Inter-Society Color Council News

PROJECT COMMITTEE 33 HUMAN RESPONSE TO COLOR

The committee on Human Response To Color will meet on Monday, April 27 9:00 am to 12:00 noon during the Annual Meeting.

Jose Raul Bernardo, Ph.D., AIA/ASID, environmental psychologist and practicing architect, will speak on Color As Status Symbol.

Gerald Allen of Peter Gluck & Associates, architects, will discuss Color Use In Architectural Practice.

Regina Baraban, editor of the magazine Restaurant Design, will moderate the session.

Alexander F. Styne, IDSA/FIES Chairman Project Committee 33, Human Response to Color

APPLICATIONS FOR INDIVIDUAL MEMBERSHIP Approved Board of Directors Meeting February 8, 1981

Mr. Alexander Akselrod GIA. Color vision, color measure-1427 N. Laurel Avenue, # ments in industry, color computations, standardization. #7 Los Angeles, California 90046

Mr. David Burnside Burnside Studios 371 N. Ridgeland Elmhurst, Illinois 60126

GATF. Psychological testing in

Mr. David Chesterton Faculty of Design Humber College of

Applied Arts and Technology

205 Humber College Boulevard Rexdale, Ontario, M9W 5L7 Canada

Mrs. Lisa Bareiss Hepfinger **B31** Sunset Terrace Troy, New York 12180

Mr. James B. Jordan Industrial Design QUME 2350 Oume Drive PO Box 40039 San Jose, California 95150

Ms. Barbara Keyser Restoration & Conservation Laboratory National Gallery of Canada

color.

Fluorescent paints and the coloring process of all materials.

Disseminating color information to

laymen as well as professionals

IDSA. Establishing and maintaining color standards for a variety of different materials which must be used together.

Problems associated with conservation of works of art and artifacts: i.e. discoloration of paint mediums and varnishes; fading of pigments and dyes; problems of color match-

NUMBER 270 **JANUARY-FEBRUARY 1981**

Ottawa, Ontario Canada K1A 0M8

changes in colors of works of art.

Mr. Robert A. Lewis Color Specialist Quality Control Dept. J.C. Penney Company 1301 Avenue of the Americas New York, New York 10019 Mr. Charles Lachlan

McDonald

Apt. 3

AATCC. Color control, visualinstrumental color measurement, monitoring programs that require suppliers to conform to establishing color standards, colorimetry, shade matching, dyeing, printing.

ing; lighting of museum displays;

color photography for documenta-

tion of museum objects; monitoring

4-color printing, Neugebauer equations.

Wilmington, Delaware 19801

1224 Washington Street,

Philadelphia College of Textiles and Science

Henry Avenue and School Computer color matching. House Lane

Philadelphia, Pennsylvania 19144

Mr. Malcolm Stearns 63 Dana Street Cambridge, Massachusetts marketing. 02139

Mr. Roger F. Wells Gardner Laboratory Division Pacific Scientific Company PO Box 5728 Bethesda, Maryland 20014

Ms. Nancy Jo Shoemaker AATCC. Video tapes of lectures on color to promote education of color theory in colleges and universities.

AIA, IES. Color in the environment,

especially hospitals, etc.; color

ASTM, MCCA. To develop a better understanding of the needs of industry to solve appearance evalution problems and to improve communications between other instrument manufacturers and end-user.



For Information: New Delegates

Mr. W. Donald Duckworth Arts & Industries Bldg. Smithsonian Institution Washington, D.C. 20560 ESA. Color standards for biological descriptions.

CHANGES IN 1980 MEMBERSHIP LIST NOVEMBER 15, 1980 to FEBRUARY 1, 1981

A. Changes in Status

Mrs. Patricia L. Barnes: off CMG Mrs. Phyllis Farrell: on CMG Lic. Roberto D. Lozano: on AIC

B. Additions

Miss Leslie Mogul, CMG, on delegation Mr. Takashi Okuda, IMG, corporate change from Mr.

Hideichi Misono Mr. Robert W. Pekar, IMG, corporate change from Mr. L. James Halberstadt

N. V. Philips' Gloelampenfabriken – new sustaining member c/o Mr. B. Logtenberg, Chief Information Terminal CIDC, Eindhoven, The Netherlands

Miss Dorothy Tricarico, CMG, on delegation Drs. R. P. VanDort, IMG, changed from VanOort

C. Deletions

Mr. George E. Alatza, CMG (off delegation) Mr. Robert Brandber, CMG (off delegation) Mr. L. James Halberstadt, IMG (corporate change to Mr. Robert W. Pekar) Mr. William A. Howard, IMG (deceased) Mr. Hideichi Misono, IMG (corporate change to Mr. Takashi Okuda)

Mr. Mathias J. Schuler, IMG (retired) Drs. R. P. VanOort, IMG (misspelled name) Mrs. Nancy Walker, IMG (no address)

D. Changes of Address

Mr. Frank J. Alban, IMG, 2500 Moundview Driv wood, Ohio 45212. Miss Paula J. Alessi, IMG, 28 Springwood Drive, New York 14580. Mrs. Elaine F. Becker, IMG, 656 Spring Street, F Pennsylvania 19522. Mr. Frank Benham, GTA, American Color Corpo North 24th Street, Phoenix, Arizona 85006. Mrs. Alice E. Bresnahan, IMG, 3M Company, 3M 209 Library, St. Paul, Minnesota 55144. Mr. Patrick Chassaigne, IMG, Diano Corporation monwealth Avenue, Woburn, Massachusetts 01801. Mr. S. L. Davidson, ACHS, FSCT, HON, 42 Kem Fair Haven, New Jersey 07701. Mr. J. Flynn, NAPIM, EM Chemicals, 5 Skyline Hawthorne, New Jersey 10532. Mr. George K. C. Hardesty, IMG, Box 130, Mayo 21106. Mr. Yorick G. Hurd, IMG, L. E. Carpenter & Co Center, 9 Depot Street, Milford, Connecticut 06460 Mr. Kenneth A. Jones, IMG, 3404 Imperial Drive Point, North Carolina 27260. Miss Sylvia Wei-Ling Ki, IMG, 46A Broadway, 1 Mei Foo Sun Chuen, Kowloon, Hong Kong. Dr. John MacMillan, IMG, 4633 Talley Hill Lane ton, Delaware 19803. Mr. Fred L. Maves, IMG, 3M Company, Eng'g Se Technology, Building 42-2W Stop 06, 900 Bush Av Paul, Minnesota 55144.

Drs. J. J. Opstelten, AIC, Nederlandse Vereniging Voor Kleurenstudie, Leeuweriklaan 5, 5613 AG Eindhoven, The Netherlands.

Dr. Shalini S. Patwardhan, AIC, IMG, c/o Wool Research Association, Akbar Camp Road, PO Sandoz Baug, Thane 400 067, Maharashtra, India.

Mr. Daniel M. Quinn, IMG, PO Box 2013, Burlington, North Carolina 27215.

Mr. Alexander F. Styne, IDSA, IES, IMG, PR 33, PO Box 431468, South Miami, Florida 33143.

Mr. Robert Waltke, IMG, 99 Business Park Drive, Armonk, New York 10504.

Mr. Walter F. Zawacki, IMG, 919 Tadlock Place, Matthews, North Carolina 28015.

SYMPOSIUM ON COLOR AND APPEARANCE INSTRUMENTATION

March 24-26, 1981, Louisville, Ky.

Sponsored by Federation of Societies for Coatings Technology Manufacturers Council on Color and Appearance Inter-Society Color Council.

PROGRAM

Tuesday, March 24

	8:45 - 9:00 am	Introductory remarks, representatives of FSCT and MCCA.
	9:00 - 10:30 am	GENERAL SESSION – Dennis Osmer, CIBA-GEIGY Corp. – Moderator.
ve, Nor-		"Color Marketing and Consumerism" by Joyce Davenport, DeSoto, Inc., Des Plaines, IL.
Webster,		"The Experimental Origins of the 1931
Fleetwood,		CIE System of Colorimetry" by W. D. Wright, Consultant, Radlet, Herts, England.
oration, 402	11:00 - 12:30 pm	WORKSHOPS – Four Parallel Sessions
I Center,	•	(Color Formulation; Color Measurement; Gloss and Other Appearance Measure-
, 8 Com-		ment; Sample-Preparation-and- Presentation.
np Avenue,	1:45 - 3:10 pm	GENERAL SESSION – S. Leonard David- son, N L Industries, Inc. – Moderator.
Drive,		"Color Communications" by James
o, Maryland		Davidson, Macbeth Div., Kollmorgen Corp., Newburgh, NY.
., Design		"Black, White and Everything In Be-
0. e, High		tween" by Robert Hillman, Sears, Roe- buck and Co., Chicago, IL.
st Floor,		"Evaluation of Coating Appearance – An Overview" by Harry K. Hammond III,
e, Wilming-		Gardner Laboratory, Div. of Pacific Sci- entific Co., Bethesda, MD.
ervices & enue, St.	3:30 - 5:00 pm	WORKSHOPS – (Rotate and Repeat Sessions).

5:00 - 7:00 pm Instrumentation (Clinic.
----------------------------------	---------

Wednesday, March 25

9:00 - 10:30 am	GENERAL SESSION – Pedro Sotorrio, DeSoto, Inc. – Moderator.
	"Precision, Accuracy and Standardiza- tion Requirements of Color-Measuring Instruments" by Charles J. Sherman. The Sherwin-Williams Co., Chicago, IL.
	"Collaborative Reference Program for Color and Appearance Measurements: An Eight Year Performance Report" by Charles G. Leete, Manufacturers Council on Color and Appearance, McLean, VA.
	"Difficult Samples to Measure" by Richard Harris, Applied Color Systems, Inc., Princeton, NJ.
11:00 - 12:30 pm	WORKSHOPS – (Rotate and Repeat Sessions).
1:45 - 3:10 pm	GENERAL SESSION – James Cave, Reliance Universal, Inc. – Moderator.
	"Use and Misuse of Computers in Color Control" by Hugh R. Davidson, David- son Colleagues, Tatamy, PA.
	"High Speed On-Line Color Measurement by Jerry Alford, Ford Aerospace and Communications Corp., Charlotte, NC.
	"Color Measurement of Wet Paint" by Don W. Parker, Macbeth Div., Glenwood, IL.
3:30 - 5:00 pm	WORKSHOPS – (Rotate and Repeat Sessions).
5:00 - 7:00 pm	Instrumentation Clinic.

Thursday, March 26

9:00 - 10:15 am	GENERAL SESSION – Joyce Davenport, DeSoto, Inc. – Moderator.
	"Pitfalls of Pigment Strength Assessment" by Reinhold William Bartsch, Jr., CIBA- GEIGY Corp., Ardsley, NY.
	"Color-Difference Assessment" by Fred W. Billmeyer, Jr., Rensselaer Polytechnic Institute, Troy, NY, and Danny C. Rich, The Sherwin-Williams Co., Chicago, IL.
10:45 - 12:00 pm	GENERAL SESSION – Cont'd.
	"Testing for Color – An Analytical Pro- cedure" by A. M. Keay, Harmon Colors Corp., Hawthorne, NJ.
	"Education in the Instrumental Measure- ment of Color and Appearance" by Richard S. Hunter, Hunter Associates Laboratory, Reston, VA.
12:00 pm	Closing Remarks.

COLOR MARKETING GROUP (CMG)

CMG is in the process of holding regional meetings.

On December 4, 1980, "Trends with a Capital 'T'" was the theme of a most interesting day at the Fashion Institute of Technology in New York City. Our excellent speakers expressed concern for the consumers' needs, and spoke of satisfying those needs — often with a more 'total design' approach. Trends, of course, change constantly, but good design is timeless.

The Central Regional Meeting on January 29, 1981, at Sears, Roebuck, and Co., in Chicago, took us "Back to Basics in Marketing." It, too, was a very successful meeting.

On February 20, 1981, "Gambling with Color" will be the theme of the Western Regional Meeting, to be held at the Dunes Hotel in Las Vegas. That should certainly provide a dramatic backdrop for a meeting focused on the contract market.

The Southern Regional Meeting will take place on May 15 in Tampa, Florida. There will be speakers in the morning, followed by a special tour of Jim Walter Research in St. Petersburg during the afternoon.

From May 17-19, we will convene at The Dutch Inn in Lake Buena Vista, Florida for our semiannual National Meeting. This Spring our theme will be "Future For Color."

CANADIAN SOCIETY FOR COLOR

An answer to your COLOR PROBLEMS

If you work with color in any way, undoubtedly you have encountered problems from time to time. How often did you wish for the name of some expert in a particular field of color to whom you could turn for assistance?

In response to this situation the Canadian Society for Color has established a Directory of Color Experts. As a society concerned with color, we have a tremendous breadth of expertise available through our members.

To use the service one needs merely to identify the area of the specific color problem. Send this information with your name and address to:

Dr. P.K. Kaiser Department of Psychology York University 4700 Keele Street Downsview, Ontario M3J 1P3 (416) 667-3797

We will send you the name(s), address and phone numbers of those people who have indicated, to us, an expertise in your problem area. We will also tell you if an initial consulting fee will be requested by these people. Some do, others don't. After that, it is up to the inquirer and the expert to make all subsequent arrangements.

This service is free to Canadian Society for Color members - others will be charged a fee of \$15 which will automatically entitle them to membership (unless they choose otherwise, and are merely interested in a solution to their immediate problem).

1981 Conference

The 9th Annual Conference of the Canadian Society for Color will be held on May 13 and 14, 1981 at the University of Western Ontario in London, Ontario.

The tentative program is as follows:

TUESDAY, May 12

- Evening registration with wine and cheese reception.

WEDNESDAY, May 13

Morning theme: THE GENERATION OF COLOR

- Color Television: Present and Future.
- Generation of Color in the Human Eye.

- Traditional Uses of Color in the Arts.

EXHIBITIONS: Areas will be set aside for exhibits from industry, publishers and members' work.

TWO-PART TOUR to:

a) 3M Canada – Tour and presentation – "Color in Marketing"

b) The London Regional Art Gallery – designed by Raymond Moriyama.

Evening banquet followed by cash bar and musical entertainment.

THURSDAY, May 14

Introduction to afternoon workshops.

Annual business meeting of the Society.

Two workshops running in parallel (each approximately three hours in duration):

MEASUREMENT OF COLOR IN INDUSTRY

- Presentations by three representatives from industry and

COLOR IN ART AND EDUCATION

- films, exhibitions and color tests on the subject of students' responses to color usage.

REGISTRATION

Member: \$45 (early) \$55 (late) Non-member: \$60 (early) \$70 (late) Campus accommodation will be available at the rate of \$18 (single).

For further information on the Society or the Annual Conference please contact:

Ms. Shelagh J. Stewart Brescia College 1248 Western Road University of Western Ontario London, Ontario (519) 432-8353

What is the CANADIAN SOCIETY FOR COLOR?

The Canadian Society for Color in art, industry and science was founded in 1972, and provides a forum for communication and an official association for everyone interested in all aspects of color arising from its application in the creative arts, education, industry and science.

These aims are met by:

a) publishing a quarterly newsletter

b) holding annual conferences

c) the organization of workshops and seminars by local groups

d) giving lectures and demonstrations to outside institutions and organizations e) providing liaison between experts and those requiring their services (Directory of Color Experts)

f) exchanging information with similar societies in other countries either directly or through the Association Internationale de la Couleur (AIC)

COLOR JOURNAL

The journal COLOR RESEARCH AND APPLICATION which deals exclusively with color, is available to members at a significantly reduced rate.

WHO CAN JOIN?

Membership in the CSC is open to all people from Canada and abroad interested in the subject of color. The current membership includes:

artists	psycholgists	educators
scientists	printers	architects
designers	esigners engineers	
publishers	marketing specialists	
advertising pe	rsonnel and many others.	
There are t	hree classes of membership:	
Individual	(\$15)	
Student	(\$2)	
Sustaining	(\$100)	

DETROIT COLOR COUNCIL

The first Detroit Color Council program of 1981 was a spectacular design show, projecting Fall, 1981 colors and styles by June Roche, Corporate Fashion Director of Milliken and Company. An overflow crowd enjoyed the multi-faceted look at where color fashions have been and where they are going.

An April 9, 1981 meeting was announced, featuring John Dickenson of Harshaw Chemical Co., who will update the government's position of use of chromate and cadmium pigments. The Fall meeting program will be a panel discussion on the use of color measurement in automotive applications, scheduled for September 24.

Dry Color Manufacturers Association (DCMA)

Pigments in the Workplace

Ms. Jackie Fetsko, Technical Administrator of Lehigh University's NAPIM Technical Institute, spoke on Pigments in the Workplace. She discussed research done on the NAPIM Technical Institute's raw materials handbook on coatings and EP toxicity testing on pigments.

The March 4 meeting began at 12:00 Noon at the Sheraton Heights Hotel in Hasbrouck Heights, New Jersey. Other DCMA meetings on March 4 were the Board of Governors, the Alkali Blue Subcommittee, the Dairylide Yellow Subcommittee, the Phthalocyanine Pigments Subcommittee, and the Program Committee.

SOCIETY OF PHOTOGRAPHIC SCIENTISTS AND ENGINEERS

Non-Impact Printing Technologies Program Announced

The First International Congress on Advances in Non-Impact Printing Technologies to be held on June 22-26, 1981 in Venice Italy includes more than sixty papers scheduled to be presented at the Conference Center on the Island of St. Giorgio. According to Dr. Joseph Gaynor, Sierra Madre, California, Program Co-Chairman (USA) of the Congress, about one fourth of the confirmed papers will be devoted to ink jet printing and nearly a third with Electrophotographic systems exposed by scanning gas and solid state lasers, LED arrays and CRT's.

"In the latter case, considerable progress will be reported on scanners and infrared sensitive photoconductors," Dr. Gaynor said. A perusal of the program will show the intensity as well as the breadth and depth of technical activities in every facet of non-impact printing. The importance of this field for a wide range of applications including office and tele-communications is readily inferred. It is anticipated that the final program will include as many as 80 highly significant invited and contributed papers.

The Congress is sponsored by the Society of Photographic Scientists and Engineers Springfield, Virginia, USA and Olivetti Corporation, Ivrea Italy. The General Chairman is Dr. Arnaldo Pasini of Olivetti. The Program Co-Chairmen are: Dr. Ulf Rothgord, Philips, Hamburg, West Germany and Dr. Eiichi Inoue, Tokyo Institute of Technology as well as Dr. Gaynor. Information on program, travel, and hotel arrangements may be obtained by contacting:

Robert H. Wood, Executive Director Society of Photographic Scientists and Engineers 7003 Kilworth Lane Springfield, VA 22151 USA Telephone: (703) 642-9090

WASHINGTON PAINT TECHNICAL GROUP (WPTG)

Annual WPTG Paint Symposium April 13 & 14, 1981 Marriott Twin Bridges Motel Washington, DC

The Washington Paint Technical Group announces the following program for its 21st Annual Symposium to be held at the Marriott Twin Bridges Motel, Washington, DC on Monday and Tuesday, April 13 & 14, 1981. The theme of the Symposium will be "New Decade, New Ideas." The keynote speaker will be Dr. George E.F. Brewer, Coating Consultant, who will speak on "Productivity, Invention and Innovation in the Coating Industry." Other speakers and topics are as follows:

James J. McDermott, Sales Manager, 3M Company, "Fusion Bonded Epoxy Coatings;" Raymond Lin, Principal Research Scientist, Honeywell Systems & Research Center, "Low Cost Solar Selective Paints;" William Wass, Vice President, Marketing, Ocean Chemicals, "Fire Retardant Coatings and Mastics, An Overview;" Robert Hartley, Senior Vice President, Research, International Paint Co., "New Polymer Based Anti-Fouling Paints;" Melvin Camelon, Paint Research & Development Manager, Ford Motor Co., "Automobile Coatings - New Era;" Sidney Childers and/or Gary E. Stevenson, Materials Engineers, Wright Patterson Air Force Base, "Coatings Research and Applications in the Air Force;" R.R. Robertson, Technical Director, Coil Coating Div., Valspar Corp., "The State of the Art of Chemical Coatings Used in Coil Coatings;" Ted Dowd, Materials Engineer, Coatings & Corrosion Control Br., NAVSEA, "Heat Shrinkable Plastic Sheathing for Wooden

Piles;" Dr. Eugene Allen, Professor of Chemistry, Lehigh University, "New Advances in Color Formulation and Back Shadows;" James E. Corby, Special Agent, F.B.I., "Forensic Paint Analysis;" Ben Seidenberg, Chemist, AST., Goddard Space Flight Center, "Thermal Control Paints Used in Aero-Space Environment."

There will be a banquet at the same location on the evening of the first day, followed by professional entertainment. For further information write to the Washington Paint Technical Group, P.O. Box 12025, Washington, DC 20005 or call Mildred Post at 301-530-1664 or Bernard Appleman at 703-557-5204.

FROM HISTORICAL RECORDS

In going over early ISCC records I have come across many bits of interesting and, often, forgotten pieces of information. One that I think will interest NewsLetter readers is the following, taken from an introductory talk by Preston S. Millar, president of the Electrical Testing Laboratories, when he chaired the evening session of the 7th Annual Meeting of the ISCC, February 24, 1938. This was our first meeting co-sponsored by a Member-Body, the Optical Society of America. It was also a first in that it was an all-day meeting of three sessions, held – at the invitation of E.T.L. through our friend William F. Little – in the new ETL building that was to house their expanding laboratories. E.T.L. was a generous host for this 3-session meeting; they not only provided the location, but they provided us with both luncheon and supper.

Of the afternoon technical session it can be said that the papers were so well received that they were requested for publication in the Journal of the Optical Society (published, including a photograph of the ISCC group taken at the meeting, in JOSA 28, 1938, the five papers beginning on page 60 by Hardy, Michaelson, Gibson, Foss, and Judd). Reprints of these papers were supplied by OSA for ISCC members, and papers of the popular evening session, mimeographed and supplied by ETL, were also distributed to ISCC members. The speakers were Bittinger (on the solar corona), Dimmick (on the psychology of color), Lewis (on color in interior design), and Jones (who showed moving pictures of growing crystals under polarized light).

Mr. Millar, in introducing himself to the evening session of this color group, related some experiences in what he called his "undistinguished color career." After telling about problems he had with heterochromatic photometry back in 1909, he went on to say that in going through his records he "came across a sad tale." From here on I give you the story in his own words:

"In 1915 I dabbled in color music. It was a rather interesting experience. The Russian government had subsidized an orchestra in this country for the purpose of popularizing Russian music — the Russian Symphony Orchestra. A Russian composer, Scriabin, had prepared a score for a symphony which he called Prometheus, the Poem of Fire. He had written into the score notations for color which appeared on the score sheet just about as the notations for the first violin or the viola would appear.

"The Russian Symphony Orchestra undertook to produce that Symphony with color, and some influential friends approached us at Electrical Testing Laboratories and brought pressure to bear upon us to such an extent that we undertook to try and produce the color to interpret Scriabin's color notation for this symphony. In the meantime, the war broke out. Communication with Russia was difficult and we had difficulty in learning what Scriabin's intentions had been, what he intended by his color notations in the score, particularly what he had in mind when he wrote the chords. However, after a great deal of difficulty, some inkling was gained of his intentions, and we learned then that all he had in writing the composition was an upright piano with a row of colored lamp bulbs on top. From trial with these lights he would write something down in his score.

"We had no idea as to the composer's wish as to an interpretation instrument; we had to go to it blind. But before we realized the difficulties of it, we were committed to it.

"So we built an instrument. It was an instrument to be placed in the back of the orchestra, to be operated from a piano keyboard which actuated relays and turned on large lamps with reflectors behind them, throwing beams of desired hues through colored gelatine. After several rehearsals, the great night came. The symphony was put on at Carnegie Hall before a very distinguished musical and artistic audience.

"When it was played, my friends and I didn't know what the color meant because it was extremely modernistic; we certainly didn't know what the combination of the color and the music meant. The whole thing was a flop. But we had a lot of fun.

"That was rather discouraging to my young spirit on the color business. As I went over the record, I found that we had made the acquaintance of several people, mostly lady folks, who were color enthusiasts and who felt that they could accomplish with color many things that we had never realized could be accomplished. They thought by selection of proper hues and proper exposures and treatment, they could cure some varieties of diseases. Some of them could see a musical theme in a Persian rug design. I have at home a water color painting that one of them made which she said illustrated a Wagnerian theme. It got pretty deep for a poor fellow like me, and I concluded that maybe I had better not try to follow the color art. As a matter of fact, I have never done anything myself in color since then, but I found the other day (this, ladies and gentlemen, is just by way of introduction to the meeting) that some of those people are still with us, because here is a poem that appeared in the Christian Science Monitor that I should like to read to you:

"Red is a swift young deer running in the snow; Yellow is faint laughter when the spring winds blow; Blue is a deep garden when the evenings wake;

Silver is in music heard upon a lake.

Green is water coolness on a summer day;

Purple is the shadow where tall poplars sway;

Black is the echo ringing from a great bronze gong;

White is the movement after the singing of a song.³ "Written by one Sarah VanAlstyne Allen.

"Well, I knew then that the color art was beyond me. So at the present time my color activities (and this is the only justification for my presiding tonight) are confined to very high appreciation of the Kodachrome motion picture films which the Eastman Company has made available to us and thereby greatly enhanced our esthetic enjoyment; and to rather constant grumbling on my part against the idea of the ladies that they make themselves more alluring by coloring their finger nails and painting their lips, and so forth. Those two things balance. One is appreciation; the other its antithesis. Between the two I am reminded of color all the time, even when the Color Council is not in session." And now, gentle reader of the Newsletter, I hope you have enjoyed with me this one bright and interesting moment out of ISCC's early history. In my memory there are many others; this one I had forgotten.

Dorothy Nickerson

THE COLOUR GROUP (GREAT BRITAIN)

Report of the 155th meeting, November 5, 1980

The first paper was given by Miss M.B. Halstead, her subject was "Colour Rendering Assessment of Ultra Violet Emission in Light Sources."

The extensive use of fluorescent brightening agents which fluoresce in the violet and blue spectral regions, and the increasing use of "Dayglo" paints require studies of the uv emission of light sources because the colour appearance of these materials is appreciably affected by the ultra violet.

For colour assessment of these materials some standard illuminant is required. The preferred spectral distribution is that of daylight at 6500K. Unfortunately it is not practical to use natural daylight and the production of an artificial source is extremely difficult. Hence the development of methods to assess the closeness of fit between D_{65} and artificial sources.

The colour rendering of light sources is affected when some of the objects are fluorescent. A C.I.E. committee has been considering how the problem might be treated. Simply adding fluorescent samples to the set of colours already used for calculating colour rendering indices leads to the problem of how to calculate an ultra violet index.

Miss Halstead then outlined several of the previous methods used to assess the closeness of fit between artificial light sources and D_{65} . These included: calculations based on the spectral power distribution of the source and other methods using colorimetric measurements as well as spectral differences.

From a survey of the methods applicable to colour matching and measurements it seemed appropriate to select an excitation band procedure for the colour rendering assessment. The procedure proposed requires a colour difference to be found between the test lamp and D_{65} for each of three fluorescent samples. These differences could then be used to calculate a general or a special, fluorescent colour rendering index.

It was argued that, as D_{65} is the reference illuminant, it would be desirable for the sum of the excitation curves of the fluorescent samples chosen to have the same shape as that of the spectral emission of D_{65} in the uv.

The fluorescent colour rendering index includes an extra factor to indicate the amount of uv emission relative to D_{65} . This was achieved by considering the direction of the chromaticity shift produced by the fluorescent emission.

The calculations were performed using u,v colour coordinates with a von Kries transform to correct for differences in illuminant and substrate. The fluorescent colour rendering indices obtained agree reasonably well with the known performance of fluorescent lamps.

The paper on which this talk is based will be published in Color Research and Application, Vol. 5, No. 4.

The Second Speaker was F.J.J. Clarke; his subject was "Interior and Exterior Daylight Illuminants in Relation to Practical Colorimetry."

Manufacturers of materials for which critical colour matching is needed still rely to some extent on inspection by visual means using 'real' daylight. These assessments are made under the daylight conditions found inside buildings: it being impractical to perform colour assessment outside. In terms of customer end use, at least as much value of production is destined to be used in buildings during daylight hours as is used out of doors.

Persons making critical colour matches will avoid obviously tinted glazing but any glass will alter the spectral power distribution of daylight, particularly at the ends of the visible spectrum. The spectral absorption characteristics of modern float glass differs little from glass maker to glass maker. So the glazing used in different buildings will vary by a small amount compared to the inherent variations in exterior daylight.

Exterior daylight, as represented by D_{65} , has a irregular S.P.D. so it is very difficult to design and build a filtered light source to simulate it. However if the effect of the ultra violet attenuation by glazing is allowed for both filtered tungsten halogen and a filtered xenon source could be produced to give a practical yet adequate artificial interior daylight source.

The most critical test for a uv deficient simulator of D_{65} would be a fluorescent colour (neglecting optical brightener) with the shortest emission band, hence the shortest region of excitation. Such a colour, called "Saturn Yellow," has been measured at the N.P.L. The results showed that for these strong fluorescent colours illuminant C would suffice rather than D_{65} . This is possibly due to the use of uv absorbers put in to protect against photo degradation showing that the bulk of the photon catch lies in the visible region.

There has been some discussion as to whether the D series of illuminants has sufficient uv component. Dr. Clarke felt that this argument was somewhat academic because the original measurements for the D series were made on the roofs of buildings to minimize the effect of the surround which is unfortunate as most practical colour assessment is not generally carried out at such lofty heights. So the very real influence of buildings and foliage etc. will be far more important than small deviations in the uv component.

The meeting closed after Ms. R. Burns demonstrated some of the effects Dr. Clarke had mentioned in his paper.

Much of this talk has been published in the Proceedings of the C.I.E. 19th Session Publication No. 50 1980.

J. Kempster

Reprinted from the newsletter of The Colour Group (Great Britain).

A PINK WELL-LIGHTED PLACE

Faber Birren has caromed some intelligence our way concerning effects of color on behavior. One article relates that pink rooms have been used with salutory effect in such places as jails, old folks homes, and VA hospitals. It is reported that pink hath charms that soothe the savage beast in us (*Contemporary* magazine, Marilyn Elias, June 22, 1980). Another article, however, warns us that such techniques must be used with caution (*Gazette Telegraph*, November 13, 1979). It seems that one Lt. Paul Becker applied pink paint to the holding cell of the Santa Clara County calaboose. Things went fine for a while, but Lt. Becker noted that "after 20 minutes it has a reverse effect." One is inevitably reminded of Alexander Pope's warning against the premature application of experimental results.

Research by Alexander Schauss of the Institute for Biosocial Research in Tacoma, Washington and Robert Pellegrini of San Jose State University are referred to in the articles.

PRODUCTS AND SERVICES

Rochester Institute of Technology Graphic Arts Research Center

The Graphic Arts Research Center at Rochester Institute of Technology has scheduled these seminars for the second three months of 1981. More information about these or any other GARC seminar can be obtained by calling Mr. Val Johnson at (716) 475-2758.

APRIL:	07-09	Improved Halftone Reproduction for Newspapers
	21-24	Color Seminar for Pressmen
	27-May 1	Orientation for the Graphic Arts
	28-May 1	Basic Quality Control for Graphic Arts
MAY:	11-14	Color Seminar for Pressmen
	18-20	Commercial Web Offset Workshop
	18-20	Black and White Tone Reproduction
	26-29	Color Control for Cost and Quality
JUNE:	01-05	Quality Control for Photographic Processing
	01-05	Printing Systems for the Paper Industry
	08-11	Color Seminar for Pressmen
	09-11	Understanding Bindery Operations
	21-25	Graphic Arts Experience

17th Annual Summer Program in Color Technology at Rensselaer

Dr. Fred W. Billmeyer, Jr., Professor of Analytical Chemistry at Rensselaer Polytechnic Institute and Director of The Rensselaer Color Measurement laboratory, will present his nationally-known one week courses in the Principles of Color Technology, Color Technology for Management, and Advances in Color Technology this June at Rensselaer's Troy Campus. The program will also feature Mr. Max Saltzman of the University of California at Los Angeles, and adjunct Professor of Color Science at Rensselaer.

Principles of Color Technology, June 1-5, or June 8-12, 1981. FEE: \$550. This course provides information on color description, color-order systems, measurement principles, color-difference calculations and tolerances, computer color matching, and colorant properties. Laboratory periods provide hands-on experience in measurement, computation and problem solving using the latest commercial equipment.

The course is of value to all individuals interested in color science from a variety of disciplines and organization levels. The major clientele is industrial personnel involved in color matching and color control. Attendance is limited to the number which can be accommodated in the laboratory sessions.

Color Technology for Management, June 15-16, 1981. FEE: \$400. The principles of color technology as they influence management decisions will be discussed. The course provides information on physical and perceptual aspects of color, color measurement, color differences and tolerances, and color matching. Typical problems in the production and sale of colored products will be covered, with solutions presented in terms of management decisions based on the principles of color technology.

The course is designed for executive and management personnel. The major clientele is individual personnel responsible for programs of production and sales of colored products. Those directly involved in color matching and color control are encouraged to enroll in other courses in the program at Rensselaer.

Advances in Color Technology, June 22-26, 1981. FEE: \$550. This course provides the latest information on the developments and techniques of color science and technology at an advanced level. Topics that will be discussed include instruments, calibration, and measurement errors; terminology and standards; color spaces and color differences; color appearance; and turbid-medium theory and color matching. Selected advanced laboratory workshops are included.

The course is designed for those having two or more years of direct personal experience in instrumental color measurement. The major clientele is industrial personnel involved in color matching and color control at an advanced level. Since elementary material is *not* included, applicants without previous experience will be asked to enroll in the course "Principles of Color Technology."

SUMMARY

- PROGRAMFred W. Billmeyer, Jr., Professor of AnalyticalDIRECTOR:Chemistry at Rensselaer Polytechnic Institute
and Director of The Rensselaer Color Measure-
ment Laboratory.
- COURSES: Principles of Color Technology, June 1-5 or June 8-12, 1981, \$550. Color Technology for Management, June 15-16, 1981, \$400. Advances in Color Technology, June 22-26, 1981, \$550.
- LOCATION: Rensselaer Polytechnic Institute, Troy, New York 12181.
- CONTACT: Office of Continuing Studies Rensselaer Polytechnic Institute Troy, New York 12181
- PHONE: 518/270-6442

COLOUR GROUP OF INDIA

Seminar on colour and its application

COLOUR Group of India organised a seminar on "Colour and its application" on November 26 in Bombay. Over 75 participants from various industries like paints, plastics, textiles, inks, dyestuff and pigment manufacturers attended the seminar.

In the first session, Prof. R. P. Joshi, delivered a lecture on "Colour in every day life". He explained in detail the concept of colour and mentioned the role of various branches of science such as physics, chemistry, physiology and psychology for understanding colour. He stressed that artists particularly designers and decorators must understand the role of colour science. Mr. S.P. Chandavarkar, Chairman of the session, summed up the conclusions.

The second session was chaired by Mr. C. J. Bhumkar, Director, Fortuna Chemicals. The topic was "Who will be your best colourist tomorrow? Man or Machine." In this panel discussion, ten technologists from various industries contributed their ideas through their short papers.

Dr. (Mrs.) Patwardhan of WRA defined the colour problems of various industries and mentioned the role of instrumental match prediction, technique. Mr. Ravi Raju of Techno Instru-

ments Bombay informed the participants about the new colour instrumentation particularly colour control systems offered by M/s Diano and M/s. Applied Color Systems, USA, Mr. Rindani, Quality Control Manager of Sandoz (I) Ltd. posed the problem of colour assessment, instrumental vs. visual. He stressed the need for collective efforts for better understanding of colour science and its application in colour industry. Dr. K. G. Gupta of Maneklal & Harilal Spg & Wvg Mills, Ahmedabad, explained in detail the "Areas of poor control in textile dveing and printing." He emphasised that success of computer colour matching technique depends on standardisation. Mr. P. B. Shah of Asian Paints (I) Ltd., mentioned the success story of computer colour matching and said "Colour instrumentation in the paint industry has succeeded due to our ability to carry out all colour matching operations with utmost accuracy and precision. Colour instrumentation gives perfect application of colour match, the credit for which undoubtedly goes to the man who handles the instrument with care and skill."

Mr. Gupte of M. G. Consultancy said that with numerous variables affecting the decision making of a dyer/colourist, there is no alternative left for him and naturally for a dyer, tomorrow's inevitable friend would be colour control through instrumentation.

Mr. Shevade of Asian Paints felt that success of even the best technology depends on the men handling it. He did not see any competition between man and machine and stressed the need of both man and machine to work together for achieving successful colour control. As a paint formulator, he found a colour computer a powerful tool to be used judiciously keeping other aspects of paint formulation in mind.

Mr. R. V. Deshpande of Sandoz (I) Ltd., expressed his views stating that computer colour predictions and colour matchings are required to achieve excellence and perfection in colouring of textiles and in a number of situations computer colour matching is going to be a big help.

Dr. Acharekar of Coats (India) Ltd., mentioned the colour problems of the ink industry and the prohibitive cost of colour instrumentation.

Dr. Gangakhedkar of Asian Paints quoted the remarks of Prof. Saltzmann – "With intelligence you can even do colour matching witout instruments. Now if you can do it without instruments, with intelligence, think of what an intelligent, well educated person can do with instruments – There is no limit."

Mr. C. J. Bhumkar, Chairman of the session summed up the panel discussions.

Reprinted from Colourage, December 18, 1980.

BOOKS ON COLOR

A booklet has been issued listing and describing ten books on color written or edited by Faber Birren. All are in print simultaneously during 1981 and are available from three publishers. A copy of the booklet may be secured by writing Faber Birren, 184 Bedford Street, Stamford, Conn. 06901.

VINCENT VAN GOGH AND THE COLOR YELLOW

The February 20, 1981 issue of the Journal of the American Medical Association contains a fascinating article by Thomas Courtney Lee, M.D. on "Van Gogh's Vision" in which emphasis is placed on the painter's obsession with yellow. It is popular knowledge that Van Gogh was a disturbed man, genius as an artist and colorist, that he was institutionalized at times, that he cut off a portion of one of his ears, and that he took his life by shooting himself in the chest at the age of 47 (in 1890). Quite tragic are further facts of insantity in his sister, the death of a favored brother, Theo, in an asylum, and the suicide of another brother. Very much aware of his plight he once write, "I am either a madman or an epileptic." He probably was both.

Dr. Lee's article reviews the opinions and diagnoses of many who have attempted to describe Van Gogh's afflictions: epilepsy, cerebral tumor, dementia praecox among a number of other assumptions. In the painter's strange view of the world and his swirling technique, there have been suggestions of glaucoma, corneal dystrophy, progressive nuclear cataracts and even sunstroke.

Poor Van Gogh! If his paintings have been startling to the world of art, his life has been intriguing to the world of medicine.

As Dr. Lee points out in the JAMA atticle (there are references also in Faber Birren's History of Color in Painting) Van Gogh had a special regard – and fantasy – for the color yellow. Toward the end of his life he lived in a "yellow house." He declared, "How beautiful yellow is" and had this color dominate and drench most of his later canvases.

His letters are replete with references to yellow. In describing one of his paintings, "A Reaper in a Wheatfield at Saint-Rémy" he wrote to an artist friend, "Have you seen a study of mine with a little reaper, a yellow wheatfield and a yellow sun? It's not successful, but still in it I have tackled the devlish problem of yellow again."

In his final years, Van Gogh came under the care and friendship of a homeopathic physician, Dr. Paul-Ferdinand Gachet, himself an amateur painter and friend of other contemporary artists, Manet, Pissarro, Renoir, Cézanne. Dr. Gachet too was a disturbed man, for Van Gogh wrote that the doctor "certainly seems to me as ill and distraught as you or me."

Van Gogh did two portraits of Dr. Gachet. Curiously, both include a small vase holding sprigs of foxglove, the plant from which the drug digitalis is made, a powerful heart stimulant, and often prescribed in epilepsy. It could logically be assumed that Dr. Gachet had Van Gogh take digitalis, a common treatment at the time. Thus Dr. Lee in the JAMA article writes, "Van Gogh's propensity for the color yellow is striking. Perhaps no other painter is so closely associated with a particular color. The question is, was his selection of yellow a free choice, or was it colored by the toxic effects of digitalis?" Indeed, digitalis "intoxication" is often accompanied by "visual changes, hazy, cloudy, or yellow vision, and red-green perception difficulties occur." Dr. Lee fairly concludes, "It is not reasonable to assume that Van Gogh was continually under the effects of digitalis and its yellow fog during the last years of his life. Rather, during his acute maniacal or epileptic periods, he may have been treated with this medicine for a short period, noticed the golden and coronal toxic symptoms, was impressed with them, and, when these side effects disappeared, purposefully continued to paint with a yellow dominance."

In psychiatry as well, yellow has been associated with unusual mental conditions. It may, on the one hand be related to genius and high intelligence, and on the other hand to insanity and mental deficiency. Years ago one authority wrote, "Thus yellow is the proper and intrinsic color of the morbid mind. Whenever we observe its accumulative appearance, we may be sure that we are dealing with a deep-lying psychotic disturbance." (Eric P. Mosse, Occupational Therapy and Rehabilitation, February, 1942.)

Faber Birren

This space reserved for contributions from ISCC Member-Bodies. Contact the editor.

9

CALENDAR

ISCC Annual Meetings

1981: April 27-28 - Roosevelt Hotel, NY

Williamsburg Conferences

1982: February 7-10 1983: February 6-9 1984: February 12-15 1985: February 9-13 1986: February 7-12

Dry Color Manufacturers Association

1981: The Greenbrier, White Sulphur Springs, WV, June 14-17

Federation of Societies for Coatings Technology 1981: Cobo Hall, Detroit, MI, October 28-30

Society of Plastics Engineers, Color and Appearance Division 1981: RETEC, Chicago.

1981: ANTEC, Boston Sheraton, May 4-7

Gravure Technical Association

1981: Drake Hotel, Chicago, April 7-9

Deadlines for submitting items to be included in the Newsletter are: February 15, April 15, June 15, August 15, October 15, and December 15, in other words, the fifteenth of the even-numbered months.

Send Newsletter items to Editor:

Dr. William Benson 636 Massachusetts Ave., N.E. Washington, D.C. 20002 301-565-4948

COMMITTEE ON PUBLICATIONS

William Benson, Chairman Yale Forman Harry K. Hammond Edward L. Cairns Frederick T. Simon

OFFICERS, 1980-1982

President Dr. William D. Schaeffer

Graphic Arts Technical Foundation 4615 Forbes Avenue Pittsburgh, Pennsylvania 15213 412-621-6941

Color and Dyeing Laboratories

Greensboro, North Carolina 27420

Burlington Industries P.O. Box 21327

Department of Chemistry Rensselaer Polytechnic Institute

Gardner Laboratory Division Pacific Scientific Company

Bethesda, Maryland 20014

Eastman Kodak Company

Rochester, New York 14650

Troy, New York 12181

Post Office Box 5728

Research Laboratories

919-379-1809

518-270-6458

301-951-4400

Building 82

716-722-0689

President-Elect Mr. Louis A. Graham

Secretary Dr. Fred W. Billmeyer

Edward T. Conner

Past President Mr. Franc Grum

DIRECTORS

1978-1981 Ms. Bonnie Bender Dr. Stephen F. Bergen Mr. Edward L. Cairns

> Mr. Robert F. Hoban Dr. Allan B. J. Rodrigues Ms. Bonnie K. Swenholt

> > 1980-1983 Ms. Joy Turner Luke Mr. Ralph Stanziola Dr. William A. Thornton

1. Any person interested in color and desirous of participating in the activities of the Council for the furtherance of its aims and purposes . . . shall be eligible for individual membership (By-Laws, Article I, Section 2). Application forms for individual membership may be obtained from the Secretary (address given above).

The Council re-affirms its community of interest and cooperation with the Munsell Color Foundation, an independent private foundation devoted solely to the advancement of color knowledge in science, art, and industry. It serves as Foundation Associate of the Inter-Society Color Council. The Council recommends and encourages contributions for the advancement of these purposes of the Munsell Color Foundation. For information, write to S. L. Davidson, NL Industries, P.O. Box 700, Hightstown, N.J. 08520.

3. The Council promotes color education by its association with the Cooper-Hewitt Museum. It recommends that intended gifts of historical significance, past or present, related to the artistic or scientific usage of color be brought to the attention of Christian Rohlfing, Cooper-Hewitt Museum, 9 East 90th Street, New York, New York 10028.

Treasurer

1979-1982