INTER-SOCIETY COLOR COUNCIL
NEWS LETTER

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NEW MEMBERS The following applications for individual membership were accepted at the last Board of Directors' meeting held in Washington, D. C. on June 14 and 15, 1956.

Associate Individual Members	Particular Interest:
Mr. Frank P. Bakos 8208 Chamberlain Avenue Detroit 9, Michigan	Color systems, color trends, color research and color styling data.
Mr. Harold J. Corbett Monsanto Chemical Company Springfield, Massachusetts	Spectrophotometry and colorimetry, practical application of color measurement and specification instruments, instrumental color matching and inspection of plastics.
Mr. Charles E. Dean 5925 Little Neck Parkway Little Neck 62, New York	Color in color television, measurement of small color differences.
Fairchild Graphic Equipment, Inc. Att: Mr. M. Farber 88-06 Van Wyck Expressway Jamaica 1, New York	Color problems in the graphic arts.
Mr. Bernard R. Halpern 909 Westdale Avenue Swarthmore, Pennsylvania	Color separation, color composition and color photography.
Mr. Charles W. Jerome 60 Boston Street Salem, Massachusetts	Measurement of color parameters and color-rendering properties of fluorescent lamps.

Associate Individual Members (cont'd)	Particular Interest:
Mr. V. J. E. Letouzey 11 rue Ravon Bourg-la-Reine, Seine France	Color physics, physiology and psychology applies to color reproduction in the graphic arts, photography and movies.
Mr. Paul Lyle c/o Western Printing and Lithographing Company Racine, Wisconsin	Any problems related to color in the graphic arts area.
Mr. Arnold E. Rogers Rogers Engraving Company, Inc. 45-61 Court Square Long Island City, New York	Color separation negatives and positives, color masking and color correction and color sensitive materials (Ektacolor, etc.).
Miss Taina Waisman 551 Fifth Avenue New York, New York	The co-relation of colors in various architectural materials for interior or exterior use.
Mr. Günter W. Wyszecki National Research Council Ottawa 2, Ontario Canada	Uniform color scales, chromatic adaptation and specification of color rendering properties of light sources.

Affiliate Individual Members	Particular Interest:
Mr. Gus Berkes Eden Avenue Springdale Stamford, Connecticut	--
Mr. Arthur A. Brackman 9 Fir Drive Great Neck, Long Island New York	Production, distribution and use of Ektachrome or other color photographs.
Miss Bridget DelForno 270 Park Avenue New York, New York	Chemicals, dye pigments, photographic density - Reproduction of color film to engraving, lithography and gravure.
Mr. Alphons J. Hackl Colortone Press 2412-24 17th Street, N. W. Washington 9, D. C.	How color increases the effectiveness, value and sales effort of printed advertising; technical color problems as related to ink and paper in lithographic printing.
Mr. Howard D. Lester 1517 Jerusalem Avenue Hempstead, New York	Production and technical problems relative to color in photography and graphic reproduction thereof.

Affiliate Individual Members (cont'd)	Particular Interest:
Mr. John P. Meade Pioneer-Moss, Inc. 460 West 34th Street New York 1, New York	Interpretation and reproduction of color in print and related problems.
Mr. W. Lane Rehm 3056 R Street, N. W. Washington 1, D. C.	Use of color and color relationships in painting.
Mr. Joseph H. Snyder Color Corporation of America 270 Park Avenue, Suite 1103D New York 17, New York	Kodak Dye Transfer, Ektacolor, Type C, Printer, Ansco 638, 3-color, still color film processing.

COLOUR COUNCIL OF TORONTO HONORS PERKIN

The following is quoted from "Colour Comments," edited for the Colour Council of Toronto by 'Gene Butt;

"The May meeting of the Colour Council of Toronto was held at the Prince Arthur House on May 8. It was a special meeting as a tribute to Sir William Perkin, the discoverer of the first organic colour. Mr. John Affleck, in the role of speaker, did an outstanding job, dividing his presentation into three sections: B. P. (before Perkin) - describing the origin and quality of colouring material up to 1856; P (Perkin) - what he did, and how he did it with authentic story and demonstration; and A. P. (after Perkin) - describing the many things in addition to colorants that owe their beginning to Perkin, such as explosives, aromatic oils, drugs and resins... In addition we were honoured with brief tributes to Perkin from Mr. E. W. Warren, Chairman of the Toronto Section of Canadian Steel Improvement Ltd., and the Canadian Industry of Chemistry; Mr. J. A. McCoubrey of North American Cyanamid, and the Society of Chemical Industry, and, lastly, Mr. William McCusker, Stauffer Dobbie, Galt, Ont., and of the Canadian Association of Textile Colourists and Chemists."

PHYSICAL SOCIETY COLOUR GROUP

The March meeting of this group of English color workers was devoted to "Colour and Lighting in Buildings." The speaker, Dr. R. G. Hopkinson, said that although models are useful, they cannot do everything, and many experiments and calculations must be undertaken to deal with the various types of glare and similar factors. The May meeting was devoted to a discussion of an exhibit sponsored by the Colour Group as part of the 40th Physical Society exhibition; the exhibit illustrated some of the principles of color television, and the discussion was led by G. C. Gouriet of the BBC Research Laboratories.

CIC DISCUSSES COLOR AND HUMAN EQUILIBRIUM

Our active co-workers in France, Centre D'Information de la Couleur, presented a symposium on June 7 under the title, "Color and Human Equilibrium." The announcement of the meeting explains that inconsiderate use of color in such items as clothing, interiors, exteriors, advertising and foods may lead to trouble both on the biologic and psychic plane. On the other hand, if colors are used with understanding, they can lead to a more harmonious and satisfying life. The seminar was arranged under four categories: 1. Normal and pathologic sensitivity to color (discussed by Dr. H. Baruk); 2. Color and therapeutic environment (discussed by Dr. H. Biancani); 3. Danger of colorants in foods (discussed by Dr. Lefebvre); 4. Harmony in colors and in life (discussed by Mr. A. Roussel).

PERKIN CENTENNIAL NOTES

Ed. note: In connection with the Perkin Centennial, Mr. Ansco G. Bruinier, Jr., publicity chairman, has written a fascinating story on the development of the dyestuff industry. Mr. Bruinier starts with the art of dyeing as practiced in ancient times, and carries the account through Perkin's discovery and its development into the great dyestuff industry as we know it today. We thought that you would be interested in this article, and are therefore reprinting it here.

Remember the Perkin Centennial celebration, to be held at the Waldorf-Astoria Hotel during the week of September 10. Make sure to be there - it will be good!

Today it is difficult to realize the significance of the discovery of the first synthetic dye, by William Henry Perkin, 100 years ago. We have come to expect the availability of all types of dyes developed for specific applications, and the countless variety of all kinds of colored articles and merchandise that are within our reach bears this out.

In turning back the pages of history, prior to 1856 the story was quite different. The early efforts of man to duplicate the beauty and color of his surroundings was attempted by staining his clothes with colored juices derived from flowers, fruits, bark of trees, insects and shellfish. Most of the resultant dyeings were only temporary, because so few true dyes existed in Nature that the variety of shades was limited and generally did not stand up to the effects of sunlight and washing.

However, there were some colors that have survived the ravages of time. Indigo was one, and the renowned Tyrian purple another. A garment dyed with indigo was found in the ancient Egyptian city of Thebes, in a tomb reputed to be 3000 years old, the color having been derived from the leaves of the indigo plant. The "purple of Tyre," famed for its beauty and durability, was obtained from different varieties of shellfish and expertly manufactured by the Tyrians. However, dyed fabrics were a luxury and could only be afforded by royalty and the wealthy, as connoted by the names "royal purple," "royal scarlet" and "royal blue." Pliny condemned the high prices charged by dyers for Tyrian purple. A pound of it cost the equivalent of what would now be $150.00, which presents a striking difference when compared with the present-day figure of $1.17 per pound reported by the U. S. Tariff Commission for the average price of all dyes produced.

The continued desire of individuals to maintain beauty of surroundings through more durable colors led to the use of mordants which possessed the ability of causing the dye to adhere firmly to the fabric. Not until this discovery was made, probably in India prior to 2000 B. C., did the art of dyeing make any appreciable progress. Through this mordanting technique the Egyptians were able to use the Biblical scarlet, the last of the "big three" dyes of that early period, which was obtained from the insect, kermes. The color was so highly regarded that it was reserved primarily for royalty and the military and was used in the military cloaks of the Greeks and of the Roman Emperors.

Yellows were produced by the Egyptians from saffron, derived from the flowers of the common yellow crocus. Reds were developed from the roots of the madder plant, which was also used to produce purples and browns. The brilliant and durable scarlet, "Turkey red," was probably known before the Middle Ages; it was developed in the Near East and later adopted by the Europeans. The dyeing process required for

applying Turkey red is one of the oldest known and also the longest, and it is believed by some historians that the scarlet thread mentioned in the 38th chapter of Genesis was dyed in this manner.

The skills of the dyers in Egypt, India, China and Persia were brought into Europe by the Phoenicians and Alexandrians, but little technical progress was made on the continent until the 13th century because most of the dyeing was done in the home. At that time, the accomplishments of Federigo in Italy stimulated a considerable revival in the art. The first book on dyeing was published in Italy in 1429, and from there knowledge spread to Germany and the rest of Europe, centering especially in Holland and Belgium. The discovery of the New World and the opening of the Cape route to the East brought in coloring materials and dyeing methods. Cochineal, similar to kermes, was imported from Mexico early in the 16th century by the Spaniards who had seen the natives employing these insects for dyeing.

But as long as man was dependent upon the animal and vegetable worlds for his dyes, his progress was restricted by the skill of the operator in mixing dyes and perfecting techniques. Dyeing was then an art, not a science as it is today. The dyes available varied greatly in quality and, consequently, so did the results obtained. Many of the natural dyes lacked fastness and were difficult to apply satisfactorily to fabrics, and they were also expensive. There is little evidence to support the idea, which has been so firmly fixed in the minds of many, that to obtain durable and artistic effects it was necessary to resort to the vegetable dyes of our ancestors. Dyeing is now based on soundly established chemical principles, the end results can be predetermined, the fastness is known, and the correct dyes can be selected to conform with the requirements of the finished fabric, garment or article.

Little fundamental progress was made in producing better dyes until the accidental discovery of mauve in 1856. William Henry Perkin was attempting to synthesize quinine, using aniline as one of his raw materials. In one of his unsuccessful experiments a dark-colored mass was formed, but when it was dissolved in alcohol a violet liquid resulted which had the power to dye silk and wool. Had it not been for the presence of toluidine as an impurity, the development of the first synthetic dye might not have occurred at that particular time. Perkin had the foresight to recognize the industrial possibilities of his invention, and, after patenting the process, established the first factory in the world for the manufacture of dyes.

Compared to some of the present day processes for vat and other type dyes, Perkin's method of manufacturing mauve was quite simple, consisting of only four steps; but the yield of actual dye was only five pounds per ton of coal, and in 1860 the price of aniline violet in the United States was around $300.00 per pound.

The publication of Perkin's discovery activated interest in the study of the chemical composition of coal tar products by chemists all over the world. During the following fifty years, many important discoveries followed one another in rapid succession. It was found that, of the ancient dyes, indigo and Turkey red could be produced synthetically and more economically than the natural products. Despite intensive activity on the part of chemists, the time element between the development of new dyes in the laboratory and practical commercial production usually was a matter of years. By 1890, synthetic dyes had attained considerable stature, and natural dyes were well on their way to obscurity.

European chemical manufacturers had established a virtual monopoly of the dye industry, and prior to 1914 only 10% of the dyes consumed in the United States were

made here. In that year the domestic production was less than seven million pounds. It did not represent complete preparation of the dyes, but merely combining certain intermediates with other raw materials to form the finished product. When foreign sources of supply were cut off, a number of chemical manufacturers started the manufacture of dyes. By 1917, eighty-one concerns were engaged in dye production but the range was limited to those for which the need was greatest. The initial hazards were many; lack of experience, financial barriers and other factors soon eliminated many of the pioneers, and by 1937 the number of domestic producers had dropped to forty-three, who produced over 122,000,000 pounds at a sales value averaged at 58 cents per pound.

Today, within a span of about forty years, America is self-sufficient and has a dye industry that is unsurpassed. Its products are the equal of any produced by other nations. Dye-consuming industries have at their disposal an annual production of around 150,000,000 pounds of coal tar colors consisting of more than 1000 different dyes - and which embody degrees of fastness capable of meeting almost every normal requirement. These range from the durable vat dyes that possess outstanding resistance to most color-destroying influences to dyes suitable for application to any of the new synthetic fibers. No longer is royalty the sole owner of colored vestments. The development of synthetic dyes, along with improvements in textile manufacture allowing mass production of moderately priced fabrics of good quality, has permitted the wide use of color in our daily lives, thus providing the means to a richer, more beautiful, more colorful world.

A. G. Bruinier, Jr.

GE COLOR COURSE A full-week course on scientific color measurements will be held at the Wentworth-by-the-Sea Hotel, Portsmouth, New Hampshire, September 24 through September 28. Sponsored by the Instrument Department, General Electric Company, Lynn, Massachusetts, the course will feature a full curriculum of industrial applications of spectrophotometry and colorimetry.

Instructors, recognized leaders in their fields, will be from such companies as American Cyanamid, Pacific Mills, Interchemical Corporation, du Pont, as well as from the National Bureau of Standards, private consulting laboratories, and educational institutions.

The objective of the course is to provide information to those people who are interested in setting up color-control programs and in learning about application that can be applied in their various fields of endeavor. This is to be accomplished in a symposium or seminar atmosphere. Technical specialists will give lectures followed by laboratory sessions utilizing the most modern equipment.

Prerequisites for the course are a keen desire to learn more about scientific color measurement, its control, and the establishment of color-control programs. Helpful would be a basic familiarity with the recognized textbooks as, "Handbook of Colorimetry," by A. C. Hardy, and "Color in Business, Science, and Industry," by Deane B. Judd.

Tuition for the entire course will be $110.00. Accommodations at the Wentworth-by-the-Sea, a well-known resort hotel, are at off season convention rates, which are reasonable. Rooms range from $4.75 European Plan to $15.00 under the American Plan. Certain planned entertainment will be provided by the General Electric Company.

Early registration is advised due to limitations on space and facilities. Complete

information on the course and the hotel accommodations may be obtained by writing to Frank Kelley, Instrument Department, General Electric Company, 40 Federal Street, Lynn, Massachusetts.

TINY ERICKSON GETS BIG AWARD

ISCC director G. L. (Tiny) Erickson was announced as winner of the Ault Award at the recent convention of the National Association of Printing Ink Makers at the Shoreham Hotel, Washington, D. C. The presentation was made by Dr. J. C. Warner, president of Carnegie Institute of Technology and the American Chemical Society.

The terms of the Ault Award are that it shall be awarded on the basis of judgment by seven leading organization presidents in the Graphic Arts, four of which are outside the Printing Ink Association. The award is made for distinguished contribution to the advancement of the printing ink industry. The first two awards were made on the basis of development in steam-set and heat-set inks.

Mr. Erickson, who is associated with the Braden Sutphin Ink Company, has contributed copiously to technical advances in the printing ink industry, largely in water-color printing and the development of non-scratch half-tone blacks. However, the award was made primarily for his outstanding contribution to the industry through organizational work. He has an outstanding record of over three years' service in World War II as consultant to the War Production Board as chief of the Printing Ink Unit, Chemicals Bureau. He was for years the chairman of the Research Committee of the National Printing Ink Research Institute. He is a founder and past president of the Technical Association of the Graphic Arts, a member of the Research Committee of the Lithographic Technical Foundation, a member of the Executive Committee of the Research and Engineering Council of the Graphic Arts, a member of the Executive Committee of the Paint, Plastic and Printing Ink Chemistry Division of the American Chemical Society, of which he has been a member for 40 years, a director of the National Association of Printing Ink Makers, and, of course, a director of ISCC.

For 27 years color has been a specialty of his, and he has lectured for numerous organizations and groups in the graphic arts industry. He has given the ink lectures at the Advertising Production classes at Fenn College in Cleveland and at the Lithographic Apprentice School and the Carnegie Institute of Technology. He has spoken to over 200 groups, largely craftsmen and litho clubs in the eastern half of the United States, and has appeared twice before the International Association of Printing House Craftsmen at its national conventions. He has given talks on printing ink technology to ink seminars in Toronto, Philadelphia, Cincinnati and St. Louis. His recent development of the new pressure control device with the standard ink mill was explained in detail at a recent technical conference of ink makers at Lehigh University.

COLOR ASSOCIATION NEWS

The Color Association of the United States held its annual membership meeting on April 12, when four people prominent in the fashion and color industries were elected to the Association's expanded Board of Directors. The new members of the board are: Dorothy Shaver, president, Lord & Taylor, and vice-president, Associated Dry Goods Corporation; William G. Lord, president, Galey & Lord, and vice-president, Burlington Industries, Inc.; George E. Holbrook, assistant manager, Organic Chemicals Department, E. I. du Pont de Nemours & Co. Inc.; and Eleanor Lambert, president, Eleanor Lambert, Inc. In addition, the membership re-elected seven directors. They are: John M. Hughlett (also president of The Color Association); W. Ralph MacIntyre, Newton J. Rice, Armand Schwab, Roy E. Tilles, Henry C. Van Brederode, and John F. Warner.

Miss Estelle M. Tennis, Executive Director of the Association, presented her annual report covering the fiscal year 1955. The report traced the expansion of the organization's services from the women's fashion fields to the many other fields with which The Color Association has recently become concerned (See ISCC News Letter 122, 7 (January, 1956)). Prefacing Miss Tennis' report, Mr. Hughlett cited 1955 as a year of major accomplishment by the organization, and explained that the change of name from The Textile Color Card Association to the broader and more inclusive The Color Association of the United States is symbolic of the re-focusing of the Association's overall objective to include a much wider range of activities.

At a luncheon meeting of the board to welcome the new directors, the present officers of The Color Association were re-elected to serve for another year. In addition to Mr. Hughlett as president, they are: Armand Schwab, 1st vice-president; John F. Warner, 2nd vice-president; Estelle M. Tennis, secretary; Henry C. Van Brederode, treasurer; and Estelle M. Tennis, executive director.

The Color Association has recently issued several new color collections: the regular editions of the 1957 Spring and Summer Color Cards for Man-made Fibers & Silk and Woolens & Worsteds; 1956 Fall and Winter Hosiery Colors; 1956 Fall and Winter Glove Colors; 1956 Fall and Winter Millinery Colors. The hosiery colors are an advance edition, to be followed later by the regular editions which will include six colors with coordinated fabric samples. The millinery colors are color-keyed to harmonize with or accent the leading fall costume and accessory shades, especially gloves.

BRITISH STANDARD 2660:1955: "COLOURS FOR BUILDING AND DECORATIVE PAINTS"

Ed. note: In an article in the May News Letter about Dr. R. G. Hopkinson's visit with some of our Washington members, we noted that the work done at the British Building Research Station on which he reported had resulted in a British Standard for "Colours for Building and Decorative Paints," BS 2660:1955. As promised, we have obtained copies of this standard, and of the 5-page article in the Architects' Journal which described and discussed the development of this new standard. We have asked our president, Mr. Waldron Faulkner, in his capacity as chairman of our Subcommittee on ISCC Problem 17, Color in the Building Industry, to describe the new standard and review this article for us.

The Architects' Journal (London) for February 16, 1956, contains an article by Michael Keyte, ARIBA, in which he was invited by the editors to describe a new British Standard color range for building and decorative paints, made available recently to assist architects in the use of color. (BS 2660:1955, available in the U.S. from the American Standards Association.)

In 1952 the Paint Industry Colour Range Committee approached the Royal Institute of British Architects with a set of approximately 100 colors, previously selected with advice from the British Color Council, from which it was intended that a range of 50 or 60 colors should be selected. The new range was intended to serve as a replacement for a number of existing ranges for use in general applications, but particularly for such large users as government departments. The paint industry was anxious to obtain the cooperation and advice of architects in selecting this new range, for they wished to take into consideration current trends in the use of color in buildings. The importance of the task was apparent, and the RIBA set up a special committee to study the matter.

Mr. Keyte discusses in some detail the many problems that had to be faced by this

committee. They found strong arguments in favor of a limited range of colors from consideration of design alone, quite apart from questions of mass production on the part of the paint industry. Studies at the Building Research Station had shown that when color qualities are broken down into their hue, lightness, and saturation components it was possible "to reduce the number of alternatives in each without any serious detriment to the functional or aesthetic properties" of color. Thus they were able finally to arrive at a selection of 100 colors which were submitted to the Paint Industry committee as an alternative to the choice originally presented to them.

Eventually the two bodies agreed, after certain modifications to allow for paint technology production, and there was joint agreement that the range should go forward to the British Standards Institute as a proposal for a new standard. After some further modifications, a range consisting of 101 colors was adopted and has been in use since March 1, 1955.

A considerable part of Mr. Keyte's report concerns the significance of the Munsell notation, both its use in the assessment of colors selected for the standard and in the design of the cards used for presentation of the standards. He says, "...it is not intended that the Munsell coordinates should inhibit the designer .... but rather that by thinking in terms of the three Munsell attributes .... he may be liberalized in his approach .... and have greater control over the medium of colour." The choice of hues shows a strong bias for warm colors, the choice of lightness is weighted in favor of light colors of value 6/ or more, and the choice of chromas is heavily weighted by background colors in low chromas.

The 101 colors of the Standard are contained on 10 color cards. The colors are given a BS number, 001 to 101, and each bears the Munsell notation it is intended to represent. The color charts have been produced by use of the McCorquodale Process which, with the limited number of color samples, makes the cost of reproduction economical. They are produced in a semi-gloss finish and are intended for daylight matching. Separate cards, 5 x 2 inches, are also available.

The 10 color cards are numbered 0 to 9, each 4" x 8¼", with 3/4" square samples along the vertical edges of each card. Card 0 contains the strong colors, and card 9 contains the grays. In general the other eight cards show low-chroma colors on the left and higher-chroma colors on the right. Card 1 contains reds; 2 and 3 contain yellow-reds; 4, yellows; 5, green-yellows; 6, greens; 7, blue-greens and blues; 8, purple-blues and red-purples. With a few exceptions, the colors in each group are graded from light to dark from the top to bottom of the charts. Because neutral grays shift in color when viewed with strong colors, three of the grays are yellowish, one reddish, and one bluish. It is noted whether each color is available in gloss, semi-gloss or matt finish paints, and also whether the color is recommended for exterior use paints.

Mr. Keyte notes that the problem of tolerances remains, that is, how well the delivered paint may match the standard that is specified. He suggests that it might be possible to investigate this problem and see whether suitable and practical tolerances, that might be acceptable to both the architect and the paint man, could be developed and defined in terms of Munsell attributes.

The RIBA has taken a courageous step forward in setting up a definite range of colors for the use of British architects. How well this range has been selected will be shown only by the test of time. It is planned to review the range at

intervals in order to see how well it meets the needs of the architectural profession. The test will be not how much paint of a given color has been sold, but how often it has been specified and effectively used.

Waldron Faulkner

FURTHER COMMENT ON BS 2660:1955

Miss Dorothy L. Tilleard of the Paint Research Station, Teddington, England, in a letter to our former president, makes the following comments, concerning the new British paint color standard and its relation to the ISCC-NBS designations, that, we believe, will interest News Letter readers:

..."You may like to hear something about the new British Standard "Colours for Building and Decorative Paints" B.S. 2660, which was issued last month, in which I am particularly interested as I have been concerned in its production. It is a product of cooperation between the Royal Institute of British Architects and the Paint Industry (represented by the various trade bodies). It has been adopted by the Government Departments Liaison Committee on Building Paints, and it is expected to be widely adopted by local authorities, education departments and the public. The range contains 101 colours, chosen very carefully to cover the main requirement of architects without running into large numbers. All the colours are approved by the paint industry as being fairly readily reproducible in reasonably light-fast finishes. The colours are given a Munsell notation and arranged in groups according to Hue Value and Chroma, but are referred to simply by their serial number (prefixed by a card number). The idea is that individual manufacturers may name the colours if they wish but that quotation of the B.S. number of the colour shall constitute a positive reference to the B.S. card.

"As a matter of interest I have applied your [ISCC-NBS] system of Colour Designation to the card and find that the 101 colors fall into 76 different colour name groups, most of them containing one color only. This appears to be a tribute either to the discrimination of the system or to the spacing of the colours on the card, perhaps both."

Dorothy L. Tilleard

101 AWARDS

Designers in three widely contrasting fields of manufacturing received the 1956 awards of the Industrial Designers Institute, during the IDI's sixth annual awards luncheon on June 21 at Chicago's Hotel Ambassador East. ISCC Vice President Walter C. Granville was chairman of the Award Committee.

Honored for their "noteworthy and fresh approach to the design of a mass produced and nationally distributed product" were:

William E. Clements, designer of the "Therma Meter," a new type electric thermometer for the nursing and medical professions, produced by Medical Research Institute, Inc., Cincinnati, Ohio.

Jon W. Hauser, American Society of Industrial Designers, St. Charles, Ill., for his design of the Model HH Payloader, a pneumatic-tired, four-wheel-drive, self-propelled tractor-shovel, manufactured by the Frank G. Hough Company, Libertyville, Ill.

A seven-man design team of the Styling Office, Ford Motor Company, for their design of the 1956 Lincoln Premiere Series two-door hardtop, produced by Ford's Lincoln

Division. George W. Walker, vice-president and director of styling for Ford, received the award for the group, other members of which are Elwood P. Engel, IDI; Joseph Oros; Eugene Bordinat, IDI; Herbert Tod, IDI; Rulo Conrad, IDI; and John Najjar, IDI.

George A. Beck, manager of industrial design for the General Electric Company at Electronics Park, Syracuse, N. Y., and IDI's national president, presented medals to the award recipients, and Emanuel M. Benson, dean of the Philadelphia Museum's School of Art, was guest speaker at the awards luncheon.

The IDI Design Award Committee, headed by Walter C. Granville, assistant director, department of design, Container Corporation of America, sifted 128 designs submitted for the 1956 awards. Granville announced the awards in alphabetical order, "since all represented equal merit."

Other members of the awards committee were IDI's President Beck; Aarre Lahti, professor of industrial design, University of Michigan; Sam S. Leotta, independent industrial designer, Philadelphia; and Paul R. MacAlister, Chicago industrial designer and founder of the IDI design award program.

IDI's annual awards are based on the professional evaluation of the designers' contributions to the field of industrial design, to the manufacturer, and to the ultimate consumer. All industrial designers -- individuals or teams, and regardless of affiliation -- were eligible to submit entries.

In his address at the IDI luncheon, Dean Benson paid tribute to industrial designers as individuals "who dedicate every waking moment to the improvement of the products they are asked to design." He declared his conviction that "no moment since the start of the Industrial Revolution has favored the artist more than the present," and went on to say:

"A fabric, a plate, or a tool can be as evocative of a civilization as a poem, a building, or a painting. And the fact that these objects may have been produced in the thousands or millions does not make them less precious. The snob appeal of scarcity only increases the price of an object, not its real worth."

Dean Benson praised what he termed "the collaborative efforts of industry to elevate the quality and appearance of everything we live with." He said the industrial designer "may be working for industry, but he is also working for mankind," and he concluded: "One of my sardonic friends recently complained that pretty soon we won't be able to buy a lousy-looking lampshade anywhere. I'd like to be around long enough to see this happen."

HENDERSON WOLFE ON COLOR MUSIC

We recently received a newspaper clipping, letter and article from Henderson Wolfe, director of the Color Farm. The clipping indicated briefly that Mr. Wolfe was in the process of selling the Color Farm. The accompanying letter and article are most intriguing, and we share them with our readers.

> Dear Dr. Allen: In packing to leave the Color Farm, I have been taking a long look at a favorite project of mine, a linear series of colors whose intervals would be based on wave-length. Such a series, if I express myself clearly, would bear much the same relation to the spectrum that the keyboard does to sound.

I envision this enterprise as a busy little engine, plying through the woods - a wilderness of trees the passenger has never seen all at once, but must study one by one. From time to time the engine slows down, while the driver descends, perhaps to lead a cow from the track, or to lift a fallen timber, or to take a shovel to a landslide. Real pioneers, mind you, laid the track; the present explorers are editors, critics and teachers.

The obstacles never seem very serious, as long as you keep your eye on them. That is why I am looking intently this morning at a phrase quoted in the May News Letter - from Fraulein Ostwald's biography of her father. The phrase is "color music" and I have taken the liberty of writing a little article about it - for your consideration.

Sincerely

June 10th, 1956. Henderson Wolfe

C O L O R M U S I C

The news that a Wilhelm Ostwald Library and Research center has been established near Leipzig has an especial significance for younger students of color. Not only is Dr. Ostwald's name as well known in Germany as Albert Munsell's is in America, but the two men were friends and in agreement about many facets of color theory.

The history of color science could hardly be pointed up in a more delightful way. Not only will a comparison of methods and materiél prove rewarding, but the mere translation of terms from one language to another can be extremely helpful.

Fraulein Ostwald mentions, for instance, the "coming eventful art of color music (lichtkunst)." I would like to consider, as a case in point, the meaning of this phrase in relation to recent color history. "Color music" can be interpreted in at least three ways:

1. A possible meaning of "color music" might be an experiment that has sometimes been tried in this country, though never with complete success: namely, abstract color compositions shown simultaneously with music. Both Munsell ("A Color Notation"-First Edition-page 23) and Sir Thomas Wilfred have warned against the fallacies inherent in this merger.

2. A second, and to me, very appealing, possibility, would be a keyboard, or linear scheme of color tones based on wave-length. If such a system could be worked out, we might in a single generation have as many colorists in this country as musicians. A recent count set the latter at about 30,000,000. Did not Dr. Ostwald say, however: "Any attempt to base color harmonies on wave-length is doomed to failure"? Perhaps Fraulein Ostwald will enlighten us on this point.

3. The most literal translation of "lichtkunst" suggests a parallel to Sir Thomas Wilfred's Lumia "The Art of Light". One recalls Wilfred's little theater, entirely shrouded in black, in Grand Central Palace (since destroyed) in New York City. Siding the stage, seated at an instrument called the color organ, Wilfred touched the keys, throwing on the screen tones, shapes and movements of colors in a continuous performance resembling a symphony. No sound whatever attended these demonstrations.

Henderson Wolfe.

TITANIUM PIGMENTS AND THE STANDARD OBSERVER

At the ISCC board meeting in Washington on June 14 and 15, we had an opportunity to speak to Walter Granville about the recent News Letter articles on revision of the Standard Observer. We learned that Mr. Granville had been corresponding with Dr. Wright on several aspects of this question. With Mr. Granville's permission, we are reprinting several excerpts from one of these letters, dated April 23, 1956, which, we feel, will interest our readers.

"...I am aware that A. E. Jacobsen's studies of the colorimetry of titanium dioxide whites provide an important piece of evidence for considering a revision of the /Standard/ Observer... When I worked at the Interchemical Corporation Research Laboratories, one of the divisions produced TiO_2 and in the late 1930's it became routine for us to supply them spectral reflectance curves. For the most part these were made on a cake of the pigment produced in a small press, and the surface of this cake was presented to the spectrophotometer for measurement. We noted the difference in the position of the short wavelength cut-off between the rutile and anatase types of the pigment, also that some samples were light sensitive. This is to say, their reflectance in the short wave region of the spectrum depended on whether the sample was light adapted or dark adapted.

"The above characteristics of this material, together with the fact that the colorimetric differences occur at the extreme short wave length end of the sensitivity of the eye, and the fact that there are large differences between observers in this region, led me to question the use of TiO_2 as good evidence for changing the Standard Observer. I do not question Jacobsen's results, or the need for special consideration of his problem, but simply wish to emphasize that this is an extremely critical color on which to do accurate colorimetry. In fact, it raises the question as to whether one should do colorimetry on samples which differ almost entirely at the extreme ends of the sensitivity curves of the eye. Perhaps most of the colorimetry in these regions should be done by spectrophotometry.

"While at Interchem I know we did practically no integration of curves of TiO_2. We were able to determine all the information we needed to know simply from spectral reflectance curves...

"From my experience with spectrophotometry using the General Electric instrument, I believe that routine measurement in the region from 425 mu down to 400 or 380 mu can easily be in error by several percent. It seems to me that it is only quite recently that one can be reasonably sure of improved reliability of measurements in this region. Thus, I would prefer to see us wait a few more years in the hope that this situation will improve still further before considering a revision. Of course, there are many second order effects which would affect the accuracy also, and we should wait until we know more about these, too..."

Walter C. Granville

AMERICAN INSTITUTE OF DECORATORS

Ed. note: To us, the interior decorator has always been a person of glamour. Perhaps this is because the results of his art are always before us, and contribute daily to our sense of well-being. However, it takes an essay such as the one Gladys Miller has written here to show just how much painstaking preparation and comprehensive knowledge are needed for this type of artistic endeavor. It is important that we all know this, since, as the article points out, the work of the interior decorator is no longer confined to the homes of the few but is gradually enriching the

lives of more and more of us. With a great deal of pleasure we pass on to you this revealing article on our member-body, the AID.

The American Institute of Decorators was organized as a professional group on July 8, 1931 in Grand Rapids, Michigan. Its first members were drawn from the Women's Interior Decorator Association of Chicago, The Decorators Club of New York (Women) and the Society of Interior Decoration of New York (Men). The conference in Grand Rapids was called, "The International Conference of Interior Decoration." It was spearheaded by William B. Moore, a Chicago decorator, and Erick Dahl, who became AID's first executive secretary. Three hundred forty-two of the 500 attending the conference met the first professional standards required by the Institute for membership.

It is difficult to separate the function of an interior architect and an interior designer and decorator. In 1890, the architect in America began to cede the function of Interior Decoration to others, as he was absorbed in the rapid growth of America and its need for buildings. At first, the antique dealers took over the function, but gradually, traveled men and women of taste accepted the challenge. Quoting from the 50th Anniversary issue of Interior Decoration now extinct, we read, "In 1888 the business of Interior Decoration was carried on by some 12 first class firms and an equal number of lesser importance. The larger were highly organized with showrooms, drafting rooms, studios, woodworking factories and shops for execution of all types of furniture and furnishings. They were not decorators as we would term them today. The business was carried on frankly for profit as a commercial enterprise."

In 1907, Elsie de Wolfe Mendl became the first society woman to term herself an Interior Decorator. Her influence for nearly 50 years was immeasurable.

The demand for better-designed and better-furnished interiors grew constantly during the prosperous 20's, but little need for a professional organization was universally felt until after the financial crash in 1929. AID was born at the height of the depression. Now the American Institute of Decorators is celebrating its 25th Anniversary. In addition to its national organization at 673 Fifth Avenue, there are 21 state or regional chapters. The high admission standards of the Institute (perhaps too high) have kept the membership small (perhaps too small).

Frances Lenygon, in 1937, contributed the definition of a decorator adopted by the Institute: " decorator is one who, by training and experience, is qualified to plan, design and execute interiors and their furnishings and to supervise the various arts and crafts essential to their completion."

In 1937, Mrs. Lenygon and her education committee also worked out a course of study for schools and colleges giving a degree course decoration should follow. There are now 50 schools and colleges giving 3-, 4-, and 5-year degree courses in Interior Design and Decoration. The recommended basic requirements are:

	Percent of entire course
Design	35.00
Materials of Decoration	15.00
Form and color (drawing & shopwork)	10.00
Construction (including shopwork)	8.75
Professional practice (business methods, ethics, laws, etc.)	5.00
History of Architecture & Decorative Arts	7.50
Theory of Architecture & Decorative Arts	8.75
Economics, Languages, Philosophy	10.00
TOTAL	100.00

Interior Decoration is an art, a science and a business. Up to now, the school curriculum has stressed the art side, but the membership is fast learning that there is a need for instruction in science and business. In 1954, National AID published the Manual for Business Practice. As in all professions, we need trained teachers who have had practical experience as well as that of theory.

There is a growing hope that, within the shortest possible time, membership in AID will be based on a fair and workable examination. Today, we require four years schooling at college level, plus four years apprenticeship or ten years practical experience, plus local member sponsorship.

The growth of interior design and decoration as a profession is limited only by its client's capacity to demand better things. No longer is the decorator's work limited to residential work of the millionaire. Decorators are following the pattern of all professionals. Some are general practitioners; others specialize. Decorators are designing and executing the interiors of the development house and the housing project as well as the privately owned home. They are designing and executing the interiors of offices, clubs, hotels, ships, hospitals, banks, stores, factories. In fact, there is no limitation, where better working and living conditions are required, for the trained and experienced interior decorator.

The goal is complete professional status and licensing, but many economic and educational problems stand in the way of achievement. In spite of these obstacles, each year the interior decorator finds new recognition for his contribution to society. He experiences keener public appreciation of his value to the individual and his way of life. The decorator deals with manufactured merchandise, but he provides a happy environment in which the color, line, design, scale, proportion and perspective of the artist are ingeniously used, a fact often not understood by the public. He takes space and fills it to make it workable, livable, comfortable and beautiful.

Decorating is a vocation and an avocation but also a livelihood. At first, interior decorators made their living on the sale of merchandise, but as their professional status increases, more and more decorators work on a fee basis plus the profit from merchandise sold. There are no contractors between the decorator and client as there are between the architect and client. Decorating is 1/6 glamour and 5/6 detail and service -- a fact that few people recognize.

There are fewer and fewer good technical craftsmen, and perfection becomes more difficult. New methods must be developed to meet the clients' needs and desires. In this new growing profession, new techniques must be evolved to meet the exacting demands of a growing clientele.

Interior decoration, in its business aspect, plays a definite role in the distribution of merchandise. The influence is far greater than the purchase in dollars and cents. The public desires at all times "to be like its betters, only better." The artist in the decorator makes this desire possible.

Gladys Miller

DIE FARBE ISSUES HEIDELBERG PAPERS

A few weeks ago the complete report of the meeting, International Discussion of Problems in Color Metrics, held at Heidelberg last year in June, was issued by Die Farbe, the German journal which covers the field of color. Like the preprint issued at the meeting, this report contains all the invited and contributed papers given at Heidelberg, and in addition to them some of the discussions which took place during

the different sessions. It also contains the opening words given by Dr. D. B. Judd, the welcome address by Prof. E. Engelking and Prof. H. Schaefer, a list of the 156 participants at the meeting, and a general review of the meeting by Prof. M. Richter, who was the initiator and organizer of this symposium on color metrics.

Since the report appears one year after the event, it may be useful for many readers to recall the topics of the meeting. There were three sessions: Session I dealt with problems of Chromatic Adaptation and the Influence of Surrounding Fields; Session II with problems of Color Vision, and finally Session III with problems of Color Space, Color Systems and Color Tolerances. The chairmen of the sessions were Prof. Y. LeGrand, Prof. W. D. Wright, and Dr. D. B. Judd, respectively.

For other reviews and comments on the meeting the attention of the reader is drawn to the articles of Miss Dorothy Nickerson (ISCC News Letter No. 120, September, 1955), Commander Dean Farnsworth (ISCC News Letter No. 120, September, 1955) and Dr. I. Balinkin (Amer. Ceramic Soc. Bull. 34, p. 342 (1955)).

Günter Wyszecki

COLOR APTITUDE TEST

With this issue of the News Letter there is included a reprint of a report by Dr. Forrest L. Dimmick, Specifications and Calibration of the 1953 Edition of the Inter-Society Color Council Color Aptitude Test, from the Journal of the Optical Society of America, 46, 389-393 (1956). It concerns the 1953 edition of the CAT, made commercially available by the Federation of Paint and Varnish Production Clubs, through the office of their executive secretary, C. H. Flynn, 121 South Broad Street, Philadelphia 7, Penn.

Dr. Dimmick's report summarizes an analysis of some 1000 testings, and is sent to ISCC members as a final report of ISCC subcommittee on Problem 10.

The Color Aptitude Test subcommittee, of which Dr. Dimmick is co-chairman with Carl E. Foss, is to be congratulated on a job well done. It has been a long project, whose record is full of the sort of cooperation that has come to be expected among ISCC members, cooperation that makes even so large a project as this one possible for a committee of the ISCC.

This last report on the calibration of the 1953 edition of the Color Aptitude Test makes it possible to use the test with more confidence than ever. For information on the availability of the test, write to Mr. Flynn.

RED-TO-THE-CORE APPLE HARVESTED IN JAPAN

Several months ago, in Japan, Kenzo Maeda, 74, harvested 50 apples with the deep-down blush, red to the core. The crop of one hybrid tree followed years of experiment. He said his orchard within a few years would produce in market quantities. Maeda predicted "great popular demand" for the new variety, based on "pure esthetic appeal." The apples taste just like the regular kind.

TOTS ARE COLOR-SMART

Children like modern decoration and bright colors just as much as adults. This was proved at a home furnishing showing of the Fashion Group in New York where a group of youngsters 3 to 10 years old were asked to choose their favorites from six miniature rooms. Pink and blue, long associated with small fry, were passed up in favor of such sophisticated combinations as turquoise, black and white; olive and cocoa; natural and deep brown.