of Brightness on Luminance," S. S. Stevens and J. C. Stevens

"Refractive Error and Color Vision," Richard E. Wienke

PACKAGE DESIGNERS COUNCIL PROGRAM COINCIDES WITH PACKAGING SHOW

A dinner meeting and panel discussion sponsored by the Package Designers Council was held on Wednesday, May 28th, at the Lotus Club in New York. The subject of the panel discussion "Significant Trends and future developments in Package Design" was of special interest to all those who visited the Packaging Show that week.

ISCC Member, Egmont Arens, FPDC, of New York; Royal Dadmun, PDC, of Baltimore; Robert Sidney Dickens, PDC, of Chicago; Dean H. Reynolds, PDC, of Rochester and other top-flight package designers presented their interpretations and professional evaluation of the techniques and trends exhibited at the Show. The program was planned for designers and for business executives, the men who work together to create the packages that have become such an important part of our market conscious economy.

For information write to the Package Designers Council, 331 Madison Avenue, New York 17, or call MUrray Hill 2-1980.

THE PHYSICAL SOCIETY COLOUR GROUP

Forty members and guests were present at the 104th Science meeting held January 15 at 3:30 p.m. in the Physiology Theatre, University College, Gower Street.

Dr. F. H. C. Marriott (Physiological Laboratory, Oxford) spoke on "The Photochromatic Interval and Quantum Theories of the Visual Threshold."

He explained a specialised measuring of the photochromatic interval and referred to its importance both in connection with the visibility of signal lights, and as an aid in interpreting the trichromatic theory. He critically described Bouman and Walraven's data and compared them with his own, which referred to the long-wave end of the spectrum. Very long wavelength radiation never produced a sensation of green but shorter wavelength stimuli produced "false" impressions. A theoretical interpretation of the data was followed by tea and a warm and prolonged discussion by many members. The meeting closed at 6 p.m.

At the 105th Science Meeting, Wednesday, March 5th, your News Letter Foreign Correspondent, Cdr. Dean Farnsworth gave an amusing and colourfully illustrated talk on How the World Looks to the Color Blind. He said that however able a classification, it could hardly convey to colour normal observers what the world looked like through colour defective eyes. To illustrate this a colour film would be interesting but expensive. The U. S. Navy, however, provided facilities for shooting a training film on the topic. The making of the film - not the processing, of which Cdr. Farnsworth proudly professed to be ignorant - was greatly helped by a woman student of Professor Graham's, Uniocularly colour defective. She was slightly imperfect as a deuteranope but not as a woman. Cdr. Farnsworth's graphic account of meeting her was followed by the demonstration of typical pairs of slides: the left one illustrating the deuteranopic appearance of the normal view shown on the right. This was elaborated in the training film.

During the subsequent discussion there was momentary silence when Professor Wright enquired about the whereabouts of the unilateral protanopes and tritanopes who, by analogy, must have vetted the appropriate colour triangles which Cdr. Farnsworth had shown. Cdr. Farnsworth had assumed that the approximate experimental confirmation of one's expectations for the deuteranope justified predictions for the other defects. Others taking part in the discussion included Mr. Forsyth, Drs. Kalmus and Weale.

Tea.

Membership at the end of 1957:

Fellows of the Physical Society	109
Members of participating societies	81
Members of firms subscribing for sustaining membership	15
Other individual members	28
	233

A Symposium on Colour Tolerance was on the agenda of the 105th Science meeting, April 2nd.

Mr. J. W. Perry	A Survey of Colour Tolerance Formulation
Mr. A. D. Lott	Colour Tolerance of Printing Inks
Mr. J. S. Mudd	Colour Tolerance in the Leather Industry
Mr. F. L. Warburton	Colour Tolerance and Textiles
Mr. P. S. Williams	Colour Tolerance in Paints
Mr. J. M. Adams	Colour Tolerance in the Paper Industry
Mr. D. L. Medd	Colour Tolerance and Architecture
Mr. J. W. Strange	Colour Tolerance and Lighting
Dr. R. W. G. Hunt	Colour Tolerance in Colour Reproduction Systems

Physical Society members attention was drawn to the 1958 Physical Society Exhibition which took place as usual in the Halls of the Royal Horticultural Society, Westminster, from Monday 24th March until Thursday 27th March. Mr. M. H. Wilson gave a discourse on Goethe's Colour Experiments on Monday 24th March at 5:45 p.m.

"COULEURS" A special issue No. 23 of "Couleurs," published by the Centre d'Information de la Couleur, 23 Rue Notre Dame des Victoires, Paris 2, was devoted to a series of brief articles which anticipated the "Second International Color Days" held March 19-22 at Toulouse. Brief descriptions were included concerning color areas to be discussed at the meetings such as, the colors characteristic of Toulouse as a city, standardization of color for health and safety, color in the graphic arts and in photography, applications of light and color, and developments in colorimetry. The format and color illustrations of this unique publication are, indeed, unusual and eye-catching, although the novel content and depth of the typically short articles may leave something to be desired. There are, however, interesting points of view expressed about such things as the "colors of Toulouse" which are said to be as distinctive of a city like Toulouse as its aroma.

R. W. Burnham

NEWS FROM FOREIGN CORRESPONDENT DEAN FARNSWORTH

London Letter "Is your old school tie slipping?" was the question that opened The Color Group's tremendously successful display at the Annual Physical Society Exhibition of Scientific Apparatus. Six varied samples of ties from one school showed how very tolerant the old school can be -- in color, at least. "This show is meant to be a text-book in colorimetry," said John Perry, Chairman of the Color Group. Indeed, it was like turning animated pages of "The Science of Color" with some leaves from Judd's "Color in Business . . . ." Working models and samples from scores of industries were arranged to demonstrate color tolerance in connection with manufacturing processes and there was a wide range of modern instrumentation from many countries used for measuring and specifying the color of products. Many "measure it yourself" devices could be operated by visitors. The exhibit was packed every minute of each day with slow moving crowds, intently studying their color lessons.

While the I-SCC was holding its symposium in Washington on Color in the Building Industry, London was listening to Dr. S. E. Rasmussen, Professor of Architecture of the Royal Academy of Arts, Copenhagen. I wonder if Washington was affected as strongly? Newspaper headlines and editorials reported, "London's Need of Brisk Colors," "Color in the London Squares," with later repercussions, "Color for the County Houses," "Post Offices to be 'Gay with Color'." Dr. Rasmussen asked "Among all the royal commissions, why isn't there one dealing with the colors of London?" saying "London could be a 'new town' without cost." He particularly praised the subtle coloring of London's residential squares when they are painted as they should be, with crisp cool colors setting off the sombre tones of brickwork. Among his recommendations were to keep to cool and muted colors which look best in misty northern light; even the traditional rosy brickwork is acceptable only because it is a broken color and becomes more so as it mellows with time. The "Times" reported, "Strong primary colors can now be easily incorporated into the facades of buildings, thanks to the new synthetic facing materials at the architect's disposal, but recent attempts to add gaiety to London streets by using such colors freely have shown only how garish they look when they are

not kept in their place by the intense sunlight they would encounter farther south. In London it is wiser to leave it to the buses and the shop windows to contribute whatever modicum of primary color the street scene may be thought to require."

French "Color Days" The second "International Days of Color" was held in Toulouse this spring and being unable to be in several places at once I suggested to Miss Beverly Hillman that she cover the meeting for the News Letter. Miss Hillman is presently on a Fulbright scholarship working in the psychology of vision in Dr. M. E. Baumgardt's laboratory at the Sorbonne in Paris. However, she was in several other places at once, such as Switzerland and Vienna, and therefore the following contribution is the joint gift of Dr. Baumgardt, who collected the proceedings of the conference, and of Miss Hillman who made English summaries.

The conference was organized by the Centre d'Information de la Couleur, Paris, and is notable for breadth of coverage and the number of distinguished speakers. Miss Hillman points out that the purpose of the meetings are evidently to acquaint industry with the state of color science and therefore no startling reports should be expected; "Having not been there, I cannot convey the flavor of the meetings, but maybe if you can conjure up a chronologically early session of the I-S.C.C., you can fabricate the 'ambiance'."

A new study on color preferences was reported by Mlle. Demarest. She found that hue and saturation preferences in color pairs are most affected by subjective states such as age, health and temperament; however, the luminance relations in pleasing combinations are the same for all. E. Baumgardt was chosen to present the almost impossible -- a summarization of the psychophysiology of color, presented so that the industrialist could understand and use the information.

About 40 countries are members of the International Standardization Organization (ISO) who are working on the selection and use of safety colors. J. Duval reported on work in progress. The goal is to establish identification colors which will be as numerous as possible; to which the observer will be able to react immediately; and which can be produced inexpensively. Each color will be associated with a geometric form to aid color blinds, such as:

Red	Circle	Stop
Yellow-Orange	Triangle	Possibility of Danger
Green	Rectangle	Absence of Danger

Each color may be associated with a contrast color (black and white), an additional information color (blue), and other designs necessary to convey such information as the nature of the danger.

The first session on Colorimetric measurement was opened by W. D. Wright of London who explained the four principal types and when to select which. M. Braun covered sources of error; F. Blottiau introduced a new "volume" formulae for the uncertainty of colorimetric measures. M. Bertrand reviewed

a study in progress comparing methods and instruments, and described a new trichromatic visual difference colorimeter with very low thresholds.

The session on Reproduction of Colors dealt largely with the theory of color primaries applied to color photography and derivative reproductive processes.

Special interest was shown in the technical potentialities of subtractive versus additive methods. Participants were: P. Kowalski, P. Mouchel, Gambioli and Calabro, F. Driancourt and M. Edelmann.

The industrial Applications Session tackled six perennial problems. N. Braun discussed methods of obtaining identical reproduction of samples, formula and methods of correction. J. Jonckheere discussed the influence of metamers on color judgments; P. Mougeot, the problem of tolerances (no resume); M. Adams, the application of colorimetric measures to the trials of printing inks; P. Rochas and S. Peirret, criterion for stability of dyes; and J. Gillad reported on a project in which the standardization of the white reference standard for colorimetry is being studied.

The complete program of the meeting, the resumes of the papers and Miss Hillman's one-paragraph summaries of them can be borrowed from the Secretary's Office by any readers who are further interested.

Dean Farnsworth

(Editor's Note: Dr. Judd has provided the News Letter with a translation of the Programme. Copies may be obtained by writing to the editor. WLR)

WALTER GRANVILLE TEACHES "COLOR IN THE GRAPHIC ARTS"

The University of Chicago Downtown Center is conducting a group of courses during the spring quarter entitled "Program in Publishing and the Graphic Arts." The program consists of twelve classes covering layout design, and processes for printing, advertising, publishing and television.

Walter's course is described as "an intensive seminar on color and its application in the graphic arts. . . . directed at those in advertising, publishing, printing, and commercial art and design . . . scientific and aesthetic principles of color and the uses of color in graphic communication."

ON BALINKIN'S PHYSICS COURSES

Bill Gold, in his April 2 District Line column in the Washington Post and Times Herald, writes: "When our Favorite Teacher contest was first announced, I reminisced about Balinkin's physics courses and Odegard's political science lectures without further identifying the teachers of their schools. A few days later John White McBurney of 1543 N. Falkland Lane, Silver Spring, called to tell me that Isay Balinkin, professor of experimental physics of the University of Cincinnati, would be in Washington soon to lecture to some highdomes. The upshot was that we enjoyed a wonderful reunion at a Cosmos Club luncheon. Now I'm in receipt of a note from Prof. Peter H. Odegard, formerly of Ohio State but now at the University of California, who

writes that Guy Stanton Ford sent him a clipping of that teacher column, and that he'd like to cut up old touches, too, when he visits Washington on April 18, Where will we meet? At the Cosmos Club, naturally . . . Vagrant Thought: If I have lunch with the deep thinkers often enough, will I eventually stop feeling self-conscious about it?"

COLOR VISION SESSION AT NATIONAL ACADEMY

At the recent spring meetings of the National Academy of Science in Washington, one session consisted of a Symposium on New Developments in the Study of Color Vision. Dr. H. K. Hartline of the Rockefeller Institute was chairman, the participants were C. H. Graham of Columbia University, E. H. Land of Polaroid Corporation, Yves LeGrand of the National Museum of Natural History in Paris, France, Wm. A. H. Ruston of Cambridge University, and Dr. W. S. Stiles of the National Physical Laboratory. We were glad to welcome this group of outstanding international leaders in this field. With such a wealth of talent it seems too bad that their discussions were confined formally to a single session of the Academy meetings.

G. E. SEMINAR ON THE G. E. R. S.

A 3-day special service course for users of the General Electric Recording Spectrophotometers was held March 24th, 25th, and 26th at West Lynn, Massachusetts. The course highlighted proper service, maintenance, calibration, trouble shooting techniques, for GE's recording spectrophotometers and accessories such as the automatic tristimulus integrator. The course was free including all necessary course materials. It is possible that GE may conduct another seminar similar to this one in the future.

For information write to Color Measurement Digest, Mr. Arnold Arenson, Editor, General Electric Company, Instrument Department, 40 Federal Street, Lynn, Massachusetts.

W. D. WRIGHTS TO VISIT U. S. IN SEPTEMBER

Many of their friends in the United States and Canada will be interested to know that Dr. W. D. Wright and Mrs. Wright expect to arrive in New York on September 6, to be in this country until October 15. Rochester will be their first stop, and of course they plan to be in Detroit during meetings of the Optical Society. Otherwise Dr. Wright expects to be juggling dates during the next few months in order to fit one date in with another, for as usual we are sure they will find five weeks all too short a time to do the many things here that they and their friends may wish! He is coming over as consultant to an American firm but except for about a week they will be free agents and are hoping for the first time to include a visit to the West Coast.

THE MEASUREMENT OF COLOUR By W. D. WRIGHT

W. D. Wright has prepared a second edition of his (1944) book (W. D. Wright, The Measurement of Colour, Hilger & Watts Ltd., London; Macmillan, New York 1958). According to the preface, about two-thirds of the text has been rewritten including the chapters on the principles of photometry and colorimetry, and on the CIE system, and a chapter on three-color reproduction has been added. It seems to this reviewer that Dr. Wright has done far more

than an ordinary job of bringing his text up-to-date. He has made an inspired selection of material from the field of color measurements, and he has dealt with nearly every important facet in an authoritative way. The treatment is brief, the style, lucid; and the scope and clarity of the book amazing. The non-specialist will find the book most readable and informative. He will find in it the answers to nearly all of the questions that occur to him, and the few, well-chosen references will lead him to excellent, more detailed treatments of the subjects he wishes to delve into thoroughly. The specialist reader will, I am sure, be delighted with the book. He will recognize the sure touch, the easy clarity, for the brilliant and distinguished authorship that it is. Above all, he will appreciate how up-to-date the information is. For example, the 1955 CIE conventions for writing color equations are described at the beginning of the section on The Algebra and Geometry of Colorimetry and used throughout. Furthermore, Maxwell's spot and Abney's law are clearly discussed in relation to the basic plan used by Dr. W. S. Stiles of the National Physical Laboratory to determine color-mixture functions for fields of large angular subtense used for industrial color inspections. The reader is led directly to the fore-front of the problems being dealt with by current researches in this rapidly developing field.

The publishers have also contributed to the excellence of this second edition by improving the legibility of printing and the accuracy of the colors used in six of the illustrations. Unfortunately, the top and bottom colors on page 4 have been interchanged by mistake; so this plate may puzzle the non-specialist reader momentarily.

This book will be particularly valuable to the technically trained physicist or chemist in industry who finds himself faced, as thousands are, with a problem involving color measurement. This book will give him a clear introduction to this new field, and a superb orientation in it without forcing him to wade through unnecessary detail.

Deane B. Judd

FARBE - COLORFUL ADVERTISING OF A BOOK ON COLOR FOR ADVERTISING

Many people have called attention to Dr. Heinrich Frieling's advertisement of his book, FARBE. Deane Judd went one step further. He translated the brochure. Dr. Judd explained that he found the idiomatic German rather tough.

Color Helps Sales

(Color science and color psychology for business and advertising)

by Dr. Heinrich Frieling

(Director of the Institute for Color Psychology in Marquartstein, and Lecturer in the Institute of the Advertising Profession, Munich)

174 pages, 1 color circle, 15 plates (10 in color), 12 illustrations in the text, many tables, Price: 28DM

For an article to sell well, the quality must be good, the advertising must be complete and well done, the package must fit and have pulling power, and finally it must be priced right. Who can say which of the four factors is the most important?

Two of these factors, the advertisement and the package (including the color of the article itself), we are going to discuss in this book. There is plenty of evidence that the public must be correctly appealed to before it will buy. No doubt our interest in the two factors (advertising and packaging) is of psychological nature. How else can they be approached? . . . .

There is no package without color. Experience has shown that many articles of commerce, which are neither better nor worse than the general run, are superior simply from their mode of being presented. What is truly a "good package"? This our book must show how to define.

Also in advertising color plays an ever larger role. It is known that colored advertisements bring more replies than uncolored, especially in fields where color is used sparingly. Also the surroundings within which the article must sell itself are colored, and we must have the right color in the right place. Goods in the true sense of the word have to be presented in the best light. Finally the colored atmosphere of the salesroom cannot be forgotten, the color of the printing, and the background of the printing of an advertisement - always and everywhere colors!

Colors by themselves do not exist - they must always be used in some particular form, whether this be the box form of the package or the true form of the article itself. In addition to this, the pictorial designs, signets, trademarks, ornaments, - in short the whole design and graphic art play parts, so that we must say the color must be studied in connection with form lest we achieve only a lifeless abstraction. . . . .

Table of Contents

Color associations and synesthesia
Suggestive influences of color; sensation and color representations; abstractions and color representations (arch-type arrangement); connection between form and color; scheme for testing form and color combinations

III. Practical details

Colored advertisements, signs, placards, and advertising copy
Good and poor colored advertisements; the colored poster, colors of advertising copy; colors in sales talks (visiting card, order book, sample book); selling through motion-picture film

The colored package
Special advantage of a package; cigarette packages; candy packages; sun-tan lotions; hygienic articles; substantial coordination

Color and apparel
The true and the summary collective; type and clothing color; the mystery of fashion colors

Coloring of automobiles
General tendencies of taste; type of car and coloring, exterior and interior colors

The show window and its decoration
Contrast and attention; leading colors and leading forms; show-window illumination

The office room works through colors
Basic principles of the influence of color in space; special hints

The colored talking and advertising film
Time value of color; color dramaturgy; color martyrdom of the eye; color and form working together

Literature

Deane Judd

INTERNATIONAL LIGHTING VOCABULARY — A new international vocabulary of lighting terms, the culmination of 20 years study by a working party of the Commission Internationale de l'Eclairage (C.I.E.), is now ready for distribution through the organization's United States National Committee.

Printed in three languages - French, English, and German - the vocabulary was created for the express purpose of facilitating communication between scientists the world over who are working in the field of illumination.

The publication, entitled "International Lighting Vocabulary of the International Commission on Illumination, Volume 1 (2nd Edition)," contains 530 terms, with definitions, as well as numerous symbols and formulae.

Its principal sections cover Radiation, Photometry, Colorimetry, Eye and Vision, Production of Light, Lamps, Auxiliary Apparatus, Lighting Techniques, Lighting Fittings, and Light Signals.

Volume 2 of the publication will be published in 1959. It will contain the same terms, without definitions, and will be printed in ten languages. These are: French, English, German, Danish, Dutch, Italian, Polish, Russian, Spanish, and Swedish. The material will be arranged systematically, with ten alphabetical indexes.

The United States National Committee has placed a prepublication order for the first volume and is offering it at a reduced price. A limited number of copies are now available at $2.50. It is expected that the price will be raised when the initial supply is exhausted.

Orders for the publication with remittances payable to "U. S. National Committee, C.I.E." should be sent to Mr. T. D. Wakefield, Treasurer, U.S.N.C., Vermilion, Ohio.

Sylvester K. Guth

RUSSIAN BIBLIOGRAPHY AND TRANSLATIONS MADE AVAILABLE BY THE PERGAMON INSTITUTE

The Pergamon Institute, a non-profit foundation for the furtherance and dissemination of scientific knowledge, has announced that learned societies, government departments, trade associations, individual scientists, doctors, and engineers wishing to keep informed of what is being published in the USSR and other countries in the Soviet orbit, may apply to the Institute to receive free of charge a monthly content list in English of all the significant articles and books being currently published in his field of interest in these countries.

English translations of articles mentioned in these lists may be ordered from the Institute. The charge for such a translation will be on a cooperative cost sharing basis.

The Institute will undertake to supply on request detailed and exhaustive bibliographical information on work published in the USSR and other Soviet orbit countries on all subjects in the fields of science, technology, and medicine. The Institute with the cooperation of the National Academies of Science of the USSR will also provide books, journals, microcards, and microfilms published over the last 20 years in these countries. A number of technical journals on such subjects as zoology, atomic energy, and microbiology are already being translated from the Russian. The announcement also lists 22 books on scientific and technological subjects which have been translated.

Additional information on the Institute may be requested from I. R. Maxwell, Executive Director, Pergamon Institute, 122 East 55th Street, New York 22, New York

MISCELLANY "The Proper Cut & Color" Time Magazine: The Oxford don who swathes himself in proper hues for every day is well aware of colleagues in full dress such as a doctor of philosophy (scarlet and navy blue) or a doctor of music (cream silk with appleblossom embroidery and sleeves of cherry crimson).

For years Oxford scholars have been uneasy about certain mutations in academic plumage. Shortly after World War II, hard-pressed tailors took to making gowns of nylon instead of silk, even trimmed the hoods of bachelors of arts with nylon fur instead of ermine or white-dyed rabbit. Worse yet, many Oxonians were showing up in startling shades of the traditional colors. Reason: In the university's seven centuries, no one had ever specified the precise shades for the various degrees. Around the faculty's high tables in college dining halls, the old guard eyed the robes of the innovators and grumbled of "notorious inconsistencies."

Last week the university's sartorial rebels were sharply summoned into line by a new handbook that spells out once and for all the color and cut of the proper Oxonian's robe. Compilers of the authentic handbook: meticulous Ralph E. Clifford, head clerk in the University Registry, and elegant Dennis R. Venables, co-proprietor of one Oxford tailor shop and partner in another.

To choose patterns and shades for each degree, Clifford and Venables spent a year poking through ancient records and sifting the lore of tailors along High Street. Bound in leather, handwritten on parchment and illustrated with swatches of material, their specifications are stored for the ages in the University Archives. One fiat of the new book; nylon fur is out. Sniffs gentlemen's tailor Venables: "Any fur on an academical hood ought to come from an indigenous animal."

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"Gardner Automatic Color Difference Meter Used to Grade Tomatoes", Saturday Evening Post. It's a known psychological fact that you eat with your eyes as well as your mouth. The more pleasing the color, the more appetizing foods seem to be.

The Colorimeter is Our Color Guard. The problem in the growing and processing of foods, is that human color memory just isn't reliable. That's why Campbell uses a colorimeter as a constant guard on that good red of the Campbell Tomato. This instrument--the one you see in the picture--compares color values in an absolutely scientific way.

The Ideal Tomato Red. This is how it works. After looking at thousands of samples of tomatoes, Campbell long ago selected the most appetizing tomato red and made this their standard. It's that famous "Campbell Red." This color was then recorded.

At tomato harvest time, samples from the new crop are compared with this standard on the colorimeter to make sure the color measures up.

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"Dear Mr. Rhodes:

I have read with considerable interest the ISCC News Letter No. 134 for March 1958. On page 20 the report on Yellow being the best color for hunting clothes raises a question which perhaps some of the members of the Inter-Society Color Council would like to explore.

The conclusion that Yellow was the best color for hunters was arrived at by tests made by 'various professional organizations in cooperation with the US Army' -- 'in a rain forest near Fort Lewis Washington' ----.

Having visited these lush green forests, I can readily imagine that Yellow would be a good, high visibility color there. However, having grown up in New England where during the hunting season the brilliant reds and yellows of the woods would make a fine background in which to disappear in a Yellow hunting jacket, I cannot help wondering whether the suggestion in this article may invite disaster to hunters in the north-eastern part of the United States.

Has anyone tested a daylight fluorescent Turquoise or Peacock Blue - for use in both the green forest and the autumn colored forests of the north-east?

My bet is it might save a lot of lives!

s/t/ Frederic H. Rahr, President
Rahr Color Clinic

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LIST OF ARTICLES ON COLOR RECEIVED BY NEWS LETTER

"The Diachromoscope," Hugh T. O'Neill and William J. Nagel, Photogrammetric Engineering, March 1957 pp. 180-185.

"The Minythoscope," Hugh T. O'Neill and William J. Nagel, Photogrammetric Engineering, June 1957, pp. 533-535.

"Observer Differences in Color-Mixture Functions Studied by Means of a Pair of Metameric Grays," Kenneth L. Kelly, Journ. of Research of the National Bureau of Standards, 60:97-103, No. 2, (Feb. 1958).

"Wavelength Discrimination for Point Sources," R. E. Bedford and G. W. Wyszecki, Journ. of the Opt. Soc. of Amer., 48:129-135, No. 2, (Feb. 1958).

"An Evaluation of the Luminous-Transmittance Requirements for Railroad-Signal Glassware in Terms of Standard Source A of the International Commission on Illumination," Francis C. Breckenridge, Journ. of Research of the National Bureau of Standards, 60:317-320, No. 4, (April 1958).