

INTER-SOCIETY COLOR COUNCIL

NEWS LETTER

NUMBER 118

MAY, 1955

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Rochester 4, New York

Address correspondence regarding subscriptions and missing copies to the Secretary.

Annual subscription to non-members: \$4.00

INTRODUCING OUR NEW EDITOR

With this issue of the News Letter Dr. Eugene Allen of American Cyanamid Company takes over as editor. He became a member of the News Letter Committee some months ago and at the April meeting of the I.S.C.C. Board of Directors was appointed chairman of the committee. Thus, upon his acceptance, he became our new editor. We are proud to present him to you in this capacity for we believe that he will carry on in the best traditions of the Inter-Society Color Council and that under his direction the News Letter will continue with increasing success to fulfill its multiple role of disseminating information of mutual interest, coordinating actions of the delegates, providing material for republication in journals of its Member-Bodies, and maintaining general interest by inclusion of meeting notices, reports of Board meetings and discussions, news, notes, reviews of recent articles and patents on color.

Dr. Allen is a native of New Jersey. He graduated from Columbia University in 1938, and in 1944 obtained the degree of Master of Science at Stevens Institute of Technology. In 1952 he obtained the degree of Doctor of Philosophy at Rutgers University, the subject of his thesis: Multi-Component Spectrophotometry. The work for this degree was pursued on a part-time basis while working at the American Cyanamid Company, the experimental work for the thesis being carried out in the laboratories of the American Cyanamid Company. Dr. Allen worked at Picatinny Arsenal during the war years, and since 1945 has been at the Bound Brook plant of the American Cyanamid Company where his present position is concerned with research on color and its measurement. He has published several papers in the field of analytical chemistry and spectrophotometry, and several more in the field of optics are in the process of preparation. On the recent program of the Optical Society he gave an excellent paper on the Colorimetry of Fluorescent Whitening Agents. As secretary of ISCC's subcommittee on Problem 18, the Colorimetry of Fluorescent Materials, he has prepared remarkably lucid reports of the committee work and has been of great assistance to its chairman, Dr. S. Goldwasser, in planning and executing the work of this committee on a currently important and commercially useful subject. Dr. Allen is a member of the American Chemical Society, the Optical Society of America, the Inter-Society Color Council, and Sigma Xi.

It will interest our members to know that Dr. Allen has lectured recently on "Color: How the Eye Sees It and Instruments Measure It" before the New York and Chicago Paint and Varnish Production Clubs, and before the Philadelphia-Wilmington Color Group.

Gene is quiet, studious and cultured; in school his chief athletic interest was fencing. His main hobby is music; he is accomplished on the piano, both in composing and in playing. He lives in Elizabeth, New Jersey, with his wife Beatrice, a concert pianist and graduate of the Juilliard School of Music, and two children, Marlene, a ten-year old daughter, and Julian, a two-year old son. The children apparently have inherited their parents' musical ability for Marlene already has received a Juilliard scholarship for piano, and from Ed Stearns we understand that Julian is responsive enough to violin music so that the family has great hopes that he, too, will develop serious musical interests.

Thus we introduce to you our new Editor. May his association with us in this capacity be a successful, happy, and long one! Good luck to you, Gene!

Dorothy Nickerson, President

NEW MEMBER BODIES Three member-body applications were approved at the business session of the Annual Meeting of the Inter-Society Color Council that was held on April 6, 1955. One of these is the American Artists Professional League which is a former member-body now applying for readmission. The three new member-bodies are:

American Artists Professional League, Inc.
15 Gramercy Park
New York 3, New York

(Application signed by Mr. J. Scott Williams.)

Package Designers Council
12 East 46th Street
New York, New York

(Application signed by Mr. Karl Fink.)

Research and Engineering Council of the
Graphic Arts Industry, Inc.
719 15th Street, N. W.
Washington 5, D. C.

(Application signed by Mr. Robert E. Rossell.)

NEW MEMBERS The Board of Directors of the Inter-Society Color Council met April 5, 1955 at the Hotel Statler in New York City. The following applications for individual membership were accepted:

Associate Individual Members

Mr. A. J. Bruning
H. B. Davis Company
Bayard and Severn Streets
Baltimore 30, Maryland

Particular Interest:

Control and specification
of color.

Mr. Alex S. Quiroga
Box 2128 A.M.R.
Johns Hopkins University
Baltimore 18, Maryland

Spectral response and transfer characteristics of color television signals.

Mr. Lloyd E. Varden
Suite A-1105
200 East 66th Street
New York 21, New York

Color measurement and specification; color reproduction techniques; color vision as related to color reproduction.

Mr. Robert W. Voedisch
835 Florence Avenue
Evanston, Illinois

Colorimetry of fluorescent materials, use of color in advertising with particular emphasis on fluorescent color as it relates to the graphic arts and outdoor advertising fields.

Mr. F. W. Weber
F. Weber and Company
1220 Buttonwood Street
Philadelphia 23, Pennsylvania

Color in the manufacture of artist materials.

Affiliate Individual Members

Particular Interest:

Mrs. Helene C. Craig
4937 Forest Park Avenue
St. Louis 8, Missouri

The effect of light on color and the part color plays in the final memory picture.

Mrs. Margaret N. Godlove
127 Spring Garden Street
Easton, Pennsylvania

Color harmony, art and development of color.

Mr. Frank Hirst
5124 Greene Street
Philadelphia 44, Pennsylvania

Color matching - creating new color effects for individual installations and mass market.

Mrs. Jane G. Kennedy
17 Park Avenue
New York 16, New York

Paints.

Mr. Michael McCarthy
Rayco Manufacturing Company
220 Straight Street
Paterson, New Jersey

Automobile color trends - interior and exterior harmonies, color in merchandising and decorating.

CALIFORNIA COLOR SOCIETY

On Wednesday, March 23 the California Color Society and their guests met for a much anticipated lecture by Mr. Ralph M. Evans. This meeting was co-sponsored by the Cinematography Department of the University of Southern California, under the direction of Mr. Herbert Farmer, and was held at the University. Mr. Evans' outstanding lectures have been invaluable to this group; his visits to the West Coast are always stimulating and he has been our principal personal contact with color activities and color friends in the East. The lecture for the evening, "Creative Directions in Color Photography," had been given for this group in October 1952, and since that time many requests and inquiries had been made as to the possibility of its being repeated, from both those who missed it the first time and those who wished to see and hear it again.

Many of the requests for Mr. Evans' lecture mentioned above were from those who had seen Miss Jeannette Klute's color prints in the exhibition "The Camera and the Artist," which opened at the San Diego Fine Arts Gallery on February 15 and continued through March 13, after which it was also shown at the State Teachers college, San Diego. This was an invitational exhibition of creative photography sponsored by the Photographic Arts Committee. "Why Photography," a talk by Al King, marked the opening. Mr. Lynn Fayman, long an active member of the California Color Society, was instrumental in organizing the exhibit, and among the 55 fine prints shown were some of his abstract Flexichromes. At present 60 of his Flexichrome prints are on two national exhibition circuits.

Albert H. King

PHILADELPHIA-WILMINGTON
COLOR GROUP

We hear from Miss Martha E. Jungerman, secretary of the group, that the April 26 meeting was quite successful. ISCC director Helen D. Taylor presented her picturesque talk on "Color Timing in Merchandising," which we enjoyed at the annual ISCC meeting in New York. Many people from the packaging industry, as well as representatives from leather tanners' and merchandising groups were present. Miss Jungerman says that the talk provoked a great deal of discussion, and the questions threatened to continue indefinitely.

COLOUR COUNCIL
OF TORONTO

We learn from "Colour Comments," edited for the Colour Council of Toronto by past vice-president C. R. Conquergood, that the February meeting of the Council was unusual and interesting. Mrs. Dorothy Lash Colquhoun's talk on "Colour in Food" was presented in an informal and charming manner which won the approval of all those present. The meal served up by the Prince Arthur House was appropriately enough "color-tuned" for the event. According to Colour Comments: "'Colour in Food' provided ample food for thought, and those present 'ate it up'."

At the March 10 meeting, ISCC director Walter C. Granville spoke on "Color Principles and Practises." Colour Comments states that "Mr. Granville completely won the admiration of his audience.... His statement of the principles of colour arrangement was easily understood even by those who are not engaged in colour work."

Professor W. Ed. Carswell, who presented his excellent talk on "Color at Work" at our annual ISCC meeting in April, repeated this talk for the Colour Council of Toronto at its April 12 meeting. We have no details of this meeting as yet.

BRITISH
PHYSICAL SOCIETY

We have received notice of several meetings held by this group. On February 25, Dr. W. S. Stiles of the National Physical Laboratory delivered the Thomas Young Oration on "The Basic Data of Colour-Matching and Some Related Aspects of Visual Theory." This work is of great importance, since the data will come up for discussion at the forthcoming meeting of the C.I.E. in Zurich in connection with revision of the Standard Observer. The Colour Group of the Physical Society held its 84th meeting on February 23, when Mr. T. H. Vinnicombe spoke on "The Robbialac Colorizer Method of Paint-Colour Mixing and its Value to All Concerned in the Usage of Colour." The 85th meeting was held on March 30, with Dr. L. C. Thomson speaking on "The Part Played by Electrophysiology in the Investigation of Visual Mechanisms."

CONFERENCE ON VISION,
COLOR AND DESIGN

Albert King, an ISCC member who is active in the California Color Society, and Lynn Fayman, another active member of the California Color Society, report that they had the pleasure of attending the conference on VISION, COLOR AND DESIGN,

held at the University of Texas on March 17, 18 and 19. They claim that it was a very stimulating and informative session, and that Prof. Harry Helson, who organized the meeting and also served as its chairman, certainly was most efficient and gracious both as chairman and host. Dr. Isay Balinkin's motion at the close of the session congratulating Prof. Helson on the success of the conference was heartily endorsed by all those present. The conference was sponsored by the Psychological Research Foundation under a grant to the University of Texas by the Luminall Paint Division of the National Chemical and Manufacturing Company.

Mr. King, who for 21 years headed the color department at the Art Center School, was very favorably impressed with the approach on the part of the University of Texas Departments of Art and Architecture to the problem of integrating color in the fields of architecture and pictorial design. According to a letter from Mr. King: "The exhibition of student solutions to combined experimental and creative work problems, on display during the conference, evoked much interest and gives promise that at least some future architects will have a good background for an intelligent functional and aesthetic approach to their color problems."

The following is a list of the speakers and their topics:

Ralph M. Evans	The Expressiveness of Color
Jozef Cohen	History of Color to Maxwell
Walter C. Granville	Fundamental Coordinate Scales in Color Systems Intended for Color Selection and Specification
Isay Balinkin	Color Harmony in Three-Dimensional Space
Miles Tinker	Length of Work Period in Visual Research
S. H. Bartley	Influence of Vision on Tactual and Kinaesthetic Space
A. H. King	Art Education
Harry Helson	Color and Seeing
Deane B. Judd	Classic Laws of Color Harmony Expressed in Terms of the Color Solid
Rudolph Arnheim	Psychology and Art
D. C. Wingren	Color and Design
H. L. Hirsche and R. Slutzky	Color and Space
H. B. Hoesli	Color in Architecture
Lynn Fayman	Color in Motion
Isay Balinkin	Mechanical Models in Light and Color

In addition to the foregoing speakers who had previously indicated the topics on which they would speak, the following individuals also participated in the conference: D. B. Harmon, John Marshall Ziv, Marian B. Davis, D. L. Weismann, H. H. Harris, K. M. Dallenbach, R. B. Blake, Lynn Fayman, I Rubin, J. Martin and C. A. Winkelhake.

Dr. Judd's talk on color harmony and a brief summary of Dr. Balinkin's talk on the same subject will appear in the July issue.

INTERNATIONAL DESIGN CONFERENCE

The theme of this year's Conference, to be held in Aspen, Colorado on June 13-18, is "Crossroads - What Are the Directions of the Arts?" The program outline explains that there is a deep concern about tendencies in design philosophy which have been

developing in recent years. The Conference intends to discuss, and perhaps redefine such terms as "Functionalism, Neo-Classicism, and Humanism." The organization of the Conference is unusual, since the papers will not be presented orally. Each paper will be available to the Conference members in printed form the day before. The speaker will then devote his time to answering questions and conducting discussion about his thesis. By all accounts the Conference appears to be quite provocative and well worth attending by those interested in the subject.

HOW ARE
FLAG COLORS
STANDARDIZED? Recently, we had a request concerning the color of the blue in the United Nations' flag. Inquiries from the United Nations itself - their Information Service - brought little help. The flag was illustrated in the National Geographic some time ago, and the blue in their illustration was about 3.5PB 5⁺/7.5 in Munsell notation, therefore a "moderate blue" in ISCC-NBS terms. We then asked Miss Estelle Tennis, executive secretary of our member body, the Textile Color Card Association of the United States, Inc., if in all of their work of standardizing signal and flag colors for the United States Armed Services they might have been called upon to provide a standard for the flag of the United Nations. She replied that their association had not established the color originally for the U. N.; it was adopted by the General Assembly October 20, 1947. However, at the request of the Quartermaster General's Office, the T.C.C.A. had established BLUEBIRD, Cable No. 70211 from their Standard 9th Edition, for the blue of the U.N. flag - the flag being blue with design in white. BLUEBIRD has a Munsell notation, as reported in the NBS-TCCA Report, of 2.9PB 3.8/6.5, which is well within the limits of the ISCC-NBS description "moderate blue."

This exchange of correspondence made us curious as to how flag colors are standardized, so we asked Miss Tennis for more information, and found out some very interesting facts. We learned that the Quartermaster General asked the T.C.C.A. in 1943 to make a collection of the official flag colors of all the nations which constitute the United Nations, plus several other nations as well. This collection has been gradually enlarged as more nations were admitted to the U. N., which now numbers 60. In each case, the authentic flag colors were carefully matched to colors created by the T.C.C.A. The majority of these T.C.C.A. colors appeared in their Ninth Edition Standard Card and in their U.S. Army Color Cards for Arms and Services. A few of the standards were specified from the T.C.C.A. seasonal cards.

The compilation of this collection of authentic flag colors required a vast amount of research on the part of the T.C.C.A. staff. The colors were matched to the official flags supplied by the Embassies or Consulates of the various countries involved. These diplomatic representatives cooperated most generously with the T.C.C.A. in this project and supplied historical documents which explained the symbolism of the flags' colors and design. Frequently, each color on a flag has a special significance, which has to be understood if the colors are to be interpreted properly.

Israel, being a new country, had never standardized its flag colors. The T.C.C.A. sent duplicate samples of blues from their Standard and seasonal cards to the Israeli consulate. They, in turn, forwarded one set to the official committee in Tel Aviv which was appointed to select the standard for the blue of the Israel flag. As announced by the Israel Ministry for Foreign Affairs, the colors officially adopted were chosen from the Ninth Edition Standard Card as follows: YALE BLUE, Cable No. 70086, for the blue of the horizontal bars of the flag and for the Star of David, and WHITE, Cable No. 70001, for the background. (See the Table for Colorimetric Values.)

T.C.C.A.		C.I.E.			Munsell		ISCC-NBS
Cable No.	Name	Y	x	y	Renotation	Book Notation	Designation
FLAG OF THE UNITED STATES (RED ¹)							
		0.073	0.56	0.32		5R 3.3/15 ⁴	
70180	Old Glory Red	0.082	0.560	0.308	5.5R 3.3/11.1	5R 3.1/14	v.R
65006	U.S. Army Scarlet	0.102	0.548	0.320	6.1R 3.7/11.2	6R 3.3/13	s.R
FLAG OF THE UNITED STATES (WHITE ²)							
		0.57	0.32	0.33		4Y 8.2/1 ⁻	
FLAG OF THE UNITED STATES (BLUE ¹)							
		0.025	0.28	0.26		10PB 1.8/2 ⁻	
70077	Natl. Flag Blue	0.025	0.259	0.238	7.6PB 1.7/2.5	8PB 1.5/1.8	d.pB
70075	Old Glory Blue	0.040	0.229	0.186	8.2PB 2.3/6.1	8.6PB 2.1/5.3	m.pB
FLAG OF THE UNITED NATIONS (BLUE)							
70211	Bluebird	0.112	0.217	0.226	2.9PB 3.9/6.4	2.9PB 3.7/6.7	mod.B
FLAG OF ISRAEL							
70086	Yale Blue	0.063	0.204	0.165	7.3PB 2.9/8.8	7.2PB 2.9/9.1	deep pB
70001	White	0.753	0.320	0.327	2.5Y 8.8/0.7	2.5Y 9.1/0.7	white to yWhite
STATE COLORS OF DELAWARE (COLONIAL BLUE AND BUFF)							
10663	Arno Blue	0.168	0.242	0.270	8.4B 4.7/4.6	7.2B 4.4/3.9	m.gB
10781	Golden Beige	0.342	0.383	0.377	0.6Y 6.3/4.0	0.4Y 6.2/4.0	1.yBr
STATE COLORS OF CALIFORNIA (BLUE AND GOLD)							
70086	Yale Blue	0.063	0.204	0.165	7.3PB 2.9/8.8	7.2PB 2.9/9.1	deep pB
65001	Golden Yellow	0.449	0.474	0.458	2.0Y 7.1/11.3	1Y 7.3/11	v.Y
BEAR FLAG (OFFICIAL STATE FLAG OF CALIFORNIA)							
70001	White	0.753	0.320	0.327	2.5Y 8.8/0.7	2.5Y 9.1/0.7	white to yWhite
70180	Old Glory Red	0.082	0.560	0.308	5.5R 3.3/11.1	5R 3.1/14	v.R
70168	Irish Green	0.081	0.224	0.460	4.0G 3.3/8.8	5G 3.1/8	deep G
70129	Maple Sugar	0.182	0.414	0.387	9.0YR 4.8/4.5	9.1YR 4.8/4.4	m.yBr
70108	Seal	0.043	0.357	0.342	7.1YR 2.4/1.3	9YR 2.1/1.6	d.gyBr

¹ The first line gives the values specified by Federal Specification TT-C-591 for standard wool buntings; the second line gives the color standardized by the T.C.C.A. for the wool bunting flag; the third line gives the color standardized by the T.C.C.A. for the silk banner flag.

² Specified by Federal Specification TT-C-591.

One set of the complete collection of flag color standards is on file at the Heraldic Branch of the Department of the Army in Washington. Another is kept for reference at the Philadelphia Quartermaster Depot, while the third collection, in loose-leaf book format, is on file at the T.C.C.A. Headquarters, together with the original references. These official data serve as a permanent reference for the Quartermaster General's Office. However, they are also valuable for other branches of the Government, representatives of the U.N., manufacturers, and anyone else who may need accurate color standards of these flags.

All this brings to mind the work done some years ago in standardizing the colors of the Flag of the United States. Originally, Federal Specification TT-C-591, July 3, 1934, amended October, 1934, specified these for the wool bunting flag in C.I.E. terms (see Table). The T.C.C.A., in cooperation with the Quartermaster's Office, established two sets of standards, one for the wool bunting flag, and the other for the silk banner flag. These are also given in the Table.

The T.C.C.A. has also standardized the State colors of Delaware (Colonial Blue and Buff) and California (Blue and Gold). The work for Delaware was done at the request of Leon de Valinger, Jr., archivist of the First State. California's official colors, Blue and Gold, were standardized by T.C.C.A. at the request of J. N. Bowman, Historian, State Archives, Office of the Secretary of State. The official data on these colors was incorporated in an act passed by the State Legislature and approved by the Governor on April 11, 1955. In addition, the T.C.C.A. has recently standardized the five colors used in the Bear Flag, the official State Flag of California. These colors, all taken from the Ninth Edition Standard Card, were specified in the Bear Flag Act, passed by the Legislature and signed by the Governor of California. This act, which became effective on September 10, 1953, carefully specifies by T.C.C.A. number and name the colors for the following: Front of bear's eye, bear's claws, bear's tongue, brown of the bear, dark brown of the bear's outline, paws, iris of the eye, fur undulations, white field, red stripe, the star, shading, grass plot, 12 grass tufts, and the letters of "California Republic" (see ISCC News Letter No. 108, September, 1953, and Table). The T.C.C.A. is now working on a similar project on the State Flag of Connecticut.

In 1946, the National Bureau of Standards published Research Paper RP 1700 by Reimann, Judd and Keegan. This paper gives the colorimetric specifications for all the colors of the T.C.C.A. Ninth Edition Standard Card and for their U.S. Army card for Arms and Services. Therefore, all of the flag colors from these cards are permanently standardized in C.I.E. and Munsell terms. In the case of the Delaware State Colors, colorimetric specifications for these were separately determined by the National Bureau of Standards in NBS Test 2.1/140565. The accompanying Table presents the T.C.C.A. number and name, the C.I.E. specifications, the Munsell book notation and renotation values, and the revised ISCC-NBS designations read from Munsell renotations for all the flag colors mentioned.

D. N. and E. A.

MISS FAWCETT Miss Lorain Fawcett, our dynamic ISCC member who has done a wonderful job in putting color to work in the most diverse industrial fields, gave two of her typically dramatic lecture demonstrations recently. One was on the subject of "How to Use Color Effectively," presented on February 24 before the Textbook Clinic of the American Institute of Graphic Arts. The other was given in Montreal on March 3 before the 8th Quebec Regional Conference of the Packaging Association of Canada. These lectures, we understand, are replete with special lighting equipment and props of various kinds.

Miss Fawcett is a leading consultant in the field of package design, and gives a course on color at Columbia (see article on "Color Courses in Colleges" which follows).

**COLOR COURSES
IN COLLEGES** In the March issue of the News Letter we carried a story about a color course given at the University of Southern California. We promised that we would have more information about other such courses in the present issue. During the last two months we have corresponded with many ISCC members who are associated with educational institutions. We have obtained a good deal of valuable information, both from our correspondents and from college catalogs. However, this information is not complete, and it is possible that many courses have been left out. If so, we would like to hear about it and perhaps publish more information in the next issue.

The following table gives, if the information is available, the name of the college, the department in which the course is given, the title of the course, the name of the instructor, and finally a description of the course. For some of the courses the description of the course is copied verbatim from the college catalog; for others, the information is taken from correspondence received by us.

We do not know which of these courses are intended only for registered, full-time college students, and which may be taken by outsiders. We suggest that you write directly to the college concerned if any of these courses appear to be of interest. In any case, we think that the information is interesting because it shows what sort of instruction is available in our field throughout the country. Of course, many of the courses do not deal primarily with color but only cover it as part of another subject.

We are deeply grateful to all our members who have helped us by giving information about this subject. We wish particularly to acknowledge the help of ISCC members Martha L. Hensley and Bernice Chambers, both of whom have gone through the trouble of compiling an extensive list of color courses.

AGRICULTURAL AND TECHNICAL COLLEGE OF NORTH CAROLINA, DEPARTMENT OF ART -- COLOR DESIGN

Theory of color and principles of pure design as applied in textiles and the development of decorative motifs, over-all patterns, and sources of design.

UNIVERSITY OF ALABAMA, DEPARTMENT OF RELATED ART -- INTRODUCTION TO RELATED ART

An introductory course in design principles and color. Application made in home furnishings, posters, and flower arrangements.

ALABAMA POLYTECHNIC INSTITUTE, DEPARTMENT OF ARCHITECTURE -- ELEMENTS OF INTERIOR DESIGN II

Analysis and solution of simple interiors; color; furnishings; research and discussion.

ALABAMA POLYTECHNIC INSTITUTE -- WEAVING

Basic traditional and original patterns in color on four- and eight-harness hand looms.

THE AMERICAN UNIVERSITY, DEPARTMENT OF ART -- CREATIVE PAINTING

Work from basic and simplified theories of color, composition and design to the level of independent student work planned in conference with instructor.

UNIVERSITY OF ARIZONA, DEPARTMENT OF ART -- STAGE LIGHTING

Theory and physics of lighting, theory of color, lighting design, switchboard operation; instrumental control, electric and sound systems.

ARKANSAS A. & M. COLLEGE, DEPARTMENT OF APPLIED ART -- INTRODUCTION TO ART

Practical problems in home planning and furnishings involving principles of design and color as related to everyday life.

AUGUSTANS COLLEGE, DEPARTMENT OF ART -- CREATIVE DESIGN

Problems in the principles of design and color harmonies. Emphasis placed on these principles to practical design problems.

BOSTON UNIVERSITY, SCHOOL OF FINE AND APPLIED ARTS -- COLOR

Lectures and studio assignments. Investigation of several of the color theories and their application to interior design and painting. Practice in the development of color arrangements as used in advertising, in merchandising, and in business.

UNIVERSITY OF BUFFALO, RETAIL DIVISION -- COLOR, LINE AND DESIGN

A course designed to help the student realize the importance of color, line and design to himself and to the community; to learn the techniques which he may use as tools in creating a harmonious environment for himself, his home, and in his business. These techniques cover various aspects of color, line and design from personal, business and general cultural viewpoints, including the principles of harmony, proportion, balance, and emphasis as applied to merchandise and to the development of good taste.

UNIVERSITY OF CALIFORNIA, SCHOOL OF OPTOMETRY -- OPTOMETRY -- PROFESSOR GORDON L. WALLS

Photochemical basis of vision; rhodopsin; scotopic vision; porphyropsin; iodopsin; adaptation (photochemical); adaptation (ultrarapid types); cone chemistry and brightness; luminosity and the photometric system; psychophysical relationships; the visual acuities; color vision; color blindness; chromatic adaptation; electro-physiology of vision; spatial vision.

UNIVERSITY OF CALIFORNIA, SCHOOL OF OPTOMETRY -- PHYSIOLOGICAL OPTICS -- PROFESSOR GORDON L. WALLS

Dimensions of color; color mixture; principles of colorimetry; color mixture by alternation and binocularly; color blindness; color aptitude.

COLORADO A. & M. COLLEGE, DEPARTMENT OF ART -- COLOR AND DESIGN

Theory of color based upon light rays and pigments. Principles of balance, rhythm and harmony applied to original design.

COLORADO STATE COLLEGE OF EDUCATION, DEPARTMENT OF ART -- COLOR THEORY

A study of color relationships and organizational principles pertinent to the color unit.

COLUMBIA UNIVERSITY, DEPARTMENT OF FINE AND INDUSTRIAL ARTS -- COLOR AND DESIGN

A course to develop sensitivity to relationships in color and design. Emphasis on individual expression and development with a variety of media. Color and design as a part of natural creative expression and their function in life and in art education. Color theories and principles of color harmony are studied. Museum visits, lectures, readings, and discussions.

COLUMBIA UNIVERSITY -- COLOR IN INDUSTRY -- MISS LORAIN FAWCETT

A basic course in color, teaching the Munsell system of color and its application to the graphic and industrial fields. Lectures and demonstrations treat the physics, chemistry, and use of color. In the workshop students use printing inks to produce tinting, toleration and chroma steppings, notate color to the Munsell Book of Color, and work with color cabinets. They also create color plans, layouts, and abstract designs.

COLUMBIA UNIVERSITY, COLLEGE OF PHYSICIANS AND SURGEONS -- PHYSIOLOGICAL OPTICS -- DR. GERTRUDE RAND AND MISS M. C. RITTLER

A three-hour session offered to the residents of the Institute of Ophthalmology of the Presbyterian Hospital. Covers certain aspects of color specification, illuminants, characteristics of defective color vision. Physics and physiology of color are covered as subsidiary topics.

CORNELL UNIVERSITY -- ILLUMINATING ENGINEERING

A course in illumination which covers the scientific basis of color, including color specification and notation. Also deals with color rendition due to various illuminants.

GEORGIA INSTITUTE OF TECHNOLOGY, SCHOOL OF ARCHITECTURE -- COLOR THEORY

Lecture, laboratory experiment, and group discussion on the properties of color and its possibilities in design.

GRINNELL COLLEGE, DEPARTMENT OF ART -- INTERIOR DECORATION

Basic principles of design and color applied to the home. Brief history of domestic architecture, furniture and textiles. Work on practical problems included.

HARVARD UNIVERSITY, DEPARTMENT OF FINE ARTS -- PROFESSOR T. LUX FEININGER

Courses in painting, in which color is discussed from the studio, rather than the laboratory, point of view.

UNIVERSITY OF ILLINOIS, DEPARTMENT OF PSYCHOLOGY -- ADVANCED EXPERIMENTAL PSYCHOLOGY -- PROFESSOR JOZEF COHEN

An undergraduate course in which color is treated fairly thoroughly.

UNIVERSITY OF ILLINOIS, DEPARTMENT OF PSYCHOLOGY -- EXPERIMENTAL SENSORY PSYCHOLOGY -- PROFESSOR JOZEF COHEN

A graduate course containing a rigorous treatment of color.

UNIVERSITY OF ILLINOIS, DEPARTMENT OF ELECTRICAL ENGINEERING -- COLORIMETRY IN ILLUMINATION -- PROFESSOR J. O. KRAEHNBUHL

Color vision, color of sources, surfaces and filters, direct measurements of spectral distributions, methods of computing tristimulus values and chromaticity coefficients, color temperature, color systems and their interrelation, linear and homogeneous transformation, color discrimination, and harmony and applications.

THE JOHNS HOPKINS UNIVERSITY, DEPARTMENT OF PSYCHOLOGY -- SENSATION AND PERCEPTION -- PROFESSOR ALPHONSE CHAPANIS

A graduate seminar, a major topic of which is color vision and color perception. Course is flexible, and varies with the needs of the students.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY -- COLOR MEASUREMENT -- PROFESSOR A. C. HARDY

Measurement and specification of color in the objective and subjective sense,

and the application of such methods to industrial problems. Experiments illustrate the photometric and chromatic properties of the human eye and give experience in the technique of spectrophotometry and colorimetry.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY -- ILLUMINATION -- PROFESSOR PARRY MOON
Considers lighting design for architects, and includes one week on color.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY -- Light and Color -- PROFESSOR GYORGY KEPES
Deals with aesthetic applications of color.

OBERLIN COLLEGE -- PICTORIAL PRINCIPLES, LINE, FORM, COLOR AND COMPOSITION
An introductory experimental analysis of the principal elements of two-dimensional art.

OHIO STATE UNIVERSITY, SCHOOL OF OPTOMETRY -- INTERMEDIATE PHYSIOLOGICAL OPTICS -- PROFESSOR GLENN A. FRY
Monocular sensory mechanisms of vision; analysis and specification of visual stimuli; photoreception and retino-cortical transmission; adaptation of photoreceptors; flicker; brightness discrimination; and color vision.

OHIO STATE UNIVERSITY, SCHOOL OF OPTOMETRY -- ADVANCED PHYSIOLOGICAL OPTICS -- PROFESSOR GLENN A. FRY
Methods of controlling and measuring the accuracy of fixation; analysis and specification of visual stimuli; photoreceptor mechanisms of light and color vision including photochemistry and electrophysiology of the photoreceptors; luminosity of spectral colors; chromatic photometry; interpretation of color-mixture data; determination and specification of chromaticity; retino-cortical transmission; simultaneous contrast and induction; visibility of lines, points and borders; responses to momentary, intermittent and moving stimuli; adaptation phenomena; after-images.

OHIO STATE UNIVERSITY, SCHOOL OF OPTOMETRY -- APPLIED PATHOLOGY OF THE EYE -- PROFESSOR GLENN A. FRY
Visual fields, scotometry; entoptic phenomena of pathological significance; malingering and simulation; clinical tests for color blindness and night and day blindness; subnormal central vision involving pathology; telescopic lenses and aids for subnormal vision; theory and practice in the use of contact lenses.

OHIO STATE UNIVERSITY, DEPARTMENT OF FINE AND APPLIED ARTS -- COLOR
A specialized course in color, with the emphasis on the organic relationship of form and color.

OHIO UNIVERSITY -- APPRECIATION OF SPACE ARTS
Appreciative study of hue, mass, color, and form as shown in architecture, sculpture and painting.

OREGON STATE COLLEGE, DEPARTMENT OF ART -- COLOR AND COMPOSITION
Studio classes in the everyday use of the principles of composing or creating with lines, colors and textures.

PENNSYLVANIA STATE UNIVERSITY, DEPARTMENT OF ART -- COLOR THEORY AND HARMONY
Application of principles of color theory and harmony to two- and three-dimensional design.

PHILADELPHIA TEXTILE INSTITUTE -- PROFESSOR MARTHA E. JUNGEMAN
Three semesters of color study for the textile majors, including color mixing,

matching and application. Color harmony, and the various color systems are considered. Application to the styling and design of textiles is also included. Work on colorimetry and spectroscopy is added for the chemistry and dyeing majors.

UNIVERSITY OF RHODE ISLAND, DEPARTMENT OF ART -- DESIGN AND COLOR

The elements of design and the development and application of fundamental art principles and color theories through problems in art structure.

UNIVERSITY OF SOUTHERN CALIFORNIA

See March News Letter.

STANFORD UNIVERSITY, DEPARTMENT OF ARTS AND ARCHITECTURE -- COLOR

Theory and practical problems to develop a knowledge of the visual characteristics of color

STEPHENS COLLEGE, DEPARTMENT OF ART -- DRAWING AND COLOR THEORY

This is a pre-professional course in art which prepares the student for many advanced courses. A thorough technical knowledge of color theory. This course is recommended for students interested in a professional type of art experience. Emphasis is placed on both free-hand and mechanical drawing.

THE UNIVERSITY OF TEXAS, DEPARTMENT OF ARCHITECTURE -- THEORY OF COLOR AND TECHNIQUES

Six hours of lecture and laboratory a week (two semesters).

UNIVERSITY OF WASHINGTON, DEPARTMENT OF FINE ARTS -- COLOR

Theory of color systems and notations; vision, analyses; practical application to theories of design, interior decoration and architecture.

WESTERN RESERVE UNIVERSITY, DIVISION OF ARTS AND ARCHITECTURE -- COLOR AND LIGHTING IN INTERIOR DESIGN -- PROFESSOR VICTORIA BALL

Color science, theory and practice in relation to the work of the interior designer. The relation of lighting to color. Color systems and their use. Colorants as used by the interior designer. Practical work in color problems.

WOMAN'S COLLEGE, UNIVERSITY OF NORTH CAROLINA, DEPARTMENT OF ART -- COLOR

Study of color theories and the decorative and structural use of color in creative problems.

WORCESTER POLYTECHNIC INSTITUTE -- APPLIED OPTICS II

Includes discussion of spectrophotometry and various systems of color measurement and specification. Required for chemistry majors.

YALE UNIVERSITY, DEPARTMENT OF DESIGN -- INTERACTION OF COLOR

No information available.

THE AMERICAN PSYCHOLOGICAL
ASSOCIATION

Ed. Note: This is the first of a series of articles on our Member-Bodies. The purpose of this series is to make our members more famil-

iar with the societies of which the Inter-Society Color Council is composed; to tell something of the history, the structure, the functions, and the aims of these groups, and specifically to describe the interest and activity of each group in the field of color. We wish to thank A.P.A. voting delegate Robert W. Burnham for the following concise, yet lucid, account of the A.P.A., written at our request as a starter for the series.

The American Psychological Association was founded in 1892, incorporated in 1925, and became affiliated with the ISCC in 1932.

The association is dedicated to the advancement of "psychology as a science, as a profession, and as a means of promoting human welfare." There are currently about 13,000 members of the association which is organized into 17 divisions. The divisions each represent some major scientific or professional interest, and these interests range from experimental psychology, esthetics, human engineering, military and industrial psychology, through personality and social psychology to the psychology of maturity and old age. There are 46 state and 5 regional associations affiliated with the national organization.

Because of the size of the APA, legislative action is taken by a council of 67 representatives. A permanent central office is maintained at 1313 Sixteenth Street, N. W., Washington 6, D. C., which is administered by the Executive Secretary of the association, currently Dr. Fillmore H. Sanford, with the help of a large staff. The APA publishes 10 technical and professional journals, has 9 standing committees, 24 special committees, and sends groups of representatives to 20 other national and international scientific and professional organizations, among which is the Inter-Society Color Council.

Psychology is the study of behavior broadly conceived, and the range of interests among individual members of the APA covers every imaginable item of human and infra-human behavior from the activities of organized (and disorganized) groups down to activity in individual nerve fibers. It is not surprising, therefore, that the psychologists primarily interested in problems of color and color perception comprise a small group. Those APA members who actively contribute to the technical literature on color very likely number no more than 20 or 30. These individuals are, with practically no exceptions, members of the Division of Experimental Psychology of the APA, and their activities are typically scientific rather than clinical. It is from this group that the APA selects its delegation to the ISCC.

The delegates are nominated by the APA Board of Directors and elected by the APA Council of Representatives. A functional plan of rotation has recently been put into effect whereby each of 10 delegates serves a period of 10 years, with one delegate rotated off the delegation each year. The chairman of the delegation is changed every three years, and the other two voting delegates serve staggered two-year terms. This plan was designed to infiltrate new blood steadily into the delegation but to give each delegate time to participate actively in the affairs of the ISCC.

The APA delegation to the ISCC does not function as a group. Contributions are made as individuals, quite frequently in the form of research that has been inspired by problems originating in other member groups of the ISCC. A number of APA delegates are also active on the problems subcommittees of the ISCC. The annual report of the APA delegation to the ISCC takes the form of a report on research in progress or completed during the previous year, a description of new apparatus and techniques developed, participation on vision and color committees both in and out of the ISCC, and a bibliography of technical papers published during the preceding year.

Whereas APA delegations have contributed to basic color knowledge, this has by no means overshadowed the benefits they have received from their participation in the ISCC. The quality of their research has improved and their color horizon has been broadened over the years, because of increased knowledge about the measurement and specification of color, the resolution of terminological confusions, *acquaintance* with countless scores of technological and artistic problems and practices and, last but not least, from their direct and personal contacts with the variety of inspirational people who make the Inter-Society Color Council the effective organization that it is.

Robert W. Burnham