

# Inter-Society Color Council *News*

## ANNUAL REPORT ISSUE

### REPORT OF THE PRESIDENT WILLIAM D. SCHAEFFER

The 51st year of the Inter-Society Color Council was marked by a reassessment of the total ISCC program. The opportunity was created by the work of a Study Group organized originally by past president, Franc Grum, and carried through by Chairman, Dr. Alan Robertson, and most recently by Joy Turner Luke. The enthusiastic participation of fifteen members of the Planning Committee and the Board of Directors established numerous recommendations and guidelines for our organization. Thanks to the excellent reporting by our secretary, Dr. Fred Billmeyer, the essence of the meeting can be found in ISCC Technical Report 81-1 which was distributed to the entire ISCC membership. Several recommendations contained in the report have been adopted, many remain.

After seven years of service as ISCC News Editor, Dr. William Benson requested that he be relieved of this responsibility. Very fortunately, Ms. Mary Ellen Zuyus from the Hunter Associates Laboratory has accepted the position. Every one of us can make her work much easier by forwarding to her information from our member-bodies, our committees and our color activities.

To Joyce Davenport and Dr. A. B. J. Rodrigues we are indebted for the Program Chairperson's Guide, ISCC Technical Report 81-2. Based on their experiences as chairpersons for the 50th Anniversary program, the guide provides many helpful assists to those who will be faced with the responsibility.

Another development from the Long Range Planning Conference, the suggested use of ISCC promotional materials, has materialized at this meeting in the form of ISCC crests for use on coats or jackets. Dr. Stephen Bergen provided the initiative and manufacturing contacts based on the advice and support of Mr. Ray Spilman and others. The Board of Directors trusts that you will use and enjoy this source of recognition.

I hope that you will share the sentiments of the ISCC Board of Directors in congratulating Mr. Richard Hunter and Dr. W. David Wright for their election to Honorary Members of the ISCC.

The innovative and fascinating program for the 51st ISCC Annual Meeting is the result of the year-long effort by the chairman, Mr. Ralph Besnoy. The "Welcome to Textile Country" has been a noteworthy success for which we are most appreciative.

Our thanks are expressed to Nekoosa-Edwards Paper Company for paper donations and to Pantone, Inc. for commitments to print our stationery and Newsletter cover-spectra.

My final words must be of thanks to my fellow ISCC Officers and Board members. Once again during this past year they kept the activities of the Council moving while I was hospitalized and recuperating at home. They have been very sup-

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portive despite the irritations of frequently missing leadership.

Among the group, two individuals must be recognized. This year brings to a close a twelve year period of devoted service by our secretary, Dr. Fred Billmeyer, Jr. He has in many cases been Mr. ISCC personified. We wish him well in his new role as an ISCC director.

And to Mr. Louis Graham, the ISCC president-elect, my gratitude for his concern, his help, his counsel and his willingness to serve whenever asked. He has earned all the support we can provide as he starts his administration of the ISCC.

### REPORT OF THE PRESIDENT-ELECT LOUIS A. GRAHAM

In reflecting back on the last two years, I took the occasion of re-reading the credentials that Bill Schaeffer brought to the Office of President of ISCC. These were impressive enough; however, Bill has received further honors during his period in office. Under Dr. Schaeffer's direction, ISCC has held the successful and well attended Williamsburg Conference, celebrated its 50th Anniversary with style and verve, and developed important future guidelines through the Long-Range Planning Committee. Bill managed all this while undergoing an unexpected and protracted illness. ISCC is indeed fortunate to have the services of Dr. Schaeffer, and the Board of Directors and the membership extend their thanks and appreciation.

A draft of the questionnaire has been developed to initiate an ISCC Color Expert List. Separately, contacts have been initiated with two other associations with the hope that they may join ISCC as member bodies.

In recent years one of the main functions of the President-Elect is to act as Chairman of the Problems/Project Committees. During the last two years a number of active committees has remained approximately constant: one committee has been closed, several are currently inactive awaiting outside developments, several have required reorganization and at least five new areas have been identified as new committee candidates. The new areas are in various states of planning and organization at the present time. One new committee has been approved on the color of gems. For most active committees, scopes and objectives have been reconfirmed.

In considering the move to the ISCC Presidency, I found this quotation from Alexander Throttlebottom: "I do not know anything about being President. I just found out today how to be a Vice President." Fortunately for me, Dr. Schaeffer has moved my education a little further along than that. I am looking forward with pleasure serving ISCC for the next two

years, hoping to receive the continuing broad support of the ISCC membership which has been the help and pleasure of past Presidents.

## REPORT OF THE SECRETARY FRED W. BILLMEYER, JR.

As previously announced in the Newsletter, elections at the beginning of the calendar 1982 resulted in the following new officers and directors taking office at the end of the annual meeting: Louis A. Graham, AATCC, IMG, President; Joyce S. Davenport, FSCT, IMG, President-Elect; Therese R. Commerford, AATCC, IMG, Secretary; Edward T. Connor, IMG, MCCA, Treasurer; William D. Schaeffer, GATF, Past President; and Fred W. Billmeyer, Jr., ACHS, AIC, APS, IMG, SPE, Richard D. Ingalls, IMG, and Rolf G. Kuehni, AATCC, IMG, Directors.

At its meeting on April 18, 1982, the Board of Directors elected Richard S. Hunter and W. David Wright Honorary Members of the Council. With the death of Vincent C. Vesce, the number of living Honorary Members is now 14.

I regret to announce the resignation of two Member-Bodies during the year, the American Institute of Architects and the Technical Association of the Graphic Arts. In each case, I feel, the resignation reflects the loss by death of the key person whose knowledge of and enthusiasm for the Council made the Member-Body an active, contributing part of the ISCC: Waldron Faulkner, AIA/C for many years; and Earl Sundeen, TAGA/L/E for many years. The Board of Directors hopes that it will be possible for the AIA and TAGA to return to Member-Body status in the near future.

With these resignations the number of Member-Bodies is currently 35, but the Board is concerned over the status of some of these where the strength of the Delegation has dwindled over the years or for another reason the continuation of membership is in doubt.

The number of individual members in the Council appears to fluctuate somewhat, depending on the timing of the count relative to action of the Treasurer in dropping delinquent members. As of August 1, 1982, there were 654 IMG (including student and retired) on the rolls, compared to 581 in April, 1981, and 575 when the Secretary took office in 1970.

The Planning Committee is considering how best to enhance the role of the Individual Member Group in the Council, in accord with the objectives of the 1981 Long Range Planning Conference as set forth in ISCC Technical Report 81-1.

During 1981-82, N. V. Philips Gloelampenfabriken of The Netherlands joined the Council as a Sustaining Member, whereas the European Gemological Laboratory of New York resigned. The number of Sustaining Members remains at two.

One new ISCC Technical Report was issued this year, ISCC TR 81-2, "Program Chairperson's Guide." This report is not generally available, but will be sent from the Secretary's Office to chairpersons of ISCC meetings and cosponsored meetings as required.

In the category of cosponsored meetings, the ISCC and the Society for Information Display were cosponsors of a one-day symposium on the Colorimetry of Self-Luminous Displays,

held in Charlotte, NC, immediately following the 51st Annual Meeting, on April 21, 1982. The Illuminating Engineering Society will cosponsor with ISCC the 1983 Williamsburg Conference "Color and Illumination — Man Lights, and so Colors, His Environment," to be held on February 6-9, 1983. Plans are also being made for the Council and the AATCC to cosponsor a symposium on color organized by AATCC Research Committee RA36 some time in 1983.

At the Annual Business Meeting, it was announced that updated information on the membership of Member-Body Delegations and on Project Committee chairmen was due in the (then) Secretary's Office by June 1 for inclusion in the new membership list. As of August 1, this information had been received from only seven Member-Bodies, and the 1982-1984 membership list is accordingly delayed.

The journal Color Research and Application, endorsed by the ISCC, continues in good editorial health, with 254 pages published in 1981 and 340 projected for 1982. The increase in 1982 results from the publication, with the summer issue, of a supplement containing 19 papers making up the Proceedings of the Third Taniguchi Symposium on Neurobiological and Psychophysical Aspects of Color Vision, held at Katata, Shiga-ken, Japan. In 1981, the journal carried 44 articles, notes, letters, reviews, and reports authored or coauthored by ISCC members, and three news items about the ISCC.

The last listing of losses by death from the ISCC membership rolls was in 1979. Since then, we regret to report the passing of Vincent James Crociata, IMG; Harvey Doane Eaton, Jr., IMG; John E. Flynn, AIA; Simao Goldman, IMG; William A. Howard, IMG; Hugh G. Neil, IMG; Alex S. Quiroga, IMG; Earl Sundeen, TAGA/L/E; and Vincent C. Vesce, HON.

This is my last report to the ISCC as Secretary, after 12 very busy but highly enjoyable years. I could not have rendered this service to the Council without the help of too many members to recognize by name, including all the Officers and Directors with whom I have had the pleasure of serving, and last but far from least my own secretary, Peggy Ruggeri.

On July 23-24, I turned over the files of the Secretary's Office to the incoming Secretary, Terry Commerford, I wish her the greatest success in her new position, and extend my best wishes to all ISCC members.

Respectfully submitted  
Fred W. Billmeyer, Jr.  
Secretary

## REPORT OF THE TREASURER EDWARD T. CONNOR

The financial condition of your Council is strong. As of December 31, 1981 Fund Balance (net worth) was \$30,121, an increase of \$3,582 during the year 1981. Contributing to this increase were:

1. Membership dues — up \$2,283 as a result of higher dues rates.
  2. Annual Meeting net — up \$1,546.
  3. Williamsburg Conference net — up \$2,887. (The next Williamsburg Conference will be held in 1983).
- Expenses ran \$623 less than Budget despite increased spend-



ing for amortization of Newsletter covers and non-reoccurring expenses associated with the Long Range Planning Project charged to Directors Meetings expenses. Savings in other areas more than off-set these items.

May I extend sincere thanks to the members of the Finance Committee: Mr. Charles G. Leete, Mr. William N. Hale, Jr. and Mr. Warren B. Reese, and to my fellow officers, the Board of Directors and all of the members of the Inter-Society Color Council for their guidance and cooperation during this successful year for your Council.

## FINANCIAL STATEMENT OF ISCC, INC. AS OF DECEMBER 31, 1982

### BALANCE SHEET

| ASSETS                           | 1980            | 1981            |
|----------------------------------|-----------------|-----------------|
| Cash-Ck. Acct.                   | \$10,995        | \$ 7,458        |
| Cash-Sav. Acct.                  | 4,993           | 1,520           |
| Certificates of Deposit          | 13,894          | 18,478          |
| Receivables - Dues               | 1,494           | 1,434           |
| - Godlove Fund                   | -               | 15              |
| Deferred Chgs - Insurance        | 169             | 96              |
| - Service Awards                 | -               | 1,120           |
| - N/L Covers                     | 2,046           | -               |
|                                  | <u>\$33,531</u> | <u>\$30,121</u> |
| <b>LIABILITIES</b>               | <b>\$ 8,892</b> | <b>0</b>        |
| <b>Fund Balance</b>              |                 |                 |
| Beginning Balance                | \$24,440        | \$24,639        |
| Added during year                | 199             | 5,482           |
|                                  | <u>\$24,639</u> | <u>\$30,121</u> |
| <b>Total Liab. and Fund Bal.</b> | <b>\$33,531</b> | <b>\$30,121</b> |

### INCOME/EXPENSE STATEMENT

|                          |                 |                 |
|--------------------------|-----------------|-----------------|
| <b>Income</b>            |                 |                 |
| Dues                     | \$13,086        | \$16,837        |
| Dues (Uncollectable)     | (1,195)         | (2,663)         |
| Subscriptions/Reprints   | 393             | 735             |
| Use of Mailing List      | 50              | 51              |
| Annual Mtg. - Net        | 1,636           | 3,182           |
| Williamsburg Conf. - Net | 1,417           | 4,304           |
| Interest                 | 1,292           | 1,176           |
|                          | <u>\$16,679</u> | <u>\$23,622</u> |
| <b>Expense</b>           |                 |                 |
| Newsletter               | \$ 8,130        | \$ 9,376        |
| Amort. Newsletter Cover  | 1,023           | 2,046           |
| President's Office       | 191             | 9               |
| Treasurer's Office       | 385             | 354             |
| Secretary's Office       | 3,500           | 3,850           |
| Directors Mtgs.          | 114             | 1,504           |
| Audit                    | 450             | 700             |

|                               |                 |                 |
|-------------------------------|-----------------|-----------------|
| Print-ByLaws                  | 1,060           | 0               |
| 50th Anniversary Booklet      | 0               | 1,931           |
| Print-Membership List         | 1,359           | 0               |
| Miscellaneous                 | 268             | 270             |
|                               | <u>\$16,480</u> | <u>\$20,040</u> |
| Excess of income over expense | \$ 199          | \$ 3,582        |

## FINANCIAL STATEMENT OF L. H. GODLOVE AWARD FUND

### BALANCE SHEET

| ASSETS                 | 1980          | 1981          |
|------------------------|---------------|---------------|
| Certificate of Deposit | \$ 941        | \$ 1,000      |
| Due from Gen. Fund     | 24            | (15)          |
|                        | <u>\$ 965</u> | <u>\$ 985</u> |
| <b>Fund Balance</b>    |               |               |
| Beginning balance      | 909           | 965           |
| Added during year      | 56            | 20            |
|                        | <u>\$ 965</u> | <u>\$ 985</u> |

### INCOME/EXPENSE STATEMENT

|                              |       |       |
|------------------------------|-------|-------|
| <b>Income</b>                |       |       |
| Interest                     | \$ 56 | \$ 59 |
| <b>Expense</b>               |       |       |
| Award Engraving              | \$ 0  | \$ 39 |
| Excess of Income vs. Expense | \$ 56 | \$ 20 |

## REPORT OF THE 1982 ANNUAL BUSINESS MEETING

The 1982 annual business meeting of the Inter-Society Color Council was called to order by President William D. Schaeffer at 12:50 P.M., Tuesday, April 20, 1982, following the second group luncheon of the 51st annual meeting of the Council, in Charlotte, NC. President Schaeffer informally announced the results of the election of officers and directors for terms now beginning, and introduced those at the head table, other directors, and student speakers at the 1982 meeting of Project Committee 33, Human Response to Color. He then presented the annual report of the president, which is reproduced elsewhere in this Annual Report issue.

Dr. Schaeffer then turned the meeting over to the President-Elect, Mr. Louis A. Graham, who presented his annual report, dealing largely with the activities of the Problems Committee. This report also appears in this issue of the Newsletter.

The Secretary, Dr. Fred W. Billmeyer, Jr., and the Treasurer, Mr. Edward T. Connor, then gave brief oral reports, referring to their written reports which are included in this issue.

Dr. Schaeffer presented Certificates of Appreciation to retiring Directors Robert F. Hoban, Allan B. J. Rodrigues, and Bonnie K. Swenholt, to the retiring Past President Franc Grum, and to the Secretary.

Dr. Schaeffer then formally turned the Presidency of the ISCC over to Mr. Graham, who again expressed his appreciation to Dr. Schaeffer for his capable administration, reminded those present of the dates of forthcoming ISCC meetings and meetings cosponsored by the ISCC and its Member-Bodies, and declared the Annual Business Meeting adjourned at 1:25 P.M.

Respectfully submitted,  
Fred W. Billmeyer, Jr.,  
Secretary

## REPORT OF THE FINANCE COMMITTEE EDWARD T. CONNOR, CHAIRMAN

The approved budget of the Council for the calendar year 1982 follows. Included for comparison are budget and actual figures for 1981. The budget projects an income decrease of 18% versus 1981. This is due to the lack of a Williamsburg Conference in 1982 and lower projected revenues from the Annual Meeting due to the recession.

On the expense side, the budget projects a small increase of 6% — quite nominal in light of increased costs across the board.

A deficit of \$1,838 is projected for 1982.

It is a pleasure to note that the major financial objectives for 1981 were achieved. These included:

1. Providing for the major increase in cost of printing and postage so as not to endanger frequency and quality of service of the Council to the membership.

2. Providing for an increase in the investment in Committee work and for Directors' meetings for long-term planning purposes of your Council.

3. Maximizing investment income on our savings.

4. Budgeting for a reasonable surplus.

As appropriate maximum attention will be given to continue these same objectives in 1982.

## 1981 BUDGET — GENERAL FUND

| Income                      | 1981<br>Budget  | 1981<br>Actual  | 1982<br>Budget  |
|-----------------------------|-----------------|-----------------|-----------------|
| Dues                        | \$15,650        | \$14,174        | \$15,000        |
| Subscriptions/Reprints      | 100             | 735             | 300             |
| Use of Mailing List         | 0               | 51              | 0               |
| Annual Meeting — Net        | 3,000           | 3,182           | 1,500           |
| Williamsburg Conf.<br>— Net | 2,500           | 4,304           | 0               |
| Interest                    | 1,300           | 1,176           | 1,500           |
| ISCC Crests                 | 0               | 0               | 1,080           |
|                             | <u>\$22,550</u> | <u>\$23,622</u> | <u>\$19,380</u> |

## Expense

|                            |          |                      |          |
|----------------------------|----------|----------------------|----------|
| Newsletter                 | \$10,700 | \$ 9,376             | \$11,000 |
| Amort. Newsletter<br>Cover | 1,023    | 2,046 <sup>(1)</sup> | 1,023    |
| Newsletter Stationary      | 0        | 0                    | 600      |

|                             |                 |                      |                    |
|-----------------------------|-----------------|----------------------|--------------------|
| President's Office          | 200             | 9                    | 200                |
| Secretary's Office          | 3,850           | 3,850                | 3,500              |
| Treasurer's Office          | 800             | 354                  | 800                |
| Directors' Meetings         | 700             | 1,504 <sup>(2)</sup> | 700                |
| Audit                       | 600             | 700                  | 700                |
| Print-Membership List       | 0               | 0                    | 825 <sup>(3)</sup> |
| Committee Expense           | 500             | 0                    | 400                |
| 50th Anniversary<br>Booklet | 1,500           | 1,931                | 0                  |
| Service Awards              | 300             | 0                    | 300 <sup>(4)</sup> |
| ISCC Crests                 | 0               | 0                    | 770 <sup>(5)</sup> |
| Miscellaneous               | 500             | 270                  | 400                |
|                             | <u>\$20,673</u> | <u>\$20,040</u>      | <u>\$21,218</u>    |

Excess of Inc. vs. Exp. \$ 1,877 \$ 3,582 (\$ 1,838)

(1) Consumed in 1981 and thus required full write-off of capitalized amount.

(2) Long Range Planning Project costs included in this figure.

(3) Amortize over 2 years — \$825/year in 1982 and 1983.

(4) Expense over 4 years — 1982 through 1985.

(5) 40 crests not included in Income or Expense figures.

## REPORT OF THE PUBLICATIONS COMMITTEE MARY ELLEN ZUYUS, CHAIRMAN

The primary activity of the Committee continues to be the publication of the News. The Board of Directors is seeking a donation of paper stock in order to reduce costs to the Council. The previous stock has been depleted and, at present, the News is being published without the familiar rainbow heading.

The Chairman is exploring a means of diversifying the content of the News, including publication of subject bibliographies and short items of news. Any member interested in working with the Editor is encouraged to contact her at the address listed on the back cover of this issue.

## REPORT OF THE PUBLICITY COMMITTEE THERESE R. COMMERFORD, CHAIRMAN

The Committee continued to accumulate biographies of ISCC Directors and Officers. Press-releases were prepared for newly-elected Directors, and forwarded to the designated newspapers and publications.

Prior to the April Annual Meeting in Charlotte, North Carolina, two local news outlets were sent information on the ISCC. The two contacted were the Charlotte Observer and the Charlotte Arts and Science Council.

Letters were sent to several honorary members of the ISCC, inquiring about their present activities. The Board was delighted to hear from Mr. William Kiernan, a Past President of the ISCC. Mr. Kiernan's letter was forwarded to ISCC News for inclusion in an up-coming issue.

Mrs. Joy Turner Luke prepared a press release on Mr. Henry W. Levison, the 1982 recipient of the Macbeth Award. A press release was also written on the Long-Range Planning Meeting, held in July 1981 at Airlie, Virginia. Copies of both were sent to the ISCC News and other publications on the Secretary's list.

## **PROBLEMS/PROJECT COMMITTEES**

### **LOUIS A. GRAHAM, CHAIRMAN**

This report will summarize not only the progress since the last Board meeting, but a synopsis of the last two years. My term of office as Chairman of the Problems/Project Sub-Committees began in 1980. First, ISCC was fortunate in obtaining the services of four fine committee coordinators: Bob Hoban, who brought much experience in this area to help with our needs, Alan Robertson, Bill Thornton and Ray Spilman. At the beginning of this period, we had 13 active committees. There have been a large number of changes in the committee chairmanships which are elsewhere duly recorded. The committee coordinators met in September, 1980, and reduced Ruth Johnson Fellers' excellent report on sub-committee operations to a set of guidelines which were subsequently issued to each committee. Also, and primarily in preparation for the 50th Anniversary meeting, the scopes and objectives of all the committees were reviewed and generally updated. Several committees remain on a standby basis (6, 7, 30). One (#10) has been closed and final report is pending.

One new committee, sponsored by Bob Hoban, on the color of gems, has been initiated, and a scope/objective approved by the Board as well as the Chairman, Eunice Miles. She, however, finds herself now unable to accept and alternatives are being investigated. At the 50th Anniversary meeting, the new Problems Committee received five significant suggestions for new committees. These are: 1) Color and imagination (prime contact: Richard Ingalls), 2) Object color (prime contact: Ray Spilman), 3) Color aptitude testing (prime contact: Dr. E. Rinalducci), 4) Films/tapes for color education (prime contact: Nancy Jo Shoemaker), 5) Transformation of the Visual Scene by Illumination (contact: W. Thornton).

Most active committees have plans to meet at the Charlotte Annual Meeting. It had been anticipated that several of the new areas suggested would be explored by small working groups at Charlotte; this will be true for "Color and Imagination" and "Film/Tapes for Color Education," but not for the other two as present plans go.

Your Chairman has taken the opportunity of reviewing in depth the sub-committees' situation with Joyce Davenport, incoming President-Elect and Problems/Project Committee Chairman. As I have already told Joyce, I expect more things out of her than I have been able to accomplish myself.

## **REPORT OF PROJECT COMMITTEE 6**

### **SURVEY OF COLOR TERMS**

#### **C. JAMES BARTLESON, CHAIRMAN**

Committee on standby status. No report.

## **REPORT OF PROJECT COMMITTEE 7**

### **SURVEY OF AMERICAN COLOR SPECIFICATIONS**

#### **ROBERT F. HOBAN**

Committee on standby status. No report.

## **REPORT OF PROJECT COMMITTEE 18**

### **COLORIMETRY OF FLUORESCENT MATERIALS**

No report has been received.

## **REPORT OF PROJECT COMMITTEE 22**

### **MATERIALS FOR INSTRUMENT CALIBRATION**

#### **DANNY C. RICH AND**

#### **CHARLES J. SHERMAN, CO-CHAIRMEN**

The meeting was opened by Danny Rich, co-chairman. C. J. Sherman was unable to attend the meeting. The last meeting's minutes were read and approved. Dan Rich then requested volunteers to oversee the Committee publication, "Guide to Material Standards." Harry Hammond suggested that the individual members submit contributions to the committee chairmen. He mentioned a new ceramic material from Japan which is similar to the very popular Russian Opal. It possesses a very high reflectance and flat spectral and goniometric properties. The Japanese material appears to be more opaque than the Russian Opal and the current cost is about \$100.00 per tile.

Many members felt that there was not enough publicity concerning the "Guide." It was suggested that the instrument manufacturers put advertisements into their user newsletters. Also a notice in the ISCC Newsletter would be useful.

There was some discussion about the importance of the surface characteristics of standards. No conclusion was reached until further work can be reported.

It was reported that the BCRA has run out of their original issue and are in the process of a new issue. Dr. Schanda's lab in Hungary is offering a set of six colored ceramic tiles possessing an intermediate chroma. No prices were available at this time.

Dr. Billmeyer reported for the special interest group on fluorescent materials. He indicated that Cindy Ashton of 3M has several materials available for use as fluorescent standards. Along with the CIBA white scale there would be a blue, a green, two yellows and two oranges, all with moderate to high fluorescence. Problem subcommittee 18 will look into the possibility of producing 2" x 2" standard plaques.

There was no report from the special interest group on directional measurements.

Dr. Billmeyer reported for the special interest group on translucent materials. The CIE has been working establishing a geometry for the illumination and viewing of translucent materials. This will comprise a new section for CIE Publication 15, Colorimetry. Using the concepts from Publication 38 the distinctions between transparent and translucent materials will be defined. Essentially transparent materials will be characterized by regular transmittance and translucent materials by using an integrating sphere to measure the total transmittance. The point where the regular reflectance strikes must have the same reflectance as the rest of the sphere. Diffuse transmittance is measured with a black trap at the port. There will be a warning about scattering parallel to the sample surface and the light losses that occur.

Cal McCamy commented on some problems involved in the definitions of transmittance as found in CIE Publication 38. In

this document a 10° incident cone and a 2.5° receiving cone are specified. The transmittance is defined as the transmitted flux divided by the incident flux. He prefers a definition of transmittance factor such that the transmitted flux is divided by the flux reaching the detector with no sample in place.

Jack Hsia reported for the special interest group on retroreflectance that the NBS will soon issue a set of filters and retroreflectors for calibration and testing of retroreflectometers. Norb Johnson indicated that four new ASTM methods have been recently defined – E808, E809, E810 and E811.

Cal McCamy reported that the special interest group on terminology has recently written a paper on the terminology of retroreflectance.

The report for the special interest group on recommended measurement procedures was given by Henry Hemmendinger. He reported on a study of some recent MCCA work to update last year's report. The current information still supports the conclusion of last year's report that the new generation of instruments show an order of magnitude improvement over past generations. He now believes that wavelength calibration problems are crucial to measurement of metamerism samples. He reported that absolute measurement techniques are necessary for precise measurement of metamerism pairs. Additionally, the converse can be used to test the wavelength error of a spectrophotometer. Even the NBS 2100 filters are similar enough to be used for this purpose. Henry indicated that methods are now more important than materials. This is a real problem in industry but they seem unconcerned.

Finally there was a discussion of the recent advances in calibration and standards. Dr. Billmeyer reported that at the last CORM meeting it was decided to try to establish a National Measurement System for Radiometry. The concept will be presented to the NBS such that the Bureau will issue standards to a lab or user who will then claim measurements traceable to the NBS. The lab or user will then issue calibrated working standards to end users. Periodically the Bureau will validate the intermediate lab for conformance to the NBS scale. Jack Hsia confirmed this and also mentioned several new SRM materials. The SRM's are 2019-2022 standards for solar irradiance calibration, 2003A and 2023 specular mirror standards, both first and second surface mirrors calibrated over the range of 250 to 2500 nm and three new didymium standards, 2009, 2010, 2013. All of the new SRM's are documented in the NBS publication *Optical/Radiation News* available from the Radiometric Physics Division of the NBS. It was mentioned in passing that the new issue of BCRA times will contain a metamerism pair and that the MCCA will begin issuing metamerism samples.

The meeting was adjourned by Danny Rich.

**REPORT OF PROJECT COMMITTEE 25D  
STRENGTH OF COLORANTS – DYES  
LEONARD A. WEINER,  
ROBERT TAUSENFREUND, COCHAIRMAN**

The committee convened at the annual meeting in Charlotte. The major portion of our discussions centered around the problem encountered with newer instruments in that the intense illumination they provide occasionally produces instabil-

ity in dyestuff solutions while they are being evaluated for strength. A number of possible corrections of the problem were suggested.

The committee proposed that a questionnaire be circulated among members of ISCC to evaluate the scope of the problem as well as to alert those who may not be aware of it.

**REPORT OF PROJECT COMMITTEE 25F  
STRENGTH OF COLORANTS – PIGMENTED  
FIBERS SECTION  
GEORGE SONN, CHAIRMAN**

No report has been received.

**REPORT OF PROJECT COMMITTEE 25P  
STRENGTH OF COLORANTS – PIGMENTS  
JOYCE S. DVAENPORT AND  
JACKIE WELKER, COCHAIRMAN**

No report has been received.

**REPORT OF PROJECT COMMITTEE 27 –  
INDICES OF METAMERISM  
RALPH BESNOY AND  
ALLAN B. J. RODRIGUES, COCHAIRMAN**

There is considerable confusion in industrial use of the term metamerism and in an understanding of phenomena related to it. In order to define the many concepts expressed in common usage of the word "metamerism," this committee composed a questionnaire which was mailed to colorists around the world. They were asked to either agree or disagree with 44 statements relating to metamerism and color matching. We have received about 260 responses to date from 15 countries and 16 different industries. They will lead us toward a better definition of the problem.

We also continue collecting observation data in our round robin experiments towards better mathematical characterization of metamerism.

**REPORT OF PROJECT COMMITTEE 30  
COLOR IN THE BUILDING INDUSTRY**

Committee on standby basis. No report.

**REPORT OF PROJECT COMMITTEE 32  
IMAGE TECHNOLOGY  
LEROY DeMARSH, CHAIRMAN**

No report has been received.

**REPORT OF PROJECT COMMITTEE 33  
HUMAN RESPONSE TO COLOR  
MARY L. BUCKLEY AND  
WALTER C. GRANVILLE, COCHAIRMAN**

Two new co-chairpersons Mary L. Buckley and Walter C. Granville have been appointed to carry on from Alexander F. Styne. They were introduced by Raymond Spilman, project coordinator.

The first problem confronting the committee was to re-define its scope and goals; just what it is we think we can accomplish. As Mrs. Buckley so aptly put it, we do not want to invent the wheel! Preceding the discussion on this problem the members heard exceptional presentations by two of Mrs. Buckley's former students from Pratt Institute, who hold graduate degrees in industrial design and who drove from New York specially for the meeting.

Mr. Martin F. Skalski who heads Martin Skalski Studios gave an illustrated talk on A Process Concerned with the Concurrent Development of Color and Form and Space. Mr. Peter Barna who heads his consulting firm Peter Barna Lighting Design gave an illustrated talk on A New Methodology for Spatial Design. Each talk showed some of the fundamentals of handling color on abstract objects and the effects of various lighting geometries on their appearance. Both were followed by a lively discussion.

The meeting continued with a discussion of scope and goals. There seemed to be general agreement that the title should include "light" therefore the title would change to Human Response to Color and Light. The scopes shown below are taken from Mrs. Buckley's notes:

Scope: Includes the educational, cultural, perceptual and sensory response to light and color in the environment.

A. (Before the meeting, by the co-chairpersons)

To develop guidelines and parameters organized according to the fundamental principles of light, color and design, in order to think about color and to solve problems.

B. (After the meeting)

To compile lists of information on factors that are basic to human sensory and cultural influences, gathered (we are not clear how) from behavioral scientists, artists and designers, and organized according to the fundamentals of light and color.

C. (Another possibility)

To compile lists of information related to factors that are basic to human sensory and cultural influences.

Another meeting is planned in the New York area to develop a scope to propose to the ISCC Board. We would welcome anyone who wishes to work on this committee. Please send your name to either of the co-chairpersons, unless we already have it from the Charlotte meeting.

Minutes of the meeting with more detailed notes of the discussion were kept by Mrs. Anna Campbell Bliss, who assumed this responsibility on short notice. We thank you!

#### **REPORT OF PROJECT COMMITTEE 34 COLOR DIFFERENCE PROBLEMS SY COMMANDY, CHAIRMAN**

During the Annual ISCC Meeting held in Charlotte, North Carolina, 28 people attended the meeting of the Color Difference Problems, Committee 34. Of these, 17 were to be considered as active members to help continue the committee work.

The main theme of this meeting was a report on the meetings held in Berlin (AIC) and in London (CIE) during 1981 with respect to new developments in color difference equations. It appears that much data are available with regard to

acceptability of matches while little data, relatively speaking, have been collected on color difference perceptibility.

A new equation developed by Malcolm and Coates, referred to as the "JPC79" was presented to our committee. This formula begins with the results of the ANLAB equation and modifies its lightness, chroma, and hue differences using coefficients based on functions of the standard's lightness, chroma, and hue angle. The color difference values of the JPC79 equation are said to give a single pass-fail of one unit to apply to all colors.

Also discussed was the equation developed by Friele known as the FCM (1978). A Fortran program for this equation is available from Dr. Billmeyer at RPI and will, along with the equation for the JPC79, be distributed to interested committee members.

In keeping with the objectives of this committee, these new equations will be tested by those members equipped for such tests. A group of samples of a green dyed fabric was given us by R. Kuehni. These samples will be used for the color difference testing, along with others yet to be specified. A series of butt knit sleeves made from pigmented polypropylene yarn may be included in the color difference analyses.

It was recommended that an interim meeting of this committee be held during the Annual Board Meeting in October. Further details on this will be sent to the committee members as soon as they are known.

#### **REPORT OF PROJECT COMMITTEE 35 COLOR OF LIVING TISSUE STEPHEN F. BERGEN, CHAIRMAN**

This report is combined with that of the American College of Prosthodontists and may be found under Member-Body reports.

#### **REPORT OF PROJECT COMMITTEE 36 EXAMPLES OF INDUSTRIAL COLOR DIFFERENCE ACCEPTABILITY ANTHONY J. PENTZ, CHAIRMAN**

No report has been received.

#### **REPORT OF PROJECT COMMITTEE 37 ARTISTS' MATERIALS MARK D. GOTTSEGEN, CHAIRMAN**

During 1981 and 1982, the Artists' Materials Committee has once again provided support, research, and information to its colleagues in the ASTM subcommittee which is formulating a revised standard for artists' oil and acrylic emulsion paints. Many of the test methods needed to produce the standard have been written and are being subjected to scrutiny within ASTM. The Artists' Materials Committee continues to research areas which are not covered by the standard, and will again this year work with the ASTM subcommittee in its efforts to bring the standard to fruition.

At the 52nd Annual Meeting in Charlotte incoming chairman M.D. Gottsegen, an instructor of art and painter at UNC-Greensboro, presided. Zora Pinney, a conservator and retail

distributor of art materials who lives in California, agreed to serve this year as Co-Chairwoman; Tom Vonderbrink, the manager of the Artist Materials Development and Services Laboratory at Binney and Smith, agreed once again to serve as the Secretary for the Committee — a duty he has faithfully executed for a number of years; and Edward Flax, Vice-President at Martin F. Weber Company, has assumed the post of Solicitor General for the Committee, with the objective of raising funds among the membership to help carry out some of the work of the group. Gottsegen opened the meeting with expressions of thanks to Joy Turner Luke, who formed the Committee in 1977 and has provided impetus and inspiration plus selfless dedication to our work ever since.

Old Business consisted of reports from various members of the Committee who also are serving the ASTM subcommittee. Henry W. Levison, recipient of this year's ISCC Macbeth Award for outstanding service to the field, continued his extraordinary efforts during 81-82 to produce his report on Lightfastness Testing. His Test Method is ready for submission to the ASTM subcommittee; minor nomenclature problems were discussed briefly.

A report on Pigment Identification was briefly outlined by Dr. Treva Pamer, a chemist from New Jersey who specializes in artists' materials. Dr. Pamer, along with Dr. Fred W. Billmeyer and Dr. Romesh Kumar, have been working to provide the Committee with methods by which off-the-shelf paints in oil and acrylic emulsion vehicles can be analysed for their pigment content. Last year, the Billmeyer/Kumar Report was presented to the Committee; work on analysis of organic pigments has continued at Rensselaer Polytechnic Institute. This year, Dr. Pamer showed some interim data in the form of computer print-outs, which gives the information on inorganic pigments which she has gathered over the past few years. There are still some gaps in the data. A final report, combining the efforts of the three researchers, is expected in early September 1982.

In the absence of Ruth Johnson-Feller, discussion of her proposed Tinting Strength Test Method was deferred. Irving Shack, Director of Color Operations at M. Grumbacher, agreed that his laboratory will continue the search for a practical quantitative method. For the artists, the long-established gross qualitative method is still useful.

Physical Testing of Paint Films, a subcommittee composed of Mr. Levison and Al L. Spizzo, Director of Research and Development at Hunt Manufacturing, has two, if not three, proposed test methods under consideration. There is some disagreement over whether paint films should be tested as "free" films, without regard to their substrates; as films on a standard metal substrate used for other paint tests; or in the form which they are used by artists, as films adhered to flexible substrates such as cotton duck. Discussion and research will continue.

The definition of Terms subcommittee, headed by Mr. Vonderbrink, has been resurrected. Terms suggested by the membership will be assessed and correlated with those already defined in the Paint/Coatings Dictionary.

Text of the Specification and Hazards Labeling subcommittees agreed to defer discussion of their work since time was

running short and since no action could be taken without a quorum of the ASTM subcommittee.

New Business consisted of reports and suggestions for continued development of the objectives of the Committee.

For the information of artists, it was agreed that the Lightfastness of Pigments Categories I and II (excellent and very good, respectively) would be expanded to include III, fair, and Fugitive. This may become a separate ISCC 37 Report.

Further discussion of the possibility of publishing a Handbook on Painting Materials, including information generated by the Committee, centered around an outline submitted by Gottsegen. A call for written comments on the outline was followed by lengthy discussion and revision. Discussion of who would publish it when, and how much it would cost, has been put aside until there is a manuscript. It was agreed that this is a valuable and worthwhile project for both the artists and the manufacturers in the group.

Joy Turner Luke was absent when discussion of her Teaching Aids proposal ensued, but it was generally agreed that she should pursue this project.

Gottsegen presented an interim report on Artist-Conducted Lightfastness Testing, a program developed over the last year by Mrs. Luke, Gottsegen, Mrs. Pinney, and Hilton Brown — a conservator and painter at Winterthur — with the assistance of Dr. Robert L. Feller at Carnegie-Mellon. A round-robin is being conducted by Brown, Gottsegen, Luke, and Pinney and so far the results are very encouraging.

Gottsegen thanked those members who managed to stick with the meeting, which ran an hour overtime, and all those who attended *ad hoc*. The Committee is looking forward to a productive and active 1982-83.

## REPORT OF PROJECT COMMITTEE 38 PHILATELIC COLOR DESIGNATIONS DONALD L. MacPEEK, CHAIRMAN

There have been no changes in the personnel comprising the APS Committee On Philatelic Color Designation. With the publication of the article "Universal Color Language Designations for Some Philatelic Color Aids," a second major objective of the Committee was reached. This work, by Committee member Fred W. Billmeyer, Jr., has made available a substantial body of information about the utility of some of the more available philatelic color aids. Through the pages of the "American Philatelist," this new data source will enable collectors to make reasonable decisions about Universal Color Language naming of many stamps if the colors of the stamps are close to the colors of the samples from the recommended aids, including particularly the "Stanley Gibbons Colour Key" and the Color Supplement to "Color In Philately" by R.H. White. With some experience, it may become possible for some collectors to interpolate in such decisions, especially if a set of the ISCC-NBS Centroid Color chips is available. While the ultimate choice in our preferred approach would lead to the use of "The Munsell Book of Color," the Committee recognizes that the cost of this standard work is beyond the majority of many collectors.



Another major objective will be fulfilled with the publication of one additional article which will show how the techniques described in the two articles already published can be used to present information about the color names used in many of the major catalogs. The original format proposed for this article has been changed to shorten the volume of data and to make a more effective display of how the information available can be used by both the general collector and the specialist in considering revisions to the historical information published many years ago. The intention will remain the demonstration of how the use of the techniques developed by the Committee can be used to resolve problems dealing with color and to present the information in a manner which will prompt the enlistment of other collectors who have a comprehensive knowledge about the stamps of a particular country or of a given era or period in following the example we will have set. Much of the data collection is complete. Some additional determinations are being made under a variety of illumination sources to confirm the importance of that variable. With a demonstration of interest and support from other collectors, the Society should undertake the installation of equipment and facilities at its headquarters to not only establish a color determination capability but also to provide for the training of collectors who have sufficient interest to join the program we outlined several years ago. Every effort is being made to complete the final draft such that the third article will be ready for the ISCC review process early in the fourth quarter of 1982.

#### **REPORT OF PROJECT COMMITTEE 39 COLOR OF GEMS THERESA F. ZOOK, CHAIRMAN**

The first meeting of the New Problems Committee 39 Color of Gems was held April 20, 1982 at the 51st Annual Meeting of the Inter-Society Color Council in Charlotte North Carolina under the chairmanship of Theresa F. Zook, F.G.A., A.G.A. Fourteen ISCC members assisted in formulating the objectives for this new committee. The varied professional backgrounds represented by those attending included color consultants, instrumental measurement manufacturing representatives, specialists in spectrophotometry, specialists from the Chemical and Color manufacturing industries, and gemologists.

A brief review of the state of the art of color measurement and standards for gemstones revealed that with the exception of diamonds (to the exclusion of colored diamonds) no standards have been established to be used either by gem merchants, jewelers or gemologists. Colored gem references in use in the trade have, with the exception of diamonds, no reference standards except the one which the seller wishes to assign. The existing early prototype systems and instruments leave a wide field for improvement.

The committee decided that there should be a survey conducted to determine just what the state of the art is as practiced in the jewelry trade and the gemology profession. This survey will cover terminology and existing practices used for color determination. Several members of the Committee pointed out that there would be the need for the development of instrumentation beyond that which already exists and time

and effort for testing once the instrumentation was developed. Cost projections were mentioned and the need for industry commitment for research and development funds were cited.

The committee decided to limit its initial efforts beyond the survey of the state of the art to the areas of terminology, instrumentation, and the establishment of standards specifically for rubies, sapphires and emeralds.

The committee will welcome donations for its projects either in work efforts or in money. All contributions should be sent to the chairman and marked Color in Gem Committee. Anyone seeking information may write the chairman and it will be appreciated if a self addressed stamped envelope is included.

#### **REPORTS FROM MEMBER-BODY DELEGATIONS JOYCE S. DAVENPORT, LIAISON**

##### **REPORT FROM THE AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS DELEGATES ROLAND CONNELLY, CHAIRMAN**

No report received.

##### **REPORT FROM THE AMERICAN CERAMIC SOCIETY DELEGATES F. JOSEPH VON TURRY, CHAIRMAN**

While ceramics for most people still means pottery, there is no aspect of life in the modern world that is not influenced by the products of ceramic industries. Modern man could hardly exist if the ceramic materials in daily use were denied him, and many industries would not function without ceramic products. Ceramics include all those products which are developed from earthy, inorganic materials, fabricated in various methods and generally involve high temperatures that range from 700 F. to more than 3000 F. in some phase of their manufacture.

The bricks, tiles, porcelain-enamelled curtain walls and glass used in structure are no less essential than china and glass tableware and cooking ware, ornamental pottery, sanitaryware, stoves, refrigerators which are all part of our homes — all using color. The ceramic industry is in a unique position in the matter of color. Through no other medium is it possible to produce so many colors in permanent shades. Interest in color and its importance in the ceramic industry is evident. The public wants it and the market recognizes the psychological power of color to please and beautify.

The wide diversification of the ceramic industry and the various production methods, the use of different ingredients, and the various temperatures, all influence the hue (color, tone), depth (intensity, strength), pastel (paleness, tint), cleanness (Brilliance, purity, brightness) and dirtiness (muddiness, dullness).

The manufacturers of color develop new techniques and produce the colorants. The plant colorist's work is the preparation and application of the colors and color glazes. Colors can be applied by printing, hand painting, spraying, stamping, decal, stipple, mottling, masking and silkscreening. The colorist uses research, color matching techniques, control and instru-

mentation. The design department should have knowledge of all color-related problems. The designer analyzes the market and establishes color trends adaptable to the production process.

The delegation of the American Ceramic Society is alert to those problems in our various segments of the ceramic industry involved in color, description, specification and use. The knowledge and information on color acquired in their respective industries and from the Color Council, is communicated through meetings and publications.

The delegates, in cooperation with the A.C.S. program committee and the ISCC, have held conferences and sessions on color in the past in conjunction with the A.C.S. Annual Meetings, and will continue to do so.

Following are the reports of some of the delegate members: Paul W. Cook Design Director, Sterling China Company: "There are some very definite color trends making themselves noticed in the commercial china industry.

Pastels are coming on strong. Peach, pink, lavender and plum are being coordinated with florals. Large plates are rimmed in these solid colors and the smaller inset plates have flashy florals repeating the same colors with accent lines for added drama. More coin gold trim and also platinum are being used to add luxury and the domestic feeling to these china items.

Florals in general are also on the upswing. Our company introduced six entirely new patterns at the National Restaurant Association Show in Chicago last month. The flowers are soft and subtle in pale blues, yellows, pinks, oranges and greens.

Color trends start in the clothes fashion world today, move to the home decorating industry and about a year later catches up with the restaurant china business. People always want something new in their lives, and when they eat out (a growing trend), they want their tabletop out of the ordinary. Along with the colored pastel china, the linen people have obliged with lovely pinks, peaches and teals. Classical elegance is the end result.

One other major breakthrough in our industry pertaining to color is a totally new reactive glaze. We are importing this color from Europe and the final product has a mottled glaze ranging from deep browns to a soft celadon green on each item. There are specks and a tremendous range of shades and textures.

We call our latest offering Stonecraft for obvious reasons.

Color is probably the most important single factor today in making a commercial china purchase."

John L. Hofmann, Product Manager, Ceramic Colors, Degussa Corporation: "Although the economic climate has had an adverse effect on product sales in the overall white-ware segment, manufacturers are reacting by offering new motifs, colors and decorating techniques to tempt the consumer.

In the dinnerware section there appears to be a trend toward the pink, violet and purple area even though these are traditionally more expensive colors. Use of these shades offers a unique challenge to designers and marketers to develop patterns appealing to the consumer while maintaining acceptable price levels. There is also a renewed interest in over-glaze deco-

rating where more vibrant color tones can be achieved.

Sanitary ware has been especially hard hit by the weak condition in the housing industry. Regrettably there does not seem to be a turnaround predicted for the near future. One bright spot is that high interest rates have created an atmosphere where people are less likely to move and spend more time and money improving their present housing. This has had a positive effect on the home improvement and replacement market.

The tile industry continues to go through changes although here too the housing industry has had a constricting effect. All indications point to considerable consumer interest in more highly decorative designs and more vibrant colors. American tile manufacturers have responded to this challenge and are taking steps to adjust their production to provide the styles and colors in demand."

N. William Wagar, Technical Director, Drakenfeld Colors, A Ciba-Geigy Company: "One of the more interesting trends in the past year in color, is the availability of pearlescent, or nacreous, pigments for decorating glass. The interest in these pigments seems to be fairly broad ranging from lighting fixtures to cosmetics. Because the substrate is glass, some of the effects that are achieved are quite interesting, i.e., the effects that one can achieve when the pearlescent pigment is viewed directly versus looking through the glass at the pearlescent pigment are quite different. The range of colors available are fairly comprehensive and the pearlescent pigments can be used with the normal type of pigments used in glass enamels, if care is used."

Donald Doctorow, *American Glass Review*, an Ebel-Doctorow Publication: "Following closely the ready-to-wear fashion colors, glass tableware has moved fast into a mauve and pink palette. Now both holloware pieces and stemware have been produced in pinks, cranberries, mauves, and lilacs.

A general trend to pastels has also influenced the glass tableware market. While pastel blue has traditionally been a favorite color choice by brides, pastel green, yellow, pink, orange, light taupes (replacing heavy smoke colors) and even iridescents are now popular in stemware and drinkware. Pastels are also seen in votive candle holders, vases and bowls. Very recent market introductions include pastels in platters as well.

On the opposite end of the color scale are the deep rich tones. Most popular in recent seasons have been deep forest green, cobalt and black. The deep colors may have a seasonal appeal, while it is generally acknowledged that that pastel palette has been enjoying a "seasonless" sales record at retail.

The advent of color stems to stemware has seen the lilac stem, the black stem and the frosted stem. Demand for this type of style seems to have subsided in recent markets, however.

Several glass manufacturers have introduced vases and oversized pieces in colored glass with an opalescent look. Popular here is green that resembles jade, deep blue, cobalt, and onyx black."

The following information is from the Tile Council of America: "At-home togetherness and entertaining were never more important and have resulted in a new type of cooking/

dining/hobby and entertainment center. Outdoor living areas are receiving lots of attention also. In both cases ceramic tile's easy-going good looks fit right in.

Ceramic tile's most interesting new application is in passive solar design. Ceramic tile is an excellent thermal conductor, which aids in the storage and release of such heat, so the considerations in the use of tiles are as practical as they are aesthetic.

Color trends — the broadest range of color is found in glazed tile for walls and countertops, and, to a lesser degree, for residential floors.

In this group fashion colors abound, from neutrals to bolds, and from pales to darks. Glazed tile in brilliant reds and yellows are featured, and quite a few lines include the dusky blues made popular by the country look. Unusual metallic colors, such as bronze and pewter, are also being used.

But it is the neutrals that are making the greatest news. The pales — such as vanilla, parchment, buttermilk, and almond — are featured in all lines of glazed tile, and gray, a great new color that suits an extraordinary range of decors, now appears in many collections.

Quarry colors — fashion colors have also come to the world of unglazed quarry tile and pavers. Classic terracotta, a true red, a dark brown and flashed red are staple colors, as are the earth-tone blends.

Decorated tile — floral motifs, vegetables, fruits and birds are prevalent in decorative tile. Medallion motifs as well as Pennsylvania Dutch sampler themes, and some interesting overall patterns reminiscent of the small prints that are so popular in fabrics and wallpaper, are on the market.

The application of brightly-glazed decorative themes on matte, natural backgrounds gives the decoration a dimensional effect.

Textures — textural surface treatment on tiles may compete with color. A new generation of textures and a hand-crafted look are giving today's ceramic tile softness and designer flair.

A new leather series achieves the look of suede, rawhide and buckskin. A quarystone collection is crafted and glazed to give an irregular stone effect. Texture that becomes a pattern is the essence of two unusual introductions, one a rustic-looking burlap texture, and the other boasting distinctive reptile markings.

In some cases, subtle texture is highlighted by multiple color variations."

#### **REPORT FROM THE AMERICAN CHEMICAL SOCIETY DELEGATES**

**LAWRENCE R. LERNER, CHAIRMAN**

No report has been received.

#### **REPORT FROM THE AMERICAN COLLEGE OF PROSTHODONTISTS DELEGATES**

**STEPHEN F. BERGEN, CHAIRMAN**

The following projects or activities have been undertaken by the two committees of the American College of Prosthodontists and the Inter-Society Color Council during this past year:

1. The partitive Color System study, which was to study the surface characteristics of different stains on porcelain surfaces, has been completed to the state of data collection. The analyzed results should be available shortly. The characteristics under investigation are particle size, homogeneity, and total visual effect.

2. At the annual ISCC meeting in Charlotte North Carolina this year, the agenda included a discussion of:

a. Fluorescence in natural teeth.

b. A summary of individual members activities.

c. Operatory lighting. A guest speaker, Mr. Arthur Jones of the Pelton Crane Company, based in Charlotte, spoke about the requirements for lighting in a dental operatory and what he and his company feel are "ideal" conditions. A lively discussion ensued which expressed the opinions of the manufacturer, clinician, educator and scientist. Although an agreement as to an ideal lighting environment was not reached, each group (faction) learned to appreciate the problems involved in designing a suitable dental office meeting the requirements of esthetics, function and practicality.

3. The Committee Chairman, Dr. Bergen presented a paper on the American College of Prosthodontists sponsored slide version of the Dvorine Pseudoisochromatic color vision test at the International Color Association meeting held in Berlin, Germany in September 1981. The lecture was well received and sparked interesting discussion and commentary from educators and scientists from around the world.

The following individuals are delegation members from the American College of Prosthodontists to the Inter-Society Color Council:

Stephen F. Bergen, D.D.S., Chairman; Charles DuFort, D.D.S.; Ronald Gunderson, D.D.S.; Marion Edge, D.D.S.; Joseph Cain, D.D.S.; Robert Sproull, D.D.S.; William Griswald, D.D.S.

#### **REPORT FROM THE AMERICAN PHILATELIC SOCIETY DELEGATES**

**DONALD L. MacPEEK, CHAIRMAN**

The report from this delegation is the same as and is combined with the report from the ISCC Committee on Philatelic Color Designations found earlier in this issue.

#### **REPORT FROM THE AMERICAN PSYCHOLOGICAL ASSOCIATION DELEGATES**

**EDWARD H. RINALDUCCI, CHAIRMAN**

No report has been received.

#### **REPORT FROM THE AMERICAN SOCIETY FOR TESTING AND MATERIALS DELEGATES**

**HARRY K. HAMMOND, III, CHAIRMAN**

No report has been received.

## **REPORT FROM THE AMERICAN SOCIETY OF INTERIOR DESIGNERS DELEGATES ANNA CAMPBELL BLISS, CHAIRMAN**

The need to integrate humanism with technology and art with science will be the theme of ASID's National Conference in San Francisco July 28 through August 1, 1982. Computer technology is one of many technical innovations affecting design practice that will be considered. Workshops on many facets of design will include a session on color led by Everett Brown, FASID.

Proposals by this delegation to the National Board will be pursued. Following the resignation of Jack Lowery, Martin Elinoff, FASID, was named president. Jack is continuing to lend support to ASID involvement in ISCC and our efforts to reorganize for more productive research.

As noted elsewhere, Mary Buckley Parriott will be co-chairman with Walter Granville of Project 33 Committee devoted to Human Response to Color and Light. She is the recipient of two recent grants. One is from Pratt Institute for further research on a Color Glossary. With the aid of a grant from the Ittlesohn Foundation in Mental Health she will publish the Color Guide for Hospitals developed as Program Director of the Margaret Gate Institute.

Barbara Schirmeister, ASID and ISCC director, has also served as president of the NY Decorators Club and Board member of the Color Association along with many other professional activities.

Anna Campbell Bliss, ASID, was invited to give seminars on color at the American Institute of Architects' National Convention in Hawaii. She also wrote the lead article, ART, COLOR, ARCHITECTURE for the February '82 issue of the AIA JOURNAL devoted to color. Her proposal for the Salt Lake City Airport was one of two American entries recently published in the catalog, *Documentation* of the 1st International Colour Design Prize, Stuttgart Design Centre.

## **REPORT FROM THE AMERICAN SOCIETY OF PHOTOGRAMMETRY DELEGATES**

No report has been received.

## **REPORT FROM THE ARTISTS EQUITY ASSOCIATION DELEGATES LINDA LEWIS TAYLOR, CHAIRMAN**

Artists Equity Association, Inc. is working with the National Conference of State Legislatures providing technical help for the wording of bills to be introduced in state legislatures concerning proper labeling and consumer information on artists materials. AEA member Joy Turner Luke, immediate past chairman of ISCC Subcommittee 37 on Artists Materials has been meeting with the legislative committees of three states; California, New York, and Mass. Ms. Luke has been describing the work of the ISCC committee on rewriting the old voluntary standard and suggesting compatible wording for the bills currently being introduced in these states.

Five days of workshops, entitled *The Business of Art and The Artist*, were conducted at the University of Maryland's

College Park Campus, June 9-13, 1982. The conference was designed to give visual artists the business training they need to survive. Topics covered included how to market your art, artists' agents and how to select them, designing living/working space, packing, displaying and shipping art, health hazards in the arts and many others. The conference was supported by the U.S. Small Business Administration, the University of Maryland's Summer Institute, and Artists Equity Association, the national organization for visual artists. Sunday, June 13th, the conference concluded with a tour of the City of Baltimore's art and its arts festival ARTSCAPE 82.

## **REPORT OF THE COLOR ASSOCIATION OF THE UNITED STATES DELEGATES MARGARET WALCH, DIRECTOR**

CAUS has completed an intensive first year in its June, 1981 to June, 1984 three-year program which outlined a greatly broadened scope for its activities.

Both membership and annual revenues increased approximately 20% over the twelve-month period. Ten separate Newsletters were issued to a mailing list of 1000 recipients. Eight seminars, spaced at intervals of six weeks, were held in the Association's offices. Forecasts of color trends for the women's and men's fields were issued twice during the year (April and October), and one forecast for the environmental industries was issued in October of 1982.

Carrying on its traditional role as a center for the standardization of American colors, the Association completed the assembly and distribution of six hundred copies of a Tenth Edition of The STANDARD COLOR REFERENCE OF AMERICA. The compilation of the 1981 Standard is the first new effort since The Ninth Edition of 1941. Some 192 favored shades were documented along with a presentation of twenty-four standard U.S. Army colors. The enthusiastic reception of The Tenth Edition of the Standard Color Reference has led the Association's Executive Committee to plan for a reprint edition in 1983, which will include approximately a dozen new color standards.

In mid-year, Faber Birren accepted the Chairmanship of CAUS Color Research. Forecasts will henceforth be audited. CAUS Research audits include checks on cumulative records of actual color sales which trace rising and declining hues; the results of special market studies and retail sales tests, follow-through on previous high style color candidates to determine what has succeeded and what has failed. CAUS environmental colors are chosen by the following committee: Everett Brown, Recipient of the American Society of Interior Designers' 1980 Designer of Distinction Award; Mary McFadden, Designer of both apparel and home furnishings; Jack Lenor Larsen, Designer of international reputation; Murry Douglas, Brunswick & Fils, Inc.; Sharon Clarke-Fodor, L. E. Carpenter & Co.; John Gleason, Ameritone Paint Corp.; Robert V. Dale, Karastan Rug Mills; and Barbara Schirmeister, Color-Design Consultant.

The sharply widened CAUS role in world color communications envisioned by its Directors has made great strides this year. Foreign membership increased more than 30% with out-of-country members from some thirteen countries. Meetings



were held with color groups in England, France and Japan. Exchange and procedure arrangements were made with the Centre Textile Contemporain in Lyon. Discussions took place in Paris with the "Secrétaire de la Fédération Européenne de la Couleur" with the result that CAUS will be an active participant in the International Color Conference which will be held in Monte Carlo in 1985. Arrangements were also made in England for CAUS to cooperate with computerization of changes in consumer color preferences in Europe and the United States. This information will be made available to subscribers. CAUS Directors believe that the 1982 period will also be reckoned as a pivotal year.

#### **REPORT FROM THE COLOR MARKETING GROUP DELEGATES**

No report has been received.

#### **REPORT FROM THE DRY COLOR MANUFACTURERS ASSOCIATION DELEGATES AL M. KEAY, CHAIRMAN**

No report has been received.

#### **REPORT OF ENTOMOLOGICAL SOCIETY OF AMERICA DELEGATES J. H. FRANK, CHAIRMAN**

The Entomological Society of America Special Committee on Color Standards is refining a prototype color standard for biologists in collaboration with the Committee on Color Standards of the Mycological Society of America. The stage is now reached where a draft proposal is being readied for publication of the prototype as a new color standard for biologists internationally.

#### **REPORT FROM THE FEDERATION OF SOCIETIES FOR COATINGS TECHNOLOGY DELEGATES DENNIS OSMER, CHAIRMAN**

No report has been received.

#### **REPORT FROM THE GEMOLOGICAL INSTITUTE OF AMERICA DELEGATES VINCENT MANSON, CHAIRMAN**

No report has been received.

#### **REPORT FROM THE GRAPHIC ARTS TECHNICAL FOUNDATION DELEGATES RICHARD D. WARNER, CHAIRMAN**

During 1981-1982, the GATF Color Center was actively involved in presenting five different hands-on and lecture type workshops that were directly involved in color reproduction. These workshops are listed below and the number of times that these workshops were presented is indicated in parenthesis.

- Color Controls and Printing Process Standards (5)
- Color Separation (5)
- How to Get the Most Out of Your Scanner (5)
- Introduction to Electronic Scanning for Supervisors (8)

- Web Offset Press Operating (4)
- Sheetfed Offset Press Operating (5)

The above workshops were attended by more than 200 industry people which included manufacturers, suppliers, color separators, sheetfed, web offset, and gravure printers, and they evaluated the workshops as being most beneficial in establishing in-house color reproduction systems and quality control programs.

In addition to the workshops and seminars on color reproduction, the GATF Color Center published the first in a series of technical reports relating to electronic color scanning and process color printing entitled "The Electronic Color Scanner: Color Correction and Gray Balance." The report states that "to achieve fidelity in a color reproduction the color separations must be adjusted for the light-absorbing actions of the particular set of process inks used by the printer." Considered in this report are the results when using two different process magenta inks, a blue shade and a red shade. This report includes a step-by-step explanation of how to determine the proper gray-balance and color-correction settings for a particular ink set on a scanner. The procedure is described for both the Magnascan 510 and the Hell DC-300 Model B laser scanners, but a similar approach could be used on any commercially available modern electronic scanner.

Other activities in color at GATF include our input to the Web Offset Standards Review Committee, and the redesign of the Munsell-Foss Color Chart.

#### **REPORT FROM THE GRAVURE TECHNICAL ASSOCIATION DELEGATES FRANK BENHAM, CHAIRMAN**

No report has been received.

#### **REPORT FROM THE HOUSE & GARDEN COLOR PROGRAM DELEGATES NADINE BERTIN, CHAIRMAN**

No report has been received.

#### **REPORT FROM THE ILLUMINATING ENGINEERING SOCIETY DELEGATES W. A. THORNTON, CHAIRMAN**

Much of that part of the work of the Illuminating Engineering Society of North America (IES) which involves delving into color problems is carried out by the IES Color Committee. The members of this Committee serve as the IES Delegation to the InterSociety Color Council. We are at work on a monograph on "Color and Illumination." This monograph is based on a half-day IES workshop by the same title, which has circulated rather widely in 1981 and 1982, and is available for wider dissemination. The 1983 ISCC Williamsburg conference is titled "Color and Illumination" and is to be cosponsored by the IES. Quality of illumination, and the quality of coloration as seen in given illumination, are even now only partly understood and far from adequately studied and defined. Council members and member-societies are again invited to share their insights and problems with the Illuminating Engineering Society.

**REPORTING FROM THE INDIVIDUAL MEMBER  
GROUP VOTING DELEGATES  
BONNIE K. SWENHOLT, CHAIRMAN**

No report has been received.

**REPORT FROM THE INDUSTRIAL DESIGNERS  
SOCIETY OF AMERICA DELEGATES  
RAYMOND SPILMAN, CHAIRMAN**

No report has been received.

**REPORT FROM THE INSTITUTE OF FOOD  
TECHNOLOGISTS DELEGATES**

No report has been received.

**REPORT FROM THE MANUFACTURES COUNCIL  
ON COLOR AND APPEARANCE DELEGATES  
JAMES G. DAVIDSON, CHAIRMAN**

The project to provide a report on courses, journals, etc., available for color education was completed and the results were published in the Journal of Color Research & Application.

A discussion held on the possibility of preparing a handbook for the color and appearance industry resulted in the approval of a preliminary investigation to determine the magnitude of effort necessary to provide such a handbook.

Agreement was reached with the Screen Printing Association International to co-sponsor an educational workshop scheduled for March 1-2, 1983 at the New Orleans Marriott.

Agreement was reached with Paint Federation to conduct an educational workshop during 1984 or 1985. The exact date and location of the workshop is yet to be determined.

**REPORT FROM THE MYCOLOGICAL SOCIETY  
OF AMERICA DELEGATES  
KENT H. McKNIGHT, CHAIRMAN**

No report has been received.

**REPORT FROM THE NATIONAL ASSOCIATION  
OF PRINTING INK MANUFACTURERS  
DELEGATES  
ALFRED DIBERNARDO, CHAIRMAN**

Continuing its effort to make color books as compatible as possible with the needs of printers and ink makers, the NAPIM Color Book Technical Committee met with representatives of Pantone concerning possible changes in the new Edition 17 of the Pantone Printers Edition. Several modifications were agreed upon and incorporated in the new edition of the Pantone Color Book.

Another committee of NAPIM is now completing its work on the NPIRI Raw Materials Data Handbook on Pigments. This publication will cover physical and end use properties of pigments used in inks and other surface coatings. Also, the NAPIM Color Standards Committee continues its liaison with the AAAA/MPA Committee in maintaining of the SWOP Color Standards for Web Offset Publications.

**REPORT FROM THE NATIONAL PAINT AND  
COATINGS ASSOCIATION DELEGATES  
EVERETT R. CALL, CHAIRMAN**

In accord with its desire to support the ISCC as an observer Member-Body. The NPCA delegation has submitted no report.

**REPORT OF THE OPTICAL SOCIETY OF  
AMERICA DELEGATES  
C. J. BARTLESON, CHAIRMAN**

The OSA has been active in the field of color and vision during the past year. The society maintains two Technical Groups, one on color and one on vision, that meet at least once each year. An annual meeting is held each year. In 1981 the annual meeting was held in Kissimmee, Florida from October 26th to 30. Among the many papers and seminars presented at that meeting, there were 9 invited papers relating to color and vision and 47 contributed papers on the subject. In addition, there were 2 poster presentations on color and 3 seminars on vision: (1) measurement and evaluation of acquired vision deficiencies, (2) visual development in primates and humans, and (3) visual simulation technology. Both the Color and Vision Technical Groups met during the meeting, the latter having held three meetings to discuss relevant papers presented at the meeting and to provide a forum for discussion of the broad-ranging subjects of color and vision. A symposium on tunable spectral filters, of interest to instrumental colorimetrists, was also held at the meeting in Florida.

The next annual meeting of the OSA will be held in Tucson, Arizona on October 18th to 22nd, 1982. Information is available from the Executive Director, Optical Society of America, 1816 Jefferson Place, N.W., Washington, D. C. 20036.

During 1981, the society's journal, the Journal of Optical Society of America, published a total of 1700 pages which included 37 papers relating to color and vision. A bibliography is attached to this report.

The OSA delegation to ISCC will meet at the next annual OSA meeting in Tucson and a report will be given to the Color Technical Group summarizing ISCC activities during the past year.

**Publications**

Appended is a listing of papers published in The Journal of The Optical Society of America (Volume 71, 1981) in the field of color.

Lynn A. Ozak and James P. Thomas, "Gratings: Why Frequency Discrimination is Sometimes Better than Detection." (No. 1, p. 64)

Bruce Drum, "Rod-Cone Interaction in the Dark-Adapted Fovea." (No. 1, p. 71)

Robert L. Booker, "Luminance-Brightness Comparisons of Separated Circular Stimuli." (No. 2, p. 139)

Francine S. Frome, Steven L. Buck, and Robert M. Boynton, "Visibility of Borders: Separate and Combined Effects of Color Differences, Luminance Contrast, and Luminance Level." (No. 2, p. 145)

Toshio Inui, Osamu Mimura, and Kazutaka Kani, "Retinal Sensitivity and Spatial Summation in the Foveal and Parafoveal Regions." (No. 2, p. 151)

Edward H. Adelson, "Nonlinear Scale for Plotting Color Matching Functions." (No. 2, p. 201)

Whitman Richards and John M. Foley, "Spatial Bandwidth of Channels for Slant Estimated from Complex Gratings." (No. 3, p. 274)

Mitsuo Ikeda and Hiroaki Shimozone, "Mesopic Luminance-Efficiency Functions." (No. 3, p. 280)

James R. Hamerly and Robert Springer, "Raggedness of Edges." (No. 3, p. 285)

Andrew E. Kertesz, "Effect of Stimulus Size on Fusion and Vergence." (No. 3, p. 289)

James R. Hamerly and Charles A. Dvorak, "Detection and Discrimination of Blur in Edges and Lines." (No. 4, p. 448)

Cornelis Noorlander, Mathijis J. G. Heuts, and Jan J. Koenderink, "Sensitivity to Spatiotemporal Combined Luminance and Chromaticity Contrast." (No. 4, p. 453)

Duane O. Bowker and Marc B. Mandler, "Binocular Flicker Appears Faster Than Monocular Flicker." (No. 4, p. 496)

G. Bruce Henning, B. Gevene Hertz, and J. L. Hinton, "Effects of Different Hypothetical Detection Mechanisms on the Shape of Spatial-Frequency Filters Inferred from Masking Experiments: I. Noise Masks." (No. 5, p. 574)

A. Eisner and D. I. A. MacLeod, "Flicker Photometric Study of Chromatic Adaptation: Selective Suppression of Cone Inputs by Colored Backgrounds." (No. 6, p. 705)

Allen L. Nagy, Donald I. A. MacLeod, Nicholas E. Heyneman, and Alvin Eisner, "Four Cone Pigments in Women Heterozygous for Color Deficiency." (No. 6, p. 719)

Ellen C. Carter and Robert C. Carter, "Color and Conspicuousness." (No. 6, p. 723)

M. L. F. Mattiello and M. Guirao, "Saturation Constancy in Surface Colors." (No. 6, p. 730)

Theodore E. Cohn, "Absolute Threshold: Analysis in Terms of Uncertainty." (No. 6, p. 783)

Bjorn Stabell and Ulf Stabell, "Absolute Sensitivity at Different Eccentricities." (No. 7, p. 841)

Ulf Stabell and Bjorn Stabell, "Spectral Sensitivity of the Dark-Adapted Extrafoveal Retina at Photopic Intensities." (No. 7, p. 841)

David J. Lasley and Theodore Dohn, "Detection of a Luminance Increment: Effect of Temporal Uncertainty." (No. 7, p. 845)

Noboru Ohta, "Maximum Errors in Estimating Spectral-Reflectance Curves from Multispectral Image Data." (No. 7, p. 910)

J. J. Koenderink and A. J. Van Doorn, "Exteroscopic Component of the Motion Parallax Field." (No. 8, p. 953)

D. Regan and K. I. Beverley, "Motion Sensitivity Measured by a Psychophysical Linearizing Technique." (No. 8, p. 958)

D. A. Palmer, "Nonadditivity in Color Matches with Four Instrumental Stimuli." (No. 8, p. 966)

John J. Wisowaty, "Estimates for the Temporal Response Characteristics of Chromatic Pathways." (No. 8, p. 970)

D. H. Kelly, "Nonlinear Visual Responses to Flickering

Sinusoidal Gratings." (No. 9, p. 1051)

G. J. Burton and I. R. Moorhead, "Visual Form Perception and Spatial Phase Transfer Function." (No. 9, p. 1056)

J. O. Limb and U. Tulunay-Keesey, "Spatiotemporal Characteristics of Thresholds Adjacent to a Luminance Edge." (No. 10, p. 1209)

Michael E. Breton and William B. Cowan, "Deuteranomalous Color Matching in the Deuteranopic Eye." (No. 10, p. 1220)

Joel Pokorny, Vivianne C. Smith, and Loe N. Went, "Color Matching in Autosomal Dominant Tritan Defect." (No. 11, p. 1327)

Christina A. Burbeck and D. H. Kelly, "Contrast Gain Measurements and the Transient/Sustained Dichotomy." (No. 11, p. 1335)

Christina A. Burbeck, "Criterion-Free Pattern and Flicker Thresholds." (No. 11, p. 1343)

Michael W. Kaplan, "Concurrent Birefringence and Forward Light-Scattering Measurements of Flash-Bleached Rod Outer Segments." (No. 12, p. 1467)

P. Zuidema, H. Verschure, M. A. Bouman, and J. J. Koenderink, "Spatial and Temporal Summation in the Human Dark-Adapted Retina." (No. 12, p. 1472)

Alan J. Wilson and Alfred Lit, "Effects of Photopic Annulus Luminance Level on Reaction Time and on the Latency of Evoked Cortical Potential Responses to Target Flashes." (No. 12, p. 1481)

## **REPORT FROM THE PHILATELIC FOUNDATION DELEGATES**

**RICHARD E. BERESFORD, CHAIRMAN**

No report has been received.

## **REPORT FROM THE SOCIETY FOR INFORMATION DISPLAY DELEGATES**

No report has been received.

## **REPORT OF SOCIETY OF PHOTOGRAPHIC SCIENTISTS & ENGINEERS DELEGATES**

**RUSSELL H. GRAY, CHAIRMAN**

The SPSE delegation to ISCC is unchanged from the 10/15/81 roster appended. During the year Mr. Peter Krause, resigned, was replaced by Mr. Ara Hourdajian. The delegation has had no committee meetings this year. Several committee members are active on ISCC problem, ANSI, CIE, and other standards committees.

The Society of Photographic Scientists and Engineers Publications, 'Photographic Science and Engineering' and 'Journal of Applied Photographic Engineering' published eight papers concerning color, color reproduction, and spectral sensitivity and during the six conferences of 1981 approximately 22 papers on color topics were presented.

Society headquarters address: 7003 Kilworth Lane, Springfield, Va. 22151. Executive Director: Mr. Robert H. Wood.

## REPORT FROM THE SOCIETY OF PLASTICS ENGINEERS, COLOR AND APPEARANCE DIVISION DELEGATES

No report has been received.

## REPORT FROM THE TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY DELEGATES

S. J. POPSON, CHAIRMAN

The TAPPI Optical Methods Committee is primarily involved in the development of test methods which will eventually be adopted by TAPPI as official methods. Methods which were approved and published during the last year are:

Spectral Reflectance Factor, Transmittance, and Color of Paper and Pulp (Polychromatic Illumination)

Terminology of Optical Measurements

TAPPI Standard Practice for Identification of Instrumental Methods of Color or Color Difference Measurement of Paper, Paperboard and their Ingredients.

Among the test methods currently under consideration the following may be of interest to ISCC members:

Color of Paper and Paperboard in CIE Y, x, y, or Y, Dominant Wavelength and Excitation Purity

The Determination of Instrumental Color Differences

Specular Gloss of Paper and Paperboard

The next meeting of the TAPPI Optical Methods Committee will be held October 3 thru 7 at the Opryland Hotel, Nashville, Tennessee. Interested visitors are welcome.

## END OF ANNUAL REPORT

## CORRECTION

The name of the author of the letter to Editor published in the last issue of the Newsletter (No. 278, May-June 1982, p. 4), was inadvertently omitted. Richard S. Hunter is the contributor of the item.

## QUESTION TO THE EDITOR OR AUTHOR

In his short article "HUMAN RESPONSE TO COLOR" (ISCC News, No. 272) Faber Birren introduced his question with this paragraph:

"Regarding physiological and psychological effects for color on human beings, I have long noted two complementary viewpoints: some credulously have great confidence and faith in color reactions, and those who simply don't want color to have any reactions at all. I have always striven to stay in the middle."

Did a printer's devil get in the way of editor or author and changed in the first line "effects of color" to what it reads now "effects for color" I never knew that "colors (could) have any reactions at all." Did the author use the word "color" in any other sense than most of us do, meaning "color stimulus" (created by narrow-band visible radiation)? As he refers the reader to new "tangible evidence of reaction to color in an environment. . . ." in The International Journal of Biosocial Research,

how can he "stay in the middle," as he says. Faber Birren is considered with great justification a leading authority in color forecasting and color application. How can he have forecast color trends with such success over the past 40 years if he did not recognize predictable psychological responses?

I am certain his readers are grateful for his references.

Alexander F. Styne

## STUDY GROUP ON ENVIRONMENTAL COLOR DESIGN

The International Colour Association (AIC) has announced that a Study Group on Environmental Color Design has been set up, with the terms of reference "to study the effects that color in environmental design have on people." The chairman of the new study group is Dr. Anders Hård, Scandinavian Colour Institute, Box 14038, S-104 40 Stockholm, Sweden.

As AIC representative to the ISCC, I would like to fulfill a recent request of the AIC "to ask member countries [that is, the ISCC] to suggest names for corresponding members of the Study Group for their country and to suggest the names of other interested persons willing and capable of taking part." Please send your expressions of interest to Mr. Hård (with a copy to me) or to me for forwarding, not later than November 1, 1982.

As a member of other AIC Study Groups, I can assure you that participation by correspondence in this worthwhile effort will be a stimulating and fruitful experience, and I encourage those of you who are active in this field to respond.

Fred W. Billmeyer, Jr.

Department of Chemistry

Rensselaer Polytechnic Institute

Troy, New York 12181

## NEWS OF MEMBER-BODIES

### American Association of Textile Chemists and Colorists

..... Color Measurement Principles and the Textile Industry will be the theme of a workshop to be sponsored by the American Association of Textile Chemists and Colorists, October 27-28, 1982 at the AATCC Technical Center in the Research Triangle Park, N. C. This program is designed to provide maximum hands-on experience in performing the techniques that will be discussed. One half of the program time will be devoted to laboratory participation in the areas of reflectance measurements, transmittance measurements and color difference/shade sorting. The workshop will include the following speakers and topics:

*Color and the CIE System*, Gultekin Celikiz, Philadelphia College of Textiles and Science.

*Instrumentation and Color Measurement Procedures*, Leonard A. Weiner, Atlantic Chemical Corporation.

*Reflectance Measurement*, Roland L. Connelly, Burlington Industries.

*Transmittance Measurement*, Robert F. Hoban, Sandoz Colors and Chemicals.



*Application of Statistics to Color Measurement*, Charles D. Sweeney, American Color and Chemical.

*Strength Determination, Whiteness and Whiteness Measurement*, Rolf G. Kuehni, Mobay Chemical Corporation.

*Color Difference Determination*, Therese R. Commerford, U. S. Army Natick Research & Development Laboratories.

*Instrumental Shade Sorting: Past and Present*, William L. Acree, Burlington Industries.

A registration fee of \$200 (\$160 to individual and corporate AATCC members) includes luncheons and a book containing papers and laboratory procedures. Overnight accommodations are available at the Governors Inn, N.C. Highway 54 and I-40 at Davis Drive exit, telephone 919/549-8631. Reservations should be made directly with the hotel. Shuttle bus service will be available between the hotel and the Technical Center.

Additional information on the workshop is available from Joan Mitchell, AATCC Technical Center, Research Triangle Park, N.C. 27709, telephone 919/549-8141.

### American Ceramic Society

Scientists and engineers will have opportunities to learn about the latest developments in the ceramic industry at the upcoming American Ceramic Society 35th Pacific Coast Regional Meeting.

The meeting, slated for Oct. 27-30 at the Westin Hotel in Seattle, Wash., will be held concurrently with a meeting of the National Institute of Ceramic Engineers and the Richard M. Fulrath Memorial Symposium.

Papers will be presented relating to ceramics in the areas of basic science, electronics, glass, refractories, nuclear engineering and whitewares. Special sessions will be held on topics including brittle materials design and carbon/graphite, along with a series of lectures.

Featured at the Richard M. Fulrath Memorial Symposium will be presentation of awards in his honor to three young, outstanding scientists from Japan and one from the U.S. who are working with ceramic materials. The awards were established through a grant from Japan in recognition of the late Dr. Fulrath's contributions to ceramic science and technology and for his achievements in fostering goodwill between ceramists in the two nations.

Dr. Fulrath, who died in 1977, was professor of ceramic engineering at the University of California, Berkeley and also was principal investigator at the Materials and Molecular Research Division of the Lawrence Berkeley Laboratory.

Regional Meeting social events will include luncheons, dinners, a cruise and tours of the Seattle area including the Boeing Co. 757/767 aircraft construction facilities.

Society members and non-members are invited to participate in the Pacific Coast Regional Meeting. For registration information, contact Dr. William D. Scott, Ceramic Engineering Division, FB-10, University of Washington, Seattle, Wash. 98195.

### American Society of Photogrammetry

The American Society of Photogrammetry has moved its head-

quarters to a different location in Falls Church, VA. As of May 24, 1982, the new address is: American Society of Photogrammetry, 210 Little Falls Street, Falls Church, VA 22046.

The old address was 105 N. Virginia Ave., Falls Church, VA 22046. The telephone number will be the same, (703) 534-6617.

In the new location, which is only about 2 blocks from the previous location, ASP will be collocated with the headquarters of the American Congress on Surveying and Mapping (ACSM). Collocation is an element in the affiliation of the two societies which was approved on September 8, 1981, at the Fall Convention in San Francisco. Also located in the same building is the headquarters for COMPASS, the Council for Mapping, Photogrammetry, and Surveying Societies.

William D. French

### Color Marketing Group

Color Marketing Group held its spring national meeting at the Pheasant Run Hotel, St. Charles, IL., May 2-4th. "Market Hues" focused on new looks in merchandising with presentations on retail store design, high tech at P.O.P. and concept promotion. Workshops to project "Color Directions" were also included. Earlier in the year, CMG sponsored its Central regional meeting, "Pigmented Potpourri" in Itasca, IL. Most recently CMG hosted a roundtable breakfast at NEOCON, the National Exposition of Contract Furnishings, June 17th, Merchandise Mart, Chicago.

Colonial Williamsburg, VA. is the site of the fall national meeting, November 15-17th. The conference will include the launching of "Color Directions" for contract furnishings — workshops to examine color trends for this important industry.

Regional meetings scheduled for the year include: "Color and Design," San Francisco, CA, July 16th; "Great Reflections," Newport, RI, July 30; and "Color and Illumination," Knoxville, TN, September 10th.

### 1981 EVENTS

1981 CMG officers are: President, William C. Capehart, Tenneco Chemicals, Inc.; Vice President, Jim Brown, Diano Color Systems; Treasurer, Joyce S. Davenport, DeSoto, Inc.; and Secretary, Carol Forbes, C. Forbes Designs. Newly elected to the Board of Directors for three year terms: Doris Crary, Prince Matchabelli; Sharon de Leon, Design Portfolio; Jon Hall, PPG Industries; and Judith A. Lund, Cannon Mills, Inc.

### Society of Motion Picture and Television Engineers

The program for the 124th Annual Technical Conference of the Society of Motion Picture and Television Engineers (SMPTE) has been announced by Program Chairman Gary L. Borton, Eastman Kodak Co. The Conference is set for the New York Hilton Hotel in New York City November 7-12, 1982.

According to Borton, the Conference will feature a full five-day technical program of sessions dealing with subjects of current concern to the motion-picture and television industries.

Grouped under this year's conference theme "Commitment to Tomorrow's Technologies," the subjects that will be covered in the SMPTE technical sessions and their schedule of presentation during Conference week are: Monday morning (Nov. 8): Opening session with Executive Vice-President Joseph A. Flaherty, CBS, and guest speakers Judith Schwan, Eastman Kodak Co., Dr. Kerns Powers, RCA, and Roland J. Zavada, Eastman Kodak Co., with the first Laboratory Practices session to follow Monday afternoon. Tuesday morning: Laboratory Practices; New Technology of Lighting. Tuesday afternoon: Motion-Picture Production and Special Effects; Laboratory Practices. Wednesday morning: Motion-Picture Sound; Future Television Studio Design. Wednesday afternoon: Film to Tape Interface; Television Audio. Thursday morning: Projection Practices; Television Production. Thursday afternoon: Television Post-Production; Television Image and Signal Evaluation Technologies. Friday morning: International Television Technology; New Technology for Television. Friday afternoon: Videotape Recording.

In addition to the excellent technical program, the conference will also feature a record-breaking Equipment Exhibit, with over 39,000 square feet of exhibit space, showing the latest motion-picture and television equipment. The conference will also provide a lively social program highlighted by an Honors and Awards Luncheon, the Fellows Luncheon, the Annual SMPTE Banquet, and a week-long Spouses Program.

Additional information on the Conference is available from SMPTE, 862 Scarsdale Ave., Scarsdale, NY 10583.

## COLOR SCIENCE ASSOCIATION OF JAPAN

Officers of the Color Science Association of Japan (CSAJ) for 1982-1983 are the following:

President — Prof. Hikaru Masaki, Japan Women's University.

Vice-President — Prof. Mitsuo Ikeda, Tokyo Institute of Technology; Dr. Yutaka Kurioka, Electrotechnical Laboratory; Dr. Akihiro Suzumura, Aichi Medical University.

The address of CSAJ is as usual: c/o Japan Color Research Institute, 1-19, Nishiazabu 3-chome, Minato-ku, Tokyo 106, Japan.

Genro Kawakami

## COLOUR GROUP OF INDIA

Colour Group of India had recently organised a Colour Technology course for applications specialists from various fields. This five days course was held at Hotel Sea Rock, Bombay from March 2-6, 1982. Thirty seven participants from various fields such as paints, plastics, textiles, dyestuffs and pigment manufacturers, instrument and computer manufacturers attended this course.

Mr. Chandrakant Garware, Managing Director of Garware Paints in his inaugural address stressed the importance of computer colour matching. Dispelling fears the colourist and the Colour formulators, he said that the colour computer is a powerful tool in the hands of colourist and that the computer is not going to replace the human being. It is also not a substitute. He further said that computer aided colour matching is the need of the day and colour industry has to take it seriously.

He congratulated the Colour Group for starting such type of colour technology course. He said that it is good that in India, such type of sophisticated colour technology expertise is being developed and he was sure to see the scope for this technology in India and other Asian countries.

At the time of inaugural function, Mr. C.J. Bhumkar, Vice President of Colour Group of India introduced the chief guest mentioning the technical achievement of Mr. Garware.

Various topics were covered by the faculty members which included Dr. (Mrs.) S. Patwardhan, Wool Research Association, Thane; Dr. L.N. Chaturvedi, Suhrid Geigy-Dyestuff & Chemical Division, Baroda; Dr. N.S. Gangakhedkar, Asian Paints (I) Ltd., Bombay; Mr. V.C. Gupte,\* M.G. Consultancy, Bombay;\* Dr. Gangakhedkar and Dr. Patwardhan also conducted a tutorial for practical calculations on colour recipe formulation. A practical handbook was also prepared by Mr. Kamat and Dr. Patwardhan. Participants of the course visited two installations at the WRA and the Asian Paints. In the panel discussion held on the last day, the speakers discussed the possibility of developing indigenous technology. It was pointed out that now Indian computers were available at low cost and development of colour software was also possible. Considering these two aspects, one must develop the total colour control system and avoid the import of high cost colour technology equipment. For the concluding session, chief guest Dr. Grassman, Technical Director of Colour Chem, and Mr. Ashwin Dani, founder member of the Colour Group of India were present. Mr. Dani informed the gathering the success stories of Asian Paints and Reliance Textiles Industries who have introduced the Computer Colour Matching equipment. He also advised the participants to study in detail the various aspects of colour instrumentation and make in-depth study.

\*and Mr. P. Sampathkumar

\*Dr. M.S. Shah, SVR College, Surat  
S. Patwardhan

## SEMINAR ON COLORIMETRY

A two-day seminar on colorimetry will be held at the National Research Council in Ottawa on October 13 and 14, 1982. The seminar is one of a series sponsored by the Division of Physics, National Research Council, on the measurement of basic physical quantities. Speakers will be E. Allen (Lehigh University), W. Budde (NRC), W.B. Cowan (NRC), A.A. Gaertner (NRC), A.R. Robertson (NRC) and C. Ware (NRC). Subjects to be covered include basic principles of colour vision and colorimetry, the CIE system, spectrophotometry, spectroradiometry, photo-electric colorimetry, colorimetry of video displays, colour appearance, colour difference measurement, gloss, and colorant formulation. There will be a visit to the laboratories of the Optics Section of NRC and it is hoped also to have an exhibition of commercial colorimeters and spectrophotometers.

This and other seminars in the series are designed mainly, though not exclusively, for an industrial audience and are intended to provide an updating of information and a broadening of knowledge of measurement techniques in Canadian industry.

The number of participants will be limited and pre-registration will be necessary. The cost will be \$75 including lunch on both days.

Further information on the program may be obtained from Dr. Alan R. Robertson, Division of Physics, National Research Council, Ottawa, Ontario K1A 0R6 (Telephone: (613)-993-2504). Registration forms and other information may be obtained from Mrs. Gloria Dumoulin at the same address and telephone number.

## A MAJOR COLOR LIBRARY

In 1971, Faber Birren presented to Yale University in New Haven, Connecticut a major library on color assembled by him over a period in excess of 40 years. In it were original works by Descartes, Robert Boyle, Isaac Newton, Voltaire (on Newton), J. B. Corneille, Moses Harris, and the classical writings of Goethe, Schopenhauer, M. E. Chevreul, Charles Henry.

The Collection was exhibited at the Sterling Memorial Library in 1974, annotated bibliographic notes were composed by Robert L. Herbert and published in two issues of the *Yale Library Gazette* (Vol. 49, No. 1, July, 1974; Vol. 52, No. 3, January, 1978).

The Faber Birren Collection has since been generously subsidized and endowed and has been substantially enlarged through additional purchases and contributions.

Now in 1982, from September 18 through November, Yale will hold a second exhibition at the Sterling Memorial Library. A complete bibliography of some 46 pages will be issued. Copies will be available (for a postage fee of \$1) by writing to

Faber Birren, 184 Bedford Street, Stamford, Connecticut 06901.

Having the liberal and popular view of color expressed in Mr. Birren's own writings, the collection is particularly rich in works on the more human aspects of color. There is less of physics and chemistry than of the arts and humanities. There are publications on scientific theory and specialized bibliographies, but the collection's major holdings are books and publications on color theory, color techniques, artists' manuals and treatises, perception, vision, psychology, printing and the graphic arts, textiles, music, religion, biology, medicine, heraldry and the occult.

Of particular note are works on color systems, color standards and color nomenclature. The International Color Association (AIC) has appointed a Study Group on Color Order Systems under the chairmanship of Gunter Wyszecki of Canada and will use the Birren Collection as a basic source of reference. (Copies of this subsidiary collection are also available through Faber Birren, each item being briefly described.)

Of further interest is the fact that Research Publications of Connecticut will put major works from the Faber Birren Color Collection on microfilm. Thus a comprehensive array of color references will become available to libraries, schools, colleges and museums from one compact source.

Another great collection of books on color exists at the Royal College of Art in London. Yale and the Royal College are in friendly cooperation and have exchanged confidences — as well as books. Between the two, the broad literary and scholarly world of color is exhaustively represented.

## CALENDAR

### ISCC Annual Meetings

1983: April 10-12 – Louisville, KY, Galt House

### ISCC Williamsburg Conference

1983: February 6-9 – Williamsburg, VA,  
COLOR AND ILLUMINATION

### American Association of Textile Chemists and Colorists

Color Measurement Symposium, March 8-9, 1983 –  
Greensboro, NC

### Federation of Societies for Coatings Technology

Annual Meeting, November 3-5, 1982 – Washington, D. C.

### Optical Society of America

Annual Meeting, October 18-22, 1982 – Tucson, AZ

### Society for Information Display

International Display Research Conference, October 19-21,  
1982 – Cherry Hill, NJ

### Society of Motion Picture and Television Engineers

Annual Technical Conference, November 7-12, 1982 –  
New York City

### TAPPI

Coating Conference, May 15-18, 1983 – San Francisco, CA

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:

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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).
2. The Council re-affirms its community of interest and co-operation 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.