Inter-Society Color Council *News*

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IN THIS ISSUE

REVISED CONSTITUTION AND BY-LAWS SENT TO VOTING DELEGATES

Copies of revisions of the ISCC Constitution and By-Laws, approved by the Board of Directors on October 22, 1988, have been sent to all the Voting Delegates of the Council. As required in both the current and the revised documents, these revisions must be approved by a two-thirds majority of the Voting Delegates before they take effect.

The revisions being balloted incorporate many changes from earlier versions. The base from which the changes are considered to be made is the "yellow paper" version of the Constitution and By-Laws that was sent inadvertently to all Council members earlier in 1988, selected because most members may still have it. The changes of greatest importance all occur in the By-Laws; only minor changes in wording were made in the Constitution. The major changes in the By-Laws include the following:

The organization of the Individual, Honorary, Retired, and Student members of the Council has been formalized by the creation of an Individual Member Group (IMG) Member-Body, with all the rights, privileges, and duties of other Member-Bodies except for payment of Member-Body dues. Provision has been made for the members of the IMG Member-Body to elect up to 10 delegates, of whom three are voting delegates and one is the chairperson of the delegation. Elections will be held each year at a special meeting of the IMG members called during the annual meeting of the Council; Individual, Honorary, Retired, and Student members in attendance may vote.

The makeup of the various groups of Council members having voting rights has been clarified. They are: (1) voting delegates of the Member-Bodies; (2) officers and directors; and (3) chairpersons of standing committees, project committees, and interest groups. Provision has thus been made for each Member-Body to have three voting delegates representing its interests, in addition to all additional voting delegates in groups (2) and (3) who belong to that Member-Body. However, at no time can one person have more than one vote.

The classification of Retired member, recognized by the Council for many years, has been added to the By-Laws. Provision has been added for the termination of student membership when the student leaves school.

Provisions for termination of membership, including the little-used provision for expulsion, have been revised and simplified with the objective of insuring that the member's rights be given the maximum protection at all times.

The relative levels of the dues of all classes of membership have been defined. (The actual amounts of dues are set in the Standing Rules.)

A description of the makeup and duties of the Executive Committee has been transferred from the Standing Rules to the By-Laws.

Provisions for the creation, lifetime, and disbanding of ad-hoc committees have been clarified.

Ballots for the vote on these revised documents will be sent out around March 1, and the closing date for voting will be around April 1.

This fulfills the requirement in the old and new Constitution and By-Laws that the Voting Delegates be given 90 days notice before the vote is due. This date is just before the annual meeting, and it is expected that the results of the vote can be announced at that meeting.

If the documents are approved, copies of them will be sent to all Council members as soon as possible. The Standing Rules of the Council are currently being thoroughly revised and expanded by the By-Laws Committee. When this work is completed and approved by the Board of Directors (approval of the Voting Delegates is not required) copies of the new Standing Rules will be sent to all Council members.

Fred W. Billmeyer, Jr.

EXHIBIT OF BRADLEY SCULPTURES AT THE MIT MUSEUM

Interesting, unusual and colorful sculptures have been designed by Morton C. Bradley, Jr. of Arlington, Massachusetts, according to a combination of mathematical and aesthetic judgements. They are displayed at the Massachusetts Institute of Technology (MIT) Museum, 265 Massachusetts Avenue, second floor, Cambridge, MA 02139, phone 253-4444. Bradley is a long time member of the ISCC, has many interests and is a noted restorer of paintings.

The sculptures are geometric structures constructed by a team that includes an artist, an engineer and a mathematician. Most are made from short lengths of small cross section, round or square tubing or rodding, joined and painted with meticulous precision. Each neighboring length is painted a different color; one sculpture has 5005 different segments. Bradley uses the Munsell Book of Color to specify the paints because he wanted the color intervals between segments to be equidistant.

There are two major aspects of the sculptures to appreciate. One is the overall design, the other is the color relationships. Both give these works a unique visual appeal. Some designs are like trees, others like stars. To properly describe all requires the terminology of solid geometry, such as the 4-sided tetrahedron or the 20-faced isosahedron. Some will know what these terms mean; others, like the writer, just enjoy looking at them because they are beautiful.

Each sculpture is suspended by a single cord attached to a device that slowly rotates it. They are housed in large glass-enclosed cases illuminated from below. The background walls are black so it is easy to appreciate the design and color sequences.

Bradley has been at this project for 15 years and on display are only a fraction of his collection. I think anyone interested in color would enjoy seeing these stunning works of art. A more complete description including photographs is given in the May/June 1983 issue of Technology Review.

Why doesn't Bradley show up at ISCC meetings? Maybe he's shy, but 39 years ago he came. Isn't it about time for another visit, Mort? *Walter C. Granville, Dec. 20, 1988*

CANDIDATES FOR DIRECTOR

Norman W. Burningham received his B.S. in Chemical Engineering with Honors from Princeton University. After several years working in the aerospace industry, he resumed his education, receiving an M.S. from the University of Denver and a Ph.D. from the University of Utah.

Norman joined Eastman Kodak's Research Laboratories in 1970, involved with the development of new negative film systems. His main thrust was image science, emphasizing color reproduction. Asked to then apply color science to the rapidly expanding area of electrophotography, he has since done systems and quality analysis of photoelectrophoresis and more conventional xerographic systems. He has also applied modified photographic color models to the description of particulate, screened electrophotographic images and compared basic theories such as Kubelka-Munk with Neugebauer and characteristic vector approaches.

Norman presently leads an image science group doing basic analysis of new imaging systems. They conduct quality analysis of color systems through modeling and the application of psychophysical scaling techniques. He is involved in the incorporation of teaching the principles of color science in local high schools.

Norman has actively participated in ISCC since 1978. He served as Arrangements Chairman from 1985 through 1988, organizing Annual meeting arrangements and Williamsburg conferences. Desiring to focus on a more technical level, he accepted cochairmanship of Interest Group II on Appearance, Vision and Modeling. Through this activity he is interested in working for a continued emphasis on the sharing and application of fundamental imaging science in ISCC meetings.

James T. DeGroff currently serves the ISCC as Interest Group Liaison with the Board of Directors, charged with coordination of the interest group activities and support. He also has been designated co-chairman of the 1991 Annual Meeting. He has been active in ISCC since 1980 as an IMG as well as a delegate from Color Marketing Group (CMG). Currently CMG delegation chairman, he played a key role in the CMG Board decision to reinstate its ISCC membership.

As president of Colortec Associates, Inc., Jim acts as a consultant, teacher of color technology and engineer of new approaches to color measurement, analysis and colorant delivery systems. He has a B.S. and M.B.A. in Research Management from Cornell University.

Jim is currently chairman of the Metropolitan Section American Association of Textile Chemists and Colorists (AATCC) *Research, International Paper and Education Committees.* He has been CMG Technical chairman, founding chairman of the Tracking Committee, organizer and speaker at the CMG Saturday Color Seminar educational series and recent recipient of the CMG Service Award. He is a frequent speaker about color at meetings and seminars in the Paint, Printing, Plastics and Textile industries. He holds patents in colorant compounds and the design of specialty computerized devices. He frequently writes on emerging color technologies and acts as consultant on new ventures in color.

Richard W. Harold is HunterLab's Manager, Educational Services/Advanced Research. He joined the company in 1970 and has worked in applications engineering, research, consulting and educational programs.

Richard received his B.A. in chemistry from the University of South Florida (Tampa). Before joining Hunterlabs, he was a research chemist for the Mary Carter Paint Company (Tampa) and the Color Control Coordinator for the Harshaw Chemical Company, Pigment & Dyes Division (Louisville).

He is a Chartered Colourist and Fellow of the Society of Dyers and Colourists (U.K.). He is current chairman of Re-

search Committee RA-36 of AATCC. He is a U.S.A. delegate to the International Organization for Standardization (ISO)TC 38/SC 1 (Textiles Colour Fastness and Colour Measurement) and convenor of Working Group 7 (Colour Measurement). He is the liaison officer to ISO TC 187 (Colour Notations). He is active in the work of ASTM, ISCC, the Detroit Colour Council (DCC), the U.S. National Committee of the CIE, and the Industrial Fabrics Association (IFIA). He served as co- chairman of ISCC Project Committee #25, Strength of Colorants from 1969 to 1974.

Richard has published numerous technical papers on color and appearance technology and has recently co-authored with Richard S. Hunter, *The Measurement of Appearance, Second Edition.*

Romesh Kumar did his undergraduate work in chemistry at Punjab University, India and graduate work at Laurentian University. He got his PhD in Color Science from Rensselaer Polytechnic Institute in 1980 under the supervision of Dr. Fred W. Billmeyer, Jr.

Romesh is manager of the quality control and color instrumentation group at Hoechst Celanese Corporation, Coventry, RI in the Pigment Application Department. He supervises a color lab (developing test procedures and tolerances for colorants), handles customer complaints on pigments and their applications, and develops product formulations for new applications. He is responsible for statistical process control in quality assurance and various stages in testing. He also deals with government agencies (FDS, USDA, NSF, etc.) for approval of specific products for specific applications. His lab is responsible for the operation of the color system for measurement and color matching and for training internal personnel and customers in color science. His lab also provides a very progressive pigment identification service, well known throughout the pigment application industry.

Romesh is a member of ISCC (since 1978), the DCC and ASTM. He is an elected member of Sigma XI, Phi Lambda Upsilon, and the Colour Index Editorial Committee. He has made several presentations on color and pigments at various national and international meetings.

Evelyn Stephens is Professor of Science and Mathematics at the Fashion Institute of Technology (FIT), with a specialty in color and light. She has been in the Science and Math Department since 1960 and served as chairperson from 1973 to 1981.

Evelyn has been a member of ISCC since 1977 and served as chairperson and co-chair of Project Committee #40, Color Education. She has also participated in Project Committee #33, Human Response to Color, and #37, Artists' Materials. Currently she co-chairs ISCC Interest Group IV, Color Education.

Evelyn chaired the seminar *Color: Art and Education* cosponsored by ISCC and FIT in June 1988. This was a seminar directed towards educators, designed to help them teach color. It was a new endeavor for ISCC and very successful.

ISCC ANNUAL MEETING

Chicago, Illinois, April 9-12, 1989

The Inter-Society Color Council Annual Meeting, co-chaired by Joyce Davenport and Anna Campbell Bliss, will begin on Sunday, April 9, and continue through Wednesday, April 12, at the Ambassador West Hotel in Chicago, Illinois. An extended 3 1/2 day meeting has been scheduled in order to accommodate an outstanding program on architecture and a special symposium covering the theory behind color appearance models and the application of those models to color problems, in addition to the regular project committee and interest group sessions. The Chicago Chapter of the American Institute of Architects is cosponsoring the Tuesday program, "Color in Architecture". All day Wednesday will be given to an international symposium, "Vision and Color Appearance", arranged by ISCC Interest Group II.

Sunday afternoon there will be project committee meetings and an optional bus tour to visit interesting sites around Chicago. In the evening the Wine and Cheese Reception will be held at the Mary Bell Art Gallery where paintings by Wade Thompson, Co-Chairman of Interest Group III, will be on exhibition. Wade is Professor of Art and Design at Southwest Missouri State University and has exhibited widely in one-man and group shows and in national competitive exhibitions. The gallery is located in an artistic neighborhood slightly west of State Street. The area has coffee shops, antiques and quaint cafes plus well known restaurants. Whether it's the best beef sandwich in town or a gourmet meal, you are in the right location for dinner following the reception.

Monday, April 10, will feature a full day of interest group and project committee meetings, as well as the annual business luncheon: *Interest Group I - Measurement and Colorimetry*, co-chaired by Roy Berns and Danny Rich, will focus on instrument manufacturers' philosophies and techniques of achieving spectrophotometric and colorimetric accuracy relative to international conventions. Representatives of the leading companies that manufacture spectral-based colorimetric instruments will discuss their philosophy of calibration, material standards used to perform calibrations, and how traceability to national and international standards is achieved. Traceability will include geometric and colorimetric conformance in addition to spectrophotometric accuracy.

Following this presentation by manufacturers, a representative from the National Institute of Standards and Technology (formerly the National Bureau of Standards) will discuss the same issues from the perspective of a standardizing laboratory. Finally there will be a panel discussion composed of the invited speakers on the topic of achieving inter-instrument reproducibility.

Interest Group III - Art, Design and Psychology, co-chaired by Magenta Yglesias and Wade Thompson has scheduled three speakers. Magenta, a member of the American Society of Interior Design who founded the design studio, Designare Atelier- Interiors, will speak on "Progression of Color in the Design of an Interior." The second speaker, Dr.

George C. Brainard of the Department of Neurology at Jefferson Medical College and member of both the I.E.S. and the C.I.E. Photobiology Committees, will present "Biological Effects of Color." Dr. Charles Duan Roth, whose background includes a psychiatric residency at the National Institute of Mental Health, work with the Narcotics Treatment Agency and the private practice of psychiatry in the Washington DC area, will speak on "Color-Energy Transformation and Personal Development."

Interest Group IV- Color Education, co-chaired by Evelyn Stephens and Nancy Jo Howard, has scheduled a five member panel that will identify and discuss concepts and terminology common to all fields of color. Educators and students in art/design, science and technology will be represented. Accurate, manageable, low cost demonstrations used in the teaching of basic, underlying concepts and theories that cross these fields will be presented. Hopefully, this will result in a new project committee charged with the collection, production and distribution of these materials with appropriate documentation.

Monday evening there will be a banquet. Dr. W. David Wright will be presented the prestigious Godlove Award for a lifetime of accomplishments in color. (See more details in a story elsewhere in this issue.) Following the presentation of the award Mr. John B. Hutchings, Fellow of the Institute of Physics and chairman of the Color Group of Great Britain will give an interesting talk about color.

The symposium "Color in Architecture" moderated by Joyce Davenport and Anna Campbell Bliss is scheduled for Tuesday. The speakers include Mr. John Nicholas Vinci, FAIA, architect and educator and authority on the architectural work of Louis Sullivan. He will speak on the use of color in the work of Louis Sullivan and Sullivan's relationship to the Chicago school of architecture. Another speaker will be Mr. William Kessler, FAIA, an architect and winner of over 75 regional and national design awards including the Gold Medal of the Detroit Chapter of the American Institute of Architects. His work includes the new Detroit General Hospital, Science Center, and housing for the elderly. He will speak on the importance of color.

Mr. Frank E. Heitzman, who is the current president of the Chicago Chapter of the American Institute of Architects, will talk about color in architecture. A second presentation by Mr. John B. Hutchings is scheduled entitled, " Color in Roman and Early Saxon Artifacts Used in Buildings." Mr. N. Page Murry, Jr., manager of the Fluorochemicals Division of the Penwalt Corporation, will speak on the evolution of fluoropolymer coatings in the architectural market.

Dr. F. Howard Gillery is a Senior Scientist at the PPG Industries Glass Research and Development Center near Pittsburgh. He has been responsible for the development of new products and processes in the field of transparent conductive and nonconductive coatings on glass. He was primarily responsible for low emissivity, high transmittance coated glass used in both residential and commercial installations and most of PPG's colored, reflective architectural glass products. His topic will be, "Thirty Years of Colored High Performance Architectural Glass."

In a departure from the traditional 2 1/2 day Annual Meeting format, *Interest Group II - Appearance, Vision and Modeling,* co-chaired by Paula Alessi and Norman Burningham, has arranged for a symposium of outstanding international figures to be held all day on Wednesday, April 12. The goal of this symposium is to generate an exciting technical interchange on the relationships of vision/color science and appearance models. The morning session will feature presentations of the theories behind the models. Dr. Joel Pokorny of this country who heads the Vision and Color Division of the Optical Society of America will cover current color vision theories. Dr. Yoshinobu Nayatani, past president of the Color Science Association of Japan and currently a professor at Osaka Electro-Communication University and a vice president of the Illuminating Engineering Institute of Japan, will speak on his nonlinear color appearance model. His main interests are color engineering (color appearance and metamerism), statistical information processing, and quality management and control. His model predicts the color appearance of object colors under various adapting conditions including the effects studied by Nelson, Hunt, and Stevens. A close relationship is introduced between the present model and the Retinex Theory by Edwin Land.

Dr. Robert Hunt, who was the Assistant Director of Research at Harrow, England, and is currently Visiting Professor of Physiological Optics at The City University in London, will present his model of color vision. The morning session will close with a panel discussion among the speakers, where there will be an opportunity for further interchange and to answer questions from the participants.

The afternoon session will feature presentations describing applications and/or evaluations of those color appearance models. Dr. Ming Ronnier Luo will describe some color estimation experiments he has performed to evaluate Dr. Hunt's model. Dr. Michael Pointer will describe a color reproduction index that he has developed using parameters from Dr. Hunt's model. Dr. Nayatani will discuss results from the recent field trials of his color appearance model.

A registration form is enclosed with this newsletter for your convenience. Please note the hotel cut-off date and make your reservations early.

INTEREST GROUPS MEETING DURING THE ANNUAL MEETING IN CHICAGO

Interest Group I under the new ISCC organization is named *Measurement and Colorimetry.*

The technologies that are to be monitored by this group include all methods of quantifying the generation and modification of optical radiation. The processes of quantification include spectrophotometric, spectroradiometric, photometric, radiometric colorimetric and visual psychometric methods. Procedures and materials for calibration, verification, and diagnosis of quantification processes will be analyzed and reviewed. Methods for data reduction and analysis will be tested and reviewed. Annual meetings will involve contributed and invited paper presentations and panel discussions.

Inter-Society Color Council

Registration Form - Annual Meeting, Chicago, April 6-12, 1989

(One name per registration form- please copy if you need more forms)

Name_____

Company_____

Address_____

Telephone (W)_____ (H)_____

Is this the first ISCC Annual Meeting you have attended? Y N

ISCC Membership status: ISCC delegate from_____ Individual Member

Retired Member Honorary Member Student Guest

If guest: Are you member of other national organization?_____(Name)

Would you like ISCC membership information? Y N

SINGLE EVENT FEES			EVENTS FOR SPOUSES **
Registration Sunday	$ 25	_____	
Registration Monday	$ 25	_____	
Registration Tuesday (Color in Architecture)	$ 25	_____	
Registration Wednesday (Color & Vision Symposium)	$ 30	_____	
Banquet Monday Evening *	$ 40	_____	_____
Lunch Tuesday (Business)	$ 25	_____	_____
PACKAGE REGISTRATION FEE:	$170	_____	
(Includes 3 1/2 day conference, lunch, banquet*, wine and cheese reception.**)			
Bus Tour Sunday 1-5 pm (overlaps some committee meetings)	$18	_____	_____
Special Student Registration (Conference, wine and cheese reception)	$ 35	_____	
Late Registration Penalty (received after March 20, 1989)	$ 15	_____	
TOTAL ENCLOSED		_____ + _____ = _____	

To guarantee participation, registrations must be received by March 20, 1989. Tickets are to be picked up at the registration table - no confirmations will be mailed. Make checks payable to ISCC and return them to the Arrangements Chairman:

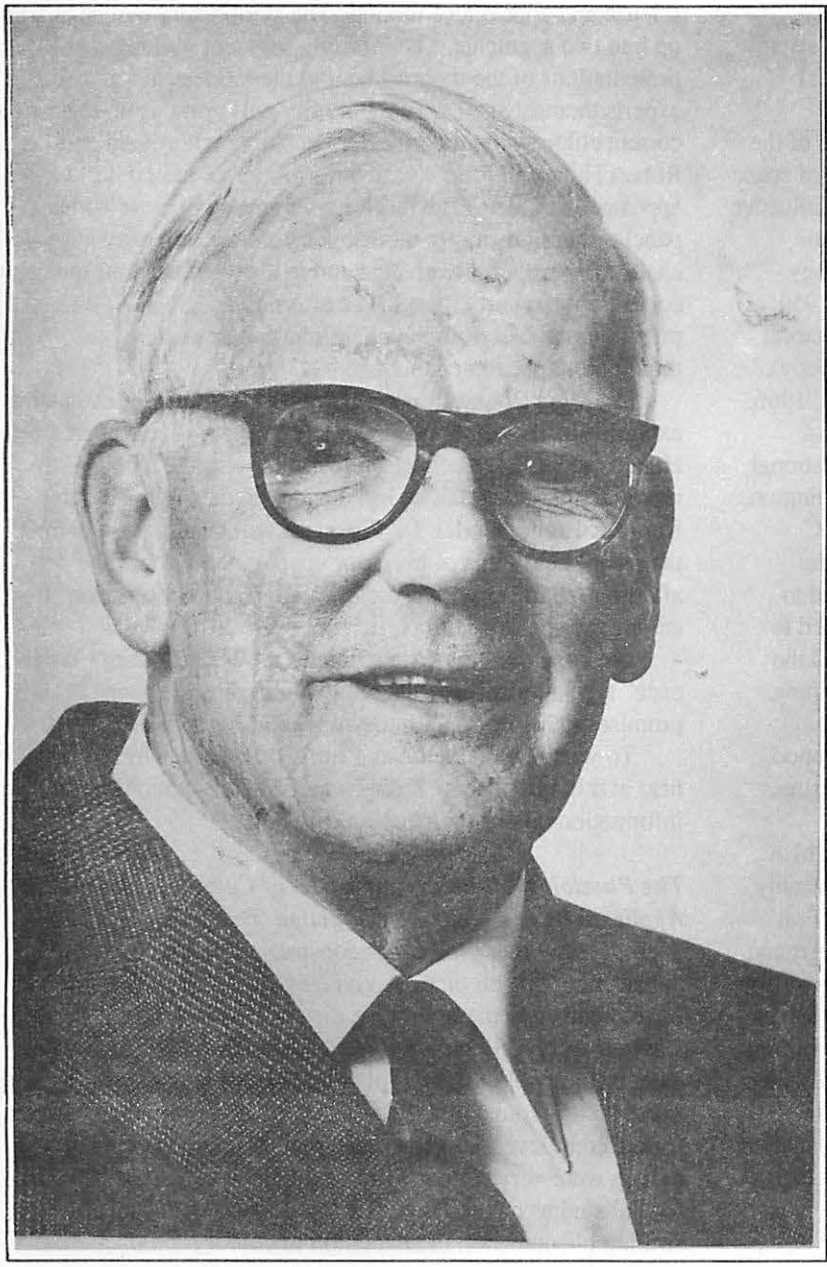
James E. Grady
7187 White Pine Drive, Birmingham, MI 48010

For more information call Joy Luke (703) 987-8386.

Note: Hotel reservations should be made directly to the Ambassador West Hotel, 1300 North State Parkway, Chicago, Illinois 60610, 1-800-621-8090 or (312) 787-7900. Guaranteed reservations at the special rate of $105 single and $125 double per night per room must be made by March 17, 1989.

* *There will be a cash bar prior to the Monday evening banquet.*

** *Spouses are welcome to attend the Wine and Cheese Reception on Sunday without registering.*



W. DAVID WRIGHT TO RECEIVE GODLOVE AWARD

On Monday April 10, 1989, at the annual meeting evening banquet, Dr. W.David Wright will receive the Godlove Award. Wright's name is virtually synonymous with color science. His interests include color vision, color measurement, color education, color in art and many other related areas. His first major contribution was an experimental determination of the color matching characteristics of human observers. His results were combined with those of J. Guild to determine the CIE 1931 Standard Observer. This Standard Observer remains, 58 years later, as the basis of most colorimetry, both scientific and industrial.

Before his retirement in 1971, Dr. Wright held the position of Professor of Applied Optics at Imperial College, University of London, England. Dr. Wright is the author of five books and many scientific papers, and even after his retirement, he has remained active in writing and teaching. It is with pride that the ISCC recognizes his dedication by presenting him with the Godlove Award.

The Godlove Award is presented to a member or former member of the Council for contributions to the field of color. To quote from the bylaws of the ISCC, "The contribution may be direct, it may be in the active practical stimulation of the application of color, or it may be an outstanding dissemination of knowledge of color by writing or lecturing, based on original contributions by the nominee."

The Godlove Award Fund was established by Mrs. Margaret N. Godlove in memory of her husband, Dr. I. H. Godlove. The first award was given to Deane B. Judd in 1957. It has been given alternating years since that time. Dr. Wright will be the eighteenth recipient of the Godlove Award.

Associated Project Committees:
#22 *Materials for Instrument Calibration*
#25 *Strength of Colorants*
#27 *Indices of Metamerism*

Chairmen: *Dr. Danny C. Rich, Manager of Research, Applied Color Systems, Inc. and Dr. Roy S. Berns, R.S. Hunter Professor, RIT Munsell Color Science Laboratory*

For this year's Interest Group I meeting agenda refer to the article on the Annual meeting.

Interest Group III - Art, Design and Psychology

Annual Meeting Group Program Schedule:

- Monday, April 10, 1989, 8:00-8:30 a.m. General meeting of Interest Group III, Magenta Yglesias and Wade Thompson, Co-Chairs. Current and new members.
- 8:30-9:00 a.m. Design: "Progression of Color in the Design of an Interior" by Magenta Yglesias.
- 9:15-10:15 a.m. Psychology: "Biological Effects of Color" by Dr. George Brainard.
- 10:30-11:30 a.m. Psychology: "Color-Energy Transformation and Personal Development" by Dr. Charles Duan Roth.
- Monday Evening: Art: An exhibition of recent paintings by Wade Thompson that deal with color relationships which create atmospheric and illusionistic images of space and movement. Mary Bell Galleries, Chicago. Gallery opening and reception.

Biographies of Speakers

Magenta Yglesias B.A. in Design, American University. Founded Designare Atelier, Interiors in 1969. Residential and commercial installations in Washington metro area, R.I. and San Diego. Member of ASID, articles on color and light in *Designer's Portfolio.*

Dr. George C. Brainard B.A., Wesleyan University; M.A., Goddard College; Ph.D., University of Texas. Assistant Professor, Department of Neurology at Jefferson Medical College in Philadelphia. Member of IES Photo-Biology Committee and International Photo-Biology Committee of the CIE and currently involved with lighting specifications of space shuttle and space station. Dr. Brainard will discuss the influence of visible and ultra-violet portions of the electro-magnetic spectrum on the control of hormones and brain physiology.

Dr. Charles Duan Roth B.S., Otterbein College, 1959; M.S., 1963; M.D., 1965, University of Chicago. Pre-doctoral studies candidate in Neuro-Anatomy (Electron-Microscopy). Internship in pediatrics, University of Chicago Hospital, 1966. National Institute of Neurological Disease and Blindness, Bethesda, Maryland, 1966-68. Psychiatric residency, National Institute of Mental Health, St. Elizabeth Hospital, Washington, 1968-70. Narcotics Treatment Agency, Washington, D.C. 1970-74. Private practice of psychiatry, Washington area, 1974-present. "During the past 18 years we have learned to distinguish various patterns of color and form which need to relate consistently to unconscious memories of birth and the sequential developmental pattern defined by Freud and Jung. Eventually the study of painted mandalas may provide a practical, consistent, clinical base with which to study mood change, brain chemistry and the hormonal responses in stress and creativity." [Charles Roth]

Wade Thompson B.A., Macalester College, 1968; M.A., M.F.A., School of Art and Design, Bowling Green University, 1972; Special Color Project, School of Art and Design, Pratt Institute, New York City, 1985. Presently Professor of Art and Design, Southwest Missouri State University. Wade Thompson has exhibited his work in numerous invitational one-person and limited group exhibitions, and national competitive exhibitions. He is listed in Who's Who in American Art, and is represented in a number of corporate and private collections across the country. He is currently represented by the Mary Bell Galleries, Chicago; Peter Drew Gallery, Boca Raton, Florida; and Jack Meier Gallery, Houston, Texas.

VISION AND COLOR APPEARANCE SYMPOSIUM TO BE FEATURED AT THE 1989 ANNUAL ISCC MEETING SPONSORED BY INTEREST GROUP II

As cochairs of ISCC Interest Group II, Norman Burningham and Paula Alessi are proud to announce that Dr. Joel Pokorny, Dr. Robert Hunt, Dr. Yoshinobu Nayatani, Dr. Michael Pointer and Dr. Ming Luo have accepted invitations to speak at a full day Vision and Color Appearance Symposium to be held on April 12th, 1989 in conjunction with the ISCC Annual Meeting in Chicago, Illinois at the Ambassador West Hotel. This addition to the schedule (as noted above) means that the annual meeting will last for 3 ½ days (April 9-12) instead of the usual 2 ½ days.

The goal of this symposium is to generate an exciting technical interchange on the relationships of vision/color science and appearance models. The symposium will be broken up into two segments. The morning segment will feature presentations of the theories behind the models, given by the experts themselves. Dr. Joel Pokorny will bring us up to date on current color vision theories. Dr. Yoshinobu Nayatani and Dr. Robert Hunt will follow with descriptions of their color appearance models. The morning segment will close with a panel discussion among the speakers, where they may have a chance for further interchange and to answer questions that may come from the participants. The afternoon segment will feature presentations describing applications and/or evaluations of those color appearance models.

Dr. Ming Ronnier Luo will describe some color estimation experiments that he has performed to evaluate Dr. Robert Hunt's model. Dr. Michael Pointer will describe a color reproduction index that he has developed using parameters from Dr. Hunt's model. Dr. Nayatani will discuss results from the recent field trials of his color appearance model. The afternoon segment will also close with a panel discussion among the speakers and participants.

We hope that this format creates a "Williamsburg Conference" type atmosphere with a high level of interchange. This promises to be a stimulating symposium for all participants.

To whet your appetite and further describe what you may hear at this symposium, five abstracts with biographical information on our speakers follow.

The Physiological Basis of a Model of Colour Vision and Its Applications in Colour Reproduction *Dr. Robert W. Hunt*

A model of colour vision was constructed to predict colour appearance. The predictions given by the model were found to be in broad agreement with the distributions of colours in the Munsell and NCS colour order systems. The model was then extended to apply to different conditions of adaptation. It was subsequently found that the families of curves of cone response for different levels of adaptation, that were incorporated in the model, were very similar to those obtained by electro-physiological studies on monkeys. The model was then applied to a striking phenomenon of adaptation in colour reproduction. If a small yellow area on a colour transparency is covered with a suitable cyan filter it looks green when the slide is projected; but if the same filter is placed over the whole slide the area still looks yellow when the slide is projected. It has been found that the model correctly predicts these effects. Another phenomenon of interest in slide projection is that, as the screen luminance of the projected picture is raised, the perceived quality of the reproduction increases. The model predicts that raising screen luminance will increase the brightnesses and colourfulnesses of the colours in projected pictures; it has been found that the logarithm of the sum of the brightness and colourfulness of representative picture elements correlates well with the way in which scaled picture quality increases with screen luminance.

Biographical information *Dr. Robert W. Hunt*

Dr. Hunt received a B.Sc., a Ph.D., and a D.Sc., from London University, England. He was a member of the Kodak Research Laboratories for 36 years, reaching the position of

Assistant Director of Research at Harrow, England. He is now Visiting Professor of Physiological Optics at the The City University, London, England, and a Colour Consultant. He has contributed many papers on colour reproduction and colour vision to scientific journals in these fields; he is the author of two books, *The Reproduction of Colour*, the 4th edition of which was published in 1987, and *Measuring Colour*, also published in 1987. His current research interests include modeling the human system of colour vision so as to be able to predict how colours will appear in different viewing conditions, and applying colour science to practical problems in industry and the environment. He was chairman of the CIE Colorimety committee from 1975 to 1983 and has received the Newton Medal of the Colour Group (Great Britain) and the Judd-AIC Award. He is an Honorary Fellow of the Royal Photographic Society, and an Honorary Fellow of the British Kinematograph Sound and Television Society.

***Measuring Colour Reproduction** Dr. Michael R. Pointer*
The quality of colour reproduction is one of the parameters that is important when assessing a photographic system. However, no metric has yet been devised to provide an objective correlate to this subjective parameter. The Hunt Model gives a measure of the absolute appearance of a colour as viewed under a specified illuminant. The parameters available from the model can be used to provide a measure of the perceived colour difference between a set of test colours viewed first in a reference (the original) and then in a test situation (the reproduction). From these differences a series of indices can be calculated that relate to the quality of the colour reproduction.

Biographical information *Dr. Michael R. Pointer*

Dr. M.R. Pointer is a member of the Research Division of Kodak Limited. His special interests are the assessment of colour reproduction using both established and novel colour measurement techniques, and the interaction between product and customer in terms of acceptability of colour reproduction and overall quality. He is an active member of several CIE Committees including TC 1-13 Colour Appearance Measurement. He has been an active member of the Colour Group (Great Britain) for the last 16 years and was awarded Fellowship of the the Royal Photographic Society in 1987.

On The Nonlinear Color Appearance Model by Nayatani et.al. Dr. Yoshinobu Nayatani
The fundamental equations of the nonlinear color appearance model by Nayatani et. al are introduced together with various color appearance metrics of object colors, such as whiteness-blackness, chroma, brightness, and colorfulness. Then, some psychophysical and physiological bases are given to each of the important elements of the model, which take the changes of adapting color and adapting illuminance into account.

The model can clearly classify the deference in perceptual behavior between [whiteness-blackness and chroma] and [brightness and colorfulness], and the model is consistent with the chromatic adaptation transform under test by CIE. The model can predict the color appearance of object colors under various adapting conditions including the effects studied by Helson, Hunt, and Stevens. Further, a close relation is introduced between the present model and the Retinex Theory by Land.

Biographical information *Dr. Yoshinobu Natayani*

Born in 1927. Graduated at Osaka University, Faculty of Engineering (Electrical Engineering), in 1951, and started to work on photometry and colorimetry of discharge lamps at Electrotechnical Laboratory (ETL) of Ministry of International Trade and Industry (MITI). Received Ph.D. from Osaka University in 1961. For two years, from 1961 to 1963, worked at National Research Council of Canada with the late Dr. G. Wywzecki as a postdoctorate fellow on visual colorimetry. Promoted to a director of Osaka Branch of ETL in 1974, and retired from there in 1980. Then started to work at Osaka Electro-Communication University. He is now a professor of the University, Faculty of Engineering (Management Engineering). His main interests are color engineering (color appearance and metamerism), statistical information processing, and quality management and control. He was a president of the Color Science Association of Japan from 1984 to 1986, and now a vice president of the Illuminating Engineering Institute of Japan.

***Field Trials on Color Appearance of Chromatic Colors Under Various Light Sources** co-authors Dr. Y. Nayatani, Dr. Kotaro Takahama, Dr. Hiroaki Sobagaki— to be presented by Dr. Nayatani*
Field trials of the nonlinear color-appearance model and the nonlinear chromatic-adaptation transform were done on the effect of chromatic adaptation between illuminants C and A, and also on the visual estimations by Mori and Fuchida under five fluorescent lamps. The model could give reasonably good predictions to the visual estimations in the above two conditions. In addition, the present study confirmed that the nonlinear color-appearance model and the nonlinear chromatic-adaptation transform could better predict the chromatic-adaptation effect between C and A than the von Kries law.

Testing Colour Model Performance Using Results Obtained From Colour Estimation Experiments Dr. Ming Ronnier Luo
The work described here forms part of a research project, entitled Predictive Perceptual Colour model. The major objective is to derive a colour appearance model that can predict changes of colour appearance under different viewing conditions.

The parameters studied were: 1) four light sources, i.e.; D65, D50, white fluorescent and tungsten, 2) two luminance levels, i.e.; 50 and 300 cd/m.sq.< 3) three neutral surrounds, i.e.; white, grey and black, 4) two media: luminous colours (displayed on a high resolution colour monitor) and nonluminous colours (presented in a viewing cabinet). In total, about 40,000 estimations were made.

All the experiment sessions were conducted using a complex field. A magnitude estimation method similar to those used by Bartleson and Pointer was used. The scaling task was

undertaken by a panel of seven observers who had normal colour vision. A telespectroradiometer was used to measure both luminous and nonluminous colours using the 1931 CIE standard observer.

The results were used to test various colour models both quantitatively and qualitatively. These models include: 1) Colour appearance model, Hunt's and Nayatani's models, 2) Uniform colour spaces: CIE L*a*b*, CIE L*u*v* and CMC(1:1) and 3) Chromatic Adaptation model, Mayatani, von Kries and Bartleson.

Biographical Information *Dr. Ming Ronnier Luo*

Dr. Luo received his degree from University of Bradford, Department of Colour Chemistry and Colour Technology in 1986. He is employed by Crosfield Electronics Limited as a Senior Colour Physicist and is currently working on a research project entitled "Predictive Perceptual Colour Models", at Loughborough University of Technology Computer Human Interface (LUTCHI) Research Centre. He is also a member of Colour Measurement Committee (CMC) of the Society of Dyers and Colourists and The Colour Group of Great Britain.

BOOK REVIEW

Round Buildings, Square Buildings, & Buildings That Wiggle Like a Fish, by Phillip M. Isaacson, Alfred A. Knopf, New York, 1987, 121 pp. Price: $14.95. (Ages 8 and up)

The delightfully nutty title of this book gives little indication that you should drop everything and do two things. Buy a copy. Go to the library and look up the review of it in The New York Times book section for November 20, 1988, by Mr. Paul Goldberger, their architecture critic. He says the book is a joy. I think his review is a joy, too. He also says "it communicates the sensual aspect of architecture better that any book I have ever seen for either adults or children". I would add that it communicates the sensual aspect of color harmony better than any book I have ever seen. Too often we look to theories of color harmony to put together colors independently of where they are used. Color atlases expertly show the color world and identify many types of color contrast that are purported to be color harmonies, but don't you have to use the colors on a building or other object before they become harmonies? Isn't it a particular (or not so particular) feeling that is the ultimate goal of color usage for decoration? Mr.Goldberger goes on to say "The author's basic method is to present buildings in terms of how they feel to us - to try to get inside the complicated business of visual impressions and therefore say something about the making of art."

The book contains superb photographs, all by the author, and many references to color and light and how buildings change during the day and night. I was reminded of Bonnie Bender's lecture which illustrated these kinds of change so well.

Mr. Goldberger describes Mr. Isaacson, the author, as the best introductory writer on architecture we have. I would add color harmony to his remarkable achievement.

Walter C. Granville

CALLS FOR PAPERS

CORM 89

The 1989 annual meeting and conference of the Council for Optical Radiation Measurements will be held at the National Institute of Standards and Technology in Gaithersburg, Maryland on May 17-19, 1989. This conference will include an international standards session, three topical sessions, and evening banquet, invited papers, and the annual business meeting. The sessions are:

I. Optical Radiation Measurements in National Standardizing Laboratories - Chairman: Bruce Guenther, Standards and Calibration Office, Goddard Space Flight Center, NASA - Mail Code 673, Greenbelt, Maryland 20771. Telephone: (301) 286-5206.

II. Geometric Aspects of Appearance - Chairman: Calvin S. McCamy, Macbeth Division Kollmorgen Instrument Corp., P.O. Box 230, Newburgh, New York 12250. Telephone (914) 565-7660.

III. Advances in the Measurement of Retroreflection - Chairman: J. J. Rennilson, Advanced Retro Technology, Inc., 2733 Via Orange Way - Suite 104, Spring Valley California 92078. Telephone (619) 670-5105.

IV. Absolute Radiometry - Chairman Edward F. Zalewski, National Bureau of Standards, Room A-221, Bldg. 221, Gaithersburg, Maryland 20899. Telephone (301) 975-2354.

Program Coordinators are Calvin S. McCamy and Norbert L. Johnson, 3M Company, 3M Center, Bldg 582-1-15, St. Paul, MN 55144-1000. Telephone (612) 733-5959. Your participation is invited in this conference. Please contact the individual session chairman or the program coordinators for further information.

Topical Meetings on Applied Vision

The Optical Society of America is sponsoring a topical meeting on Applied Vision in San Francisco, California on July 13-15, 1989. The goal of the meeting is to increase the exchange of ideas and expertise between vision researchers and scientists and engineers who apply this knowledge. Engineering applications aimed at image display, compression, communications, and image enhancement challenge our understanding of visual system function. Applied engineering problems can lead to new insights about physiological mechanisms and procession in the visual system; and our understanding of human visual function can produce better engineering solutions. Abstract Deadline: March 17, 1989. For further information contact: Optical Society of America, 1816 Jefferson Place, NW, Washington, DC 20036. Telephone (202) 223-0920.

Federation of Societies For Coatings Technology

Deadline nears for Entering Roon Awards Competition; Cash prizes for 1989 Winning authors will total $4,000

Prospective entrants in the 1989 Roon Awards competition are reminded that they must advise of their intent to compete by March 1, 1989.

Winners in the competition for the best technical papers presented at the 1989 Annual Meeting of the FSCT(to be held

Nov. 8-10 at the the New Orleans Hilton and The Rivergate Exhibition & Convention Center, New Orleans, LA) will share a total of $4,000 in cash prizes.

Sponsored by the Federation's Coatings Industry Education Fund (formerly the Paint Research Institute), the Awards were established in 1957 by the late Leo Roon, founder of Nuodex Products Co. They are supported by funds provided through the Roon Foundation, and are presented to the winning authors at the FSCT Annual Meeting each year.

Papers to be considered for the competition are those by individuals associated with the organic coatings industry, including raw material suppliers and educators, which must: (1) Describe original work not previously published or presented; (2) Be directly related to the protective coatings industry; (3) Be of such a caliber that they reflect a step forward in real scientific contribution to the coatings industry; and (4) Be accompanied by clearance for publication.

Those wishing to enter the competition must send a letter of intent, along with the title of their proposed paper and a brief abstract by the March 1 deadline to the Chairman of the Roon Awards Committee: Dr. Richard R. Eley, The Glidden Co., 16651 Sprague Road, Strongsville, Ohio 44136. Deadline for receipt of manuscript entries is May 15, 1989.

REMINDERS

ISCC Williamsburg Conference

"Color Discrimination Psychophysics" to be held on November 28 - December 1, 1989 at Colonial Williamsburg, Virginia. Abstract deadline is February 28, 1989. For information contact Dr. Roy Berns, Rochester Institute of Technology, P. O. Box 9887, Rochester, New York 14623-0887 or (716) 475-2784.

Symposium on Daylight and Solar Radiation

A symposium covering spectral and broadband measuring methods, instrumentation, calibration and standards, data acquisition, solar radiation and daylighting simulation will be held at Technische Universitat Berlin (West), Germany.

The working language of the symposium will be English. Deadline for abstracts is February 15, 1989. Information: Herr Prof. Dr. H. Kasse, Institut fur Lichttechnik der Technischen Universitat Berlin, Einsteinufer 19, D-1000 Berlin 10 GERMANY. Tel.: (030) 314 224 01.

NEWS FROM MEMBER BODIES

Gemological Institute of America (GIA)

The Research Department of the Gemological Institute of America is working to develop a unified gem database. For decades, the gemological data vital to gemological research, information on the unique properties of individual gemstones, has been available primarily via the personal observations and experience of gemologists. The best sources of information for researchers have been the gemologists who have seen the greatest number of stones. Now a comprehensive, retrievable database of gemological properties will be a location for exact data on specific stones. When completed, the gemological database will include data useful in research and identification of all types of stones. The system will also be used for statistical analysis to determine which properties can be correlated between different stones.

The GIA is pleased to announce their schedule of seminars to be offered this February during the 1989 Tuscon Gem and Mineral Shows. A partial list of seminars includes "Pocket Instrumentation and Visual Observation", "Colored Stone Grading Lab", and "Update on the Newest Synthetic Colored Gemstone". For a complete list or additional information contact Robert C. Kammerling, Gemological Institute of America, 1660 Stewart Street, Santa Monica, California 90404. Telephone (213) 829-2991.

Graphic Arts Technical Foundation (GATF)

GATF catalog highlights five new technical education textbooks

The *Textbook Catalog* is a new free GATF publication updated to describe all Foundation educational texts. It highlights five of the latest GATF books on printing technology.

Altogether, the catalog describes 25 GATF textbooks ranging from the Primer Series, which introduces the basics of three of the major processes, to comprehensive coverage of materials, chemistry, instruments, prepress, press operating, and maintenance.

For a copy of the *Textbook Catalog*, please contact Terrence M. Mahoney, GATF's senior marketing manager, 4615 Forbes Avenue, Pittsburgh, PA 15213; (412) 621-6941.

Federation of Societies For Coatings Technology (FSCT)

FSCT Series on Coatings Technology Expanded with publication of "Inorganic Primer Pigments". This publication is the 12th monograph in its continuing Series on Coatings Technology. It is authored by Alan Smith, of NL Chemicals, Inc., the monograph focuses on inorganic pigments as they are utilized in primers for the protection of metallic substrates. Particular attention is paid to those pigments which are loosely termed anticorrosive pigments.

Mr. Smith divides inhibitive pigment into two groups from the viewpoint of toxicity: lead- and chromate-containing pigment and lead- and chrome-free pigments. In this monograph the properties, advantages and disadvantages of these pigments are reviewed. In addition, a section of the monograph refers to those pigments which contribute to the overall performance of anticorrosive primers but are not inhibitive or sacrificial. Barrier pigments, film reinforcers, and extenders are included.

The Series which will total approximately 35 booklets, is designed to cover the major areas of coatings technology. For a complete listing of Monographs currently available contact Meryl Cohen, FSCT, Suite 832, 1315 Walnut Street, Philadelphia, PA 19107

NEWS FROM OTHER ORGANIZATIONS

International Organization for Standardization (ISO)

The next meeting of Technical Committee 187, Colour Notations, of ISO (ISO/TC187) will be held at the Sheraton Inner-Harbor Hotel, Baltimore, on Monday-Wednesday, Dec. 4-6, 1989. This is immediately following the ISCC Williamsburg Meeting.

TC 187 is endeavoring to write an ISO standard on descriptive color notation from a perceptual viewpoint. The US Technical Advisory Group (US TAG) is ASTM Subcommittee E12.07 on Color Order Systems. Anyone interested in joining the US TAG for this meeting, and for future meetings as well, should call Nick Hale at (301) 472-4850. It is not necessary to join ASTM. It is expected that Working Groups of TC 187 will meet at COLOR 89 in Argentina in March, 1989.

First Annual Pantone Color Awards

The Pantone Color Awards were developed by the Pantone Color Institute to honor the innovative use of color by emerging design talent. The program began with the distribution of nominating ballots to the press in January 1988. Four finalists were determined in each of four categories: fashion, interior, graphics, and industrial design. Those finalists submitted original designs to the Pantone Color Institute Advisory Board for judging. From these submissions, one winner was selected in each category.

The four winners for 1988 are Charles Anderson for graphics, David Tisdale, a pioneer in the creation of anodized aluminum jewelry, Cecilia Metheny, who developed a complete line of ready-to-wear men's fashions, and Alice Fong, an interior designer applying her talents to residential and commercial projects.

Moet-Hennessy-Louis Vuitton
1988 Science For Art Prize Awards

Pr. Benoit Mandelbrot, the father of fractal mathematics, and Professor of Mathematical Sciences at Yale University was awarded the 1988 Scientific prize.

Dr. Karl Knop from Switzerland received the prize for Innovation for his work on the generation and reproduction of pigmentless colour images by the differential diffraction of light from relief surfaces.

In order to bridge the gap between scientific endeavor and artistic creation, the jury also decided to award two special distinctions, one to Daniel de Montmollin from the Taize Abbey in France (who has developed the technique of utilizing ash enamels to create special effects), and the other to Pieteo Pedefferi, a chemical engineer from Milan, who, through a profound knowledge of electrochemical processes, has mastered artistic use of titanium oxides.

The value of each Prize was FF 100,000 (about 16,000 dollars). In addition, at a special ceremony in Paris, each awardee also received gifts from artists especially interested in the application of scientific techniques to the creation of artistic products. The American ceramicist, Fance Franck who re-created the colours of the "Red of Sacrifice" from ancient China, the sculptor and goldsmith Goudji and the famous Japanese lacquer artist Ohnishi, each offered one of their artistic creations to the awardees.

The awardees also received special creations from the houses of Louis Vuitton baggage and Christian Dior perfumes.

The Prize awards ceremony took place in the Salle Saint Louis of the Conciergerie in Paris on 20 September, 1988, under the patronage of Hubert Curien, the French Research and Technology Minister, and in the presence of over 600 individuals from the international scientific and artistic communities.

1989 Science For Art Prize Competition
THEME: Tactile, Visual and Technical Effects

This prize concerns specialists in numerous scientific fields:

- chemists, physicists or physiochemists,
- computer imaging, artificial intelligence scientists, etc...
- neurophysiologists and psychologists for tactile and visual senses

Papers or surveys submitted should be *related to aesthetic, tactile or visual aspect*, and should be applicable to industrial or artistic fields (coatings, inks, ceramics, textiles, cosmetics, etc.)

Please reply to: J.P. Megnin, 30, Avenue Hoche 75008 Paris, France.

Two grand prizes, each worth FF 100,000, will award both the truly scientific approach and the technical innovation. The application must be sent as soon as possible and by February 28, 1989 at the latest.

We hope to have you as a candidate. *J.P.Megnin*

A FINAL NOTE FROM FABER BIRREN

As of 1988, the following books (from four publishers) by Faber Birren are in print:

Published by SCHIFFER PUBLISHING LTD., 1469 Morstein Road, West Chester, PA 19380:

Color Perception in Art Devoted to human perception over vision itself in dramatic expression with color. Soft cover, 88 pages, color plates, 8 x 8, $10.95

Creative Color Widely used as a text in general color education and harmony. Includes a practical training course. Soft cover, 128 pages, color plates, 8 x 10, $14.95

Principles Of Color A highly successful text that has gone into twelve printings. Used as a basic reference in many schools. Soft cover, 96 pages, color plates, 8 x 8, 10.95

The Principles of Harmony and Contrast of colors, M. E. Chevreul Faber Birren edits this 1835 master work which influenced the Impressionists. Hard cover, 192 pages, color plates, 9 x 12, $49.50.

Light, Color & Environment A pioneering work on the biological and psychological effects of color in man-made environments. This is a second revised edition. Soft cover, 136 pages, color plates, 8 ½ x 11, $24.95

Published by CITADEL PRESS, 120 Enterprise Avenue, Secaucus, NJ 07094:

Color Psychology and Color Therapy This classical reference work, with revisions, has been continuously kept in print for over thirty years. It covers many aspects of occult and modern findings. Soft cover, 302 pages, 6 x 9, $8.95

Color: A Survey in Words and Pictures A general review of color in its many aspects of history, mythology, religion, healing, modern science. Soft cover, 223 pages, color decorations, 7 ½ x 10 ½, $14.95

The Principles of Light and Color, Edwin D. Babbitt This famous Victorian work by a still-renowned color healer has been edited by Faber Birren. Soft cover, 271 pages, 6 x 9, $9.95

The Symbolism of Color Faber Birren spent years collecting material on the mystical and mythological traditions of color among ancient, primitive and modern peoples. Hard cover, 192 pages, 6 x 9, $15.95

Published by VAN NOSTRAND REINHOLD, 115 Fifth Avenue, New York, NY 10003

Color and Human Response The subject of this book has been given increased attention over the years, dealing as it does with the biological effects of color rather than esthetic. Soft cover, 141 pages, color plates, 6 x 9, $17.95

The Elements of Color, Johannes Itten This well known text on color in art has been edited and with a foreword by Faber Birren. This is widely used in color education. Soft cover, 96 pages, color plates, 8 x 8, $16.95

Published by MACMILLAN, COLLIER BOOKS 866 Third Avenue, New York, NY 10022:

Color In Your World Two editions of this entertaining book have been published since 1962—to great success. It is devoted to the meaning of personal color preferences. Soft cover, 112 pages, 4 x 7, $4.95

Faber Birren has maintained a residence and office at 77 Prospect Street, Stamford, CT 06902 where, sadly, he suffered a stroke on or about Dec.16,1988 that resulted in his death on Dec. 23, 1988. Although an octogenarian, he had remained very active in the field and was of particular aid and encouragement to this editor especially when I first accepted the challenge. More concerning the life and contributions of Faber Birren in the next issue of the ISCC News.

FROM THE PRESIDENT

The most important decision made by the ISCC Board of Directors at their October meeting is one we regretted making, but one I believe will benefit all ISCC members. The Board voted to raise dues from the current $20 a year to $25 a year. This is still lower than dues to most other national organizations.

Our last treasurer, Ed Connor, pointed out over a year ago that current dues barely cover the cost of the *ISCC News*. All other expenses must come from registration fees collected for the various ISCC meetings; yet the ISCC has a tradition of sponsoring technical conferences, such as the Williamsburg Conferences, where attendance is limited to allow close contact between speakers and audience. Conferences with small attendance and low registration fees can not be expected to make a profit.

The first action taken by the Board last summer was to cut the costs of publishing the *ISCC News* by going to electronic composition. This helped the situation but there were other changes in costs to consider. It has been the policy of the ISCC not to pay expenses for speakers, except in a few unusual cases, and the ISCC has never paid honoraria to speakers. This policy has been possible because there is such a high level of expertise among ISCC's own members and they have been happy to share information with fellow members. However, recently both companies and universities have cut their budgets for travel. It often becomes a personal financial burden for speakers to accept an invitation to present a paper. In order to ensure that we continue to have the the best national and international speakers it is necessary to reimburse for some costs in these circumstances.

The new ISCC Treasurer, Phil Hunter, reviewed the situation and recommended, as Ed had, that dues be raised a modest amount. The Board agreed to the $5 increase in dues to assure that the ISCC could assist speakers in cases where this is necessary, can continue to sponsor symposia and conferences that may only break even, and can reimburse telephone and copying expenses for committee chairmen who have no company support. This increase in dues will only bring in around $4000 a year which is not sufficient to offer honoraria or to pay travel costs for all speakers. It will allow the Board to respond to special requests.

To move to a happier subject, I believe the Editor, Bonnie Swenholt, set a new record by getting the November-December issue of the *ISCC News* to members by the first week in December. Frequently in the past it arrived the last of part of the second month or even the first part of the following month. Articles and announcements were badly out of date. This was not the fault of past editors. The editor, who is also the chairperson of the Publications Committee, has one of the most difficult tasks in the ISCC. Editors can only publish material that is sent to them and no one likes to write articles. It is like pulling teeth to get reports from committee chairpersons and member-bodies. Mary Ellen Zuyus, who has served as editor and struggled with the problem in the past, continues to serve the ISCC as Publicity Chairwoman, another vital job loaded

with deadlines. She puts out press releases and compiles the publicity and registration forms for all ISCC meetings. The last editor, Harry Hammond, with great tenacity and effort managed to drag information out of the rest of us and expand the size of the newsletter. With his other obligations Harry could not continue as editor.

Bonnie took over as editor and has had to cope with a new computer, a modem and a new publishing arrangement. During the transition there was a low point when it was necessary to publish four months in one issue, but from the beginning it has been Bonnie's goal to get the newsletter published on time and containing current information pertinent to ISCC members. This includes a wide range of material to cover the various interests within the Council.

A large part of the success she has achieved is due to the continued assistance of Harry Hammond and articles solicited and written by a third publications committee member, Ellen Carter. For the first time the publications committee is functioning as a team with a steady stream of items going to Bonnie. We are also fortunate in the printer, Dave Sickles at Mimeoform Service, who has printed the newsletter promptly and with personal care for some 20 years; and for Mary Carnahan and Jensen Kvarnes at Small Fry who, under Bonnie's supervision, recently began to compose, proof read and put out a camera ready copy on their laser printer. Even the ISCC Secretary, Terry Commerford, contributes to the process by updating the mailing list, printing and applying mailing labels on around a thousand envelopes for each issue.

Let me add my voice to Bonnie's in asking each ISCC member to keep an eye out for material about color in your own field, and to watch for notices about meetings or other publications that will interest Council members. Please write a note or article, and it can be a rough draft, and send it to Bonnie, Ellen or Harry to be put in final form and published. The ISCC includes too broad a range of interests to be covered by three people. We all have a vested interest in seeing that it reports on important developments related to color in every field.

Joy Turner Luke

ACADEMIC COLORS

Since 1983 American universities have recognized a palette of eight colors to identify their major faculties. These hues make up part of the insignia of the learned and are worn in gown, braid, or tassels as follows: Scarlet, the color of blood and worn by Christian religious dignitaries, represents theology; blue, emblematic of truth and wisdom, represents philosophy; white is for arts and letters; green is for medicine. The dignity of purple is for law; golden-yellow represents science; orange is for engineering; and pink represents music.

Taken from CAUS Newsletter 9/16/88

CALENDAR

Please send information on Member Body and other organization meetings involving color with dates, places and information source to:

Harry K. Hammond, III
Pacific Scientific Instrument Division
2431 Linden Lane
Silver Spring, MD 20901
(301) 495-7046

1989

AATCC NAT'L COMMITTEE MEETINGS, Feb. 14-16
Hilton at University Place, Charlotte, North Carolina.
Information: Jerry Tew, (919) 549-8141.

GATF WORKSHOP, Feb.13-17
Orientation I (Methods and Technologies of the Printing Processes)
California Polytechnic State University
San Luis Obispo, CA
Kenneth Nowicki, Workshop Leader

AIC COLOR 89, Mar. 13-17
Centro Cultural, General San Martin Sarmiento 1551, Buenos Aires, Argentina. Information: Grupo Argentino del Color, Division Optica, INTI, c.c. 157,1650 San Martin (BA), Argentina or Allan Rodrigues, (313) 583-8245.

ISCC ANNUAL MEETING, Apr. 9-12
Ambassador West Hotel
Chicago, Illinois

AATCC NAT'L COMMITTEE MEETINGS, May 9-11
AATCC Technical Center, Research Triangle Park, North Carolina.Information: Jerry Tew, (919) 549-8141.

ASTM COMMITTEE E-12 ON APPEARANCE, May 15-16
National Institute of Standards and Technology, Gaithersburg, Maryland. Information: Sharon Kauffman (215) 299-5599.

SID International Symposium, May 15-19
Society for Information Display Symposium, Seminar, and Exhibition
Baltimore Convention Center, Baltimore, Maryland.
Information: Jay Morreale, (212) 620-3371.

FSCT - Federation Spring Week, May 16-19
Seminar on 16th & 17th; Society Officers' meeting on 18th; Board of Directors' meeting on 19th.
Airport Marriot Hotel, Los Angeles, California.
Information: (215) 545-1506.

GATF INTERNATIONAL CONGRESS May 17-19,
Westin William Penn Hotel, Pittsburgh, PA.
Information: William H. Smith,Special Programs Department
GATF, 4615 Forbes Ave.
Pittsburgh, PA 15213-3796
Tel.: (412) 621-6941 Telex: 866412 Cable: GAFTWORLD

CORM ANNUAL MEETING, May 17-19
National Institute of Standards and Technology, Gaithersburg, Maryland
Information: Norbert Johnson, (612) 733-5939

ASTM COMMITTEE D-1 ON PAINT, June 25-28
St. Louis, Missouri. Information: David Bradley,
(215) 299-5504

TOPICAL MEETING ON APPLIED VISION, July 13-15
San Francisco, California.
Information: Optical Society of America, (202) 223-0920.

WORK WITH DISPLAY UNITS, Sept. 11-14
Second International Scientific Conference,
Queen Elizabeth Hotel, Montreal, Canada.
Information: Diane Berthelette (514) 288-1551.

ROYAL PHOTOGRAPHIC SOCIETY, Sept. 18-22
Symposium on the Quantification of Images,
Clare College, University of Cambridge.
Information: Dr. M. R.Pointer,
Kodak Ltd, Harrow Middlesex, HA1 4TY England,
Tel. 01 427 4380.

CIE INTERIM MEETING, Oct. 2-3
Information: Dr. J. D. Schanda, Central Bureau, A-1030
Vienna, Kegelgasse 27 Austria, or
USA Dr. Jack Hsia (301) 975-2342.

SYMPOSIUM ON DAYLIGHT AND SOLAR RADIATION MEASUREMENT, OCT. 9-11
Technische Universitat Berlin (West), Germany.
Information: Herr Prof. Dr. H.Kaase,
Institut fur Lichtechnik der Technischen Universitat
Berlin, Einsteinufer 19, D-1000
Berlin 10 GERMANY. (030) 314 224 01.

OPTICS 89, Oct. 15-20
Optical Society of America Annual Meeting, Orlando, Florida.
Information: OSA, 1816 Jefferson Place, N.W.,
Washington,D.C. 20036,
(202) 223-0920.

FSCT, Nov. 8-10
Federation of Societies for Coating Technology 67th Annual Meeting and 54th Paint Industries' Show,
The Rivergate, New Orleans, Louisiana.
Information: (215) 545-1506.

AATCC NAT'L COMMITTEE MEETING, Nov. 14-16
The Doral Inn, New York, New York,
Information: Jerry Tew, (919) 549-8141.

ISCC WILLIAMSBURG CONFERENCE, Nov. 28-Dec. 1
"Color Discrimination Psychophysics",
Colonial Williamsburgh, Virginia.
Information: Dr. Roy Berns, (716) 475-2784.

1990

ASTM COMMITTEE D-1 ON PAINT, Jan 21-25
Embassy Suites Hotel, Ft. Lauderdale South, Florida.
Information: David Bradley (215) 299-5504.

ASTM COMMITTEE D-1 ON PAINT, June 17-20
San Francisco, California.
Information: David Bradley (215) 299-5504.

MEMBERSHIP APPLICATION

MEMBERSHIP IN THE ISCC IS OPEN TO EVERYONE INTERESTED IN COLOR!!

For further information and membership application, please fill out the items below and mail to address shown.

Your name_____

Address_____

_____

_____

_____

Mail to: Ms. Therese R. Commerford, Secretary ISCC, USSRMY Natick RD&E Center, ATTN: STRNC-ITS, Natick, MA 01760-5019

The ISCC is composed of both individual members and member bodies who have an interest in color. If you are a member of a national organization that might be interested in this affiliation, please indicate its name below and we will get in touch with you about it.

Organization_____

Your Phone No. (daytime) (____)_____

NEWSLETTER EDITOR: Mrs. Bonnie K. Swenholt

Send material for publication to the editor at:
5717 Gulick Rd.
Honeoye, NY 14471

Or send to Dr. Ellen Carter at:
2509 N. Utah St.
Arlington, VA 22207

If possible, 5 1/4 inch diskette for MSDOS (ASCII text file) would be appreciated, or send via MODEM:
Tel. (716) 229-5925

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