Inter-Society Color Council *Newsletter*

ANNUAL REPORT ISSUE

NUMBER 218
May-June 1972

REPORT OF THE PRESIDENT
RANDALL M. HANES

During the past year your Board of Directors met officially in three regular sessions and two special sessions. I report the number of meetings to indicate to you that your Board was active. Whether or not it was effective, you must judge for yourselves. I submit, for your consideration, the following summary of activities plus occasional additions dealing with the status of the Council. It should be noted that your Board of Directors is involved in all Council work in greater or lesser degree. Even for those matters that are handled largely by individuals or committees, the Board's monitor and control functions often require lengthy consideration.

Nomination of Officers and Board Members

One of the very important activities of the year was, of course, the selection of Officers and Board Members. The nominating committee proceeded quickly and effectively and produced an excellent slate of candidates. (I can so state without presumption because my presence on the Board follows automatically from my present office. The nominating committee therefore had no choice in my case.) Thanks are therefore due to Kenneth L. Kelly, chairman, I. A. Balinkin, and W. N. Hale, Jr., for a job well done. Their selections were as follows:

President -- Richard S. Hunter, TAPPI

Vice President -- Roland E. Derby, Jr., AATCC

Secretary -- Fred W. Billmeyer, Jr., AChS, SPE

Treasurer -- Warren B. Reese, SMPTE

Directors -- Randall M. Hanes, APA; Charles W. Jerome, IES; John T. Smith, Jr., ASP; W. T. Wintringham, SMPTE; John N. Yeatman, IFT

Standing Committees

At long last, after years of proposals and discussion, what promises to be an effective working arrangement was made between the Cooper-Hewitt Museum and the ISCC. This successful denouement was effected largely through the efforts of an ad hoc committee consisting of Calvin Hathaway, W. J. Kiernan, and Christian Rohlfing (Chairman). The mechanism for cooperation is the Cooper-Hewitt Museum Liaison Committee, a standing committee of the Council. Mr. Rohlfing has agreed to serve as the first chairman.

Another standing committee, the Information Bureau, was reactivated under the chairmanship of S. L. Davidson, who has agreed to review the scope of the Bureau in the light of the arrangement with Cooper-Hewitt and the activities of the Publications Committee.

The Publications Committee, under the able chairmanship of R. W. Burnham, has been reformed to provide representation from the broad and diversified interests of the Council membership and has already been active in making cogent recommendations to the Board. Details of committee activity will be given in Dr. Burnham's report.

It should be noted that we now have ten standing committees. In addition to the five specified in the By-Laws as "Permanent Standing Committees" -- the committees on Finance, Problems, Publications, and Membership, plus the Presidential Advisory Committee -- these are:

The Godlove Award Committee (Chairman, George Gardner), which was made a standing committee in 1963.

The Information Bureau (Chairman, S. L. Davidson), approved by the Board in 1968.

The Arrangements Committee (Chairman, Midge Wilson), formed in 1970.

The Individual Members Committee (Chairman, W. N. Hale) formed in 1970.

The Cooper-Hewitt Museum Liaison Committee (Chairman, Christian Rohlfing) formed in 1971.

I have listed the standing committees because there has been some confusion about the status of committees. Furthermore, I wanted to indicate what I choose to call continuing decentralization. At the same time, I must caution you against taking the recent growth in standing committees as a basis for projection and possibly arriving at the conclusion that we could have, say, 85 such committees by 1980. The proposed revision of the By-Laws (see below) will, I trust, tend to stabilize the situation.

Representatives to Other Organizations

In addition to the Standing Committees, and the Macbeth Award Committee, which is a Special Committee, contacts with other organizations are maintained through special representatives. At the present time, we maintain excellent contact with the AIC through the efforts of C. J. Bartleson and with the American National Standards Institute through the offices of Kenneth L. Kelly.

Revision of the By-Laws

As reported in N. #214, the Board approved the following resolution: "It is the intent of the Inter-Society Color Council to amend its By-Laws to conform to the present statutes of the Internal Revenue Service regarding tax-exempt foundations." A committee has been appointed to consider the matter of tax status as well as other possible revisions such as: aims and purposes, operational structure, tenure of Board members, life memberships, and honorary memberships. The present membership of this committee is: S. L. Davidson, chairman, G. B. Gardner, W. J. Kiernan, D. Nickerson, and R. Spilman, with the Officers as ex-officio members.

Meeting Policy

Questions about format, length, and location of the Annual Meeting were discussed again this year. Conclusions were as usual with respect to location (New York City), but a new policy was to be tested as follows: a two-day format with a Monday banquet and with the option of adding a third day at the discretion of the Board to accommodate such features as additional symposia or Problems Subcommittee sessions.

Questions were also raised about the nature and timing of the Williamsburg conferences, but no policy changes were forthcoming, and reservations have been made for conferences in 1974 and 1976.

For Council participation in meetings and symposia other than our own Annual Meetings and Williamsburg Conferences, a Joint Meeting Policy was established. Three categories of such joint meetings were specified, with guidelines covering publicity, expenses, and publications. Details of this policy will be set forth in the Newsletter.

Meetings

The 1972 Williamsburg Conference on Fluorescence was an outstanding success, largely as a result of the efforts of Frank Grum and his co-chairman, Eugene Allen, with Milt Pearson and George Gardner providing invaluable help in arrangements.

The program for the current Annual Meeting was arranged and supervised most effectively by John T. Smith, Jr.

The past year saw the publication of the Proceedings of the 1971 Williamsburg Conference, and thanks are due to the Rochester Institute of Technology for a truly handsome publication.

Awards

The physical symbols for both the Godlove and the Macbeth awards were largely completed this year. These handsome symbols are a result of creativeness and hard work of designers in the Council. Principal credit for the Godlove symbol belongs to Karl Fink, while the Macbeth symbol was produced by Prof. R. E. Redmann and his students at the University of Bridgeport, with instruction and guidance from Ray Spilman. We are indeed indebted to these individuals for their outstanding efforts.

The first Macbeth Award was presented at the banquet on Monday evening, and the selection committee, consisting of Dorothy Nickerson, chairman, Robert Feller, Leo Hurvich, W. T. Wintringham, and J. A. C. Yule deserves a vote of thanks for its outstanding service.

Finances

Warren Reese will report on the fiscal health of the Council, so I shall leave this vital matter to him, noting only that he maintains us in sound condition.

Membership

I should like to welcome, as our newest Member-Body, the American College of Prosthodontists. Information on the organization and its delegates will be given in Walter Granville's report of the Membership Committee, but I want to indicate my pleasure at this latest addition to our membership.

I should like to welcome also the new individual members. I hope that your association with the Council will be pleasant as well as productive.

Credits

As retiring President, I wish to thank again all those who have helped to achieve whatever may have been accomplished in the past two years. I assure you that I do this not merely as a formality, for I am truly indebted to the officers and other Board members, committee chairmen, and numerous individuals already mentioned for most effective support. Your Secretary, Fred Billmeyer, and your Treasurer, Warren Reese, have done an outstanding job in taking over these vital activities and providing a continuity that would not have obtained with less able individuals. Dick Hunter, as Vice-President, has provided most valuable assistance and advice, and will be an excellent President. He was unfortunate in the sense of his being in my local telephone area, so that he received an undue number of calls, but I consider it fortunate that he was so readily accessible.

Roland Derby, whose highly successful term as Chairman of the Problems Committee will end soon, as he becomes President-Elect, deserves special thanks for his long and effective service.

I am particularly grateful to Bob Burnham for taking over the Newsletter when I became President and for making it a very effective and interesting publication.

All Board members and committee chairman, in one way or another, have provided very useful support, and I am indebted to Len Davidson, George Gardner, Bob Feller, Ray Spilman, Nick Hale, and Midge Wilson, in addition to those already mentioned, for their help. Midge Wilson, of course, is a very special case, for she works so quietly and with such success that she is truly the ideal associate.

REPORT OF THE VICE PRESIDENT RICHARD S. HUNTER

I thought it might be helpful in introducing myself and my plans to speak briefly about my first contact with the ISCC. Let me give you the setting. I was an office boy and errand runner in the Colorimetry Section of the Bureau of Standards in 1931 when the ISCC was formed. I can vividly remember to this day being down on the floor with my dust pan and brush cleaning up the corners in the office and hearing Mr. Priest, who was then Chief of the Colorimetry Section of the Bureau of Standards, telling Dr. Jones of Eastman Kodak, who was visiting, and who was also President of the Optical Society, "We don't need another technical society." (In this case, technical society on color which had been proposed.) "What we need is a group to coordinate the technical societies already existing and already interested in the field of color." This was the foundation on which the ISCC was built. I think we have to admit that now the need for coordinating technical activities in color is greater than 40 years ago.

I want to make three observations about the conditions under which the ISCC must operate. I want to describe five of my objectives for the ISCC in 1972 and 1973.

The first of the conditions under which we operate involves our dependence on volunteer labor and materials. In other words, when we want something, we can't buy it. We must do it or make it ourselves. Our financial model makes this necessary. I thought I could best drive this point home by contrasting our situation with that described to us by Len Davidson who has been on our Board of Directors during the past two years. Simultaneously he has been formerly President, and now Past-President of the Paint Federation. The contrast that impressed me is this. The Paint Federation has a nice specific technical area in which to work -- paints. It operates with a budget of around a million a year. We in the ISCC with paints, plastics, papers, art, design, printing, prosthodontics, photogrammetry and other technologies to deal with, operate on a budget of around $10,000 a year. So it is clear that what we do, we must do with our own effort.

Now to look at our area of expertise and its importance. Our area is important not just to us, but to everybody. This is because 80% of the information from the world comes to us through our eyes. We are all of us experts in the art of seeing. We analyze, work and innovate in this area of seeing, whereas the world at large sees, and just takes for granted and enjoys what it sees. It is because we analyze, that we are technical experts in appearance.

The next point I want to make about seeing is that the optical analyses of appearance are so complex that each of us can only build his own working model of his specific area of effort. Each of us then uses his own working model to do his job. I mention this because each of us needs to be tolerant of the other person's model. We need to understand how his works and contrast it with our own because there is no such thing as a single "exact" model. If there were, it would be too complex and cumbersome for any of us to use.

To document this matter of technical complexity of our subject, we at Hunterlab have recently put together some tables identifying the specific uses of measurements in all the different industry areas in which we work. We already have 5,000 specific applications and we are still adding to the number of specific problems on which we work.

In summary, we are volunteers working together to help each other in our common area of specialization.

Technically, our common area is very complicated, but practically, it is exceedingly important.

Now, to some specific objectives for the ISCC in 1972-73. There are many directions in which we might go. We better choose some specific directions to follow now and in the immediate future. If we don't, our efforts will be aimless.

First, we must continue to advance color technology through the Problems Committee. This has been the backbone of our technical effort in years past. It should continue.

My second objective is to expand the Problems Committee to include a Chairman with broad overview of the Committee's efforts and then one specialist in each of the four areas which are listed on the inside front cover of the new membership list. This breakdown of the ISCC areas of concern, I am told, we owe to Ex-President Bill Kiernan. These four areas are:

a. Color science and technology (Fundamentals of color science);

b. Colored materials and colorants (Technology and chemistry of dyes, pigments, colored products);

c. Color reproduction in printing, photography and TV;

d. Color in art and design (covers creativity in color and its application).

My third objective is to stimulate the preparation and exchange of elementary information about color. As an example, I'm looking for volunteers to reactivate the terminology effort. I find that at least two of our member-bodies in the ISCC are active on terminology projects now. Thus, now is a good time to reactivate our work on terms and their meanings. The last published report of an ISCC Committee on Terminology appeared in 1949 and has been out of print for years. If we are going to understand each other, we need to bring our terminology up to date and make it available to the current membership.

I want to encourage another effort in communicating color information at the elementary level. I would like wherever possible to offer tutorial sessions covering specific areas of interest.

The fourth objective on my list is a personal interest of mine. It involves a trend which has been with us for a number of years. I recommend that we formally expand our area of concern to include not just color, but the other appearance attributes of objects. I recommend that we divide the appearance, or optical aspects of the things we see into chromatic attributes (associated with spectral distribution of light) and geometric attributes (associated with geometric distribution of light).

We are all familiar with hue, saturation and lightness, the color attributes of surfaces. Less well known are the geometric attributes of object appearance such as gloss, texture, turbidity, luster, translucency, directionality and the like. In the ISCC, we have already worked on a number of projects where we dealt with geometric attributes as well as color attributes. Let's recognize and publicize this fact.

My fifth and last objective is to involve the individual members and the younger members more actively. Because I was present in 1931 when the ISCC was formed, I must make a conscious effort to assure that I deal with the ISCC's needs of 1972-73, not those of 1931. I want to guide and encourage the young to come in and take over. My experience 41 years ago was stimulating and challenging and has kept me motivated for most of my life. I want to share my challenges with those just entering our fluid, growing field.

These are my thoughts about the ISCC, its functions and its objectives. What are your thoughts in these matters? I would like to have you write me.

REPORT OF THE SECRETARY
FRED W. BILLMEYER, JR.

As of December 31, 1971, membership in the Inter-Society Color Council consisted of 30 member-bodies and 630 individual members. There were 239 member-body delegates (with some delegates representing two -- in one case three -- member-bodies) out of a possible 300. The number of living honorary members was 17. We also carried on the membership rolls 51 liaison officers and editors of the member-bodies, 17 secretaries of the other member societies of the International Color Association, our printers, Mimeoform, Inc. (as a mail check), and the Library of Congress. Of the 326 persons in these latter categories, 79 were also individual members. Our total mailing list was therefore 877.

A revised membership list was issued late in 1971, and sent to all members of record in all categories as of December 31, 1971. Anyone who failed to receive this list should write to the Secretary for a copy. An addendum to this list will be published as soon as possible, and distributed to all members of current record, to update the list to the time of the 1972 annual meeting. The entire list will be revised and reissued in 1974.

Although this report officially covers the preceding year, it may be noted that there were 155 registrants at the 1972 annual meeting, and 107 at the banquet.

The arrangements for publicizing Council events have been expanded during the year with the development of a list of journals and organizations to whom publicity releases are sent. There are currently about 70 names

on the list, but its expansion is in progress. Many of the publicity releases sent out to date have also led to articles in the Newsletter.

Following the newly-adopted guidelines for joint meetings, the Council has contributed speakers, publicity and encouragement to several member-bodies and other groups in the presentation of cooperative symposia, as follows:

With the American Chemical Society, a symposium on modern aspects of dyeing, on April 12, 1972.

With the American Ceramic Society, a symposium on color in ceramics and the relationships between the ACeS and the ISCC, on May 10.

With the American Society for Testing and Materials, a symposium on sensory perception, on October 24.

With the Eastern Analytical Symposium, a session on the analysis and specification of color, October 30-November 1, 1972.

Depending on timing, these meetings have been or will be the subject of announcements in the Newsletter.

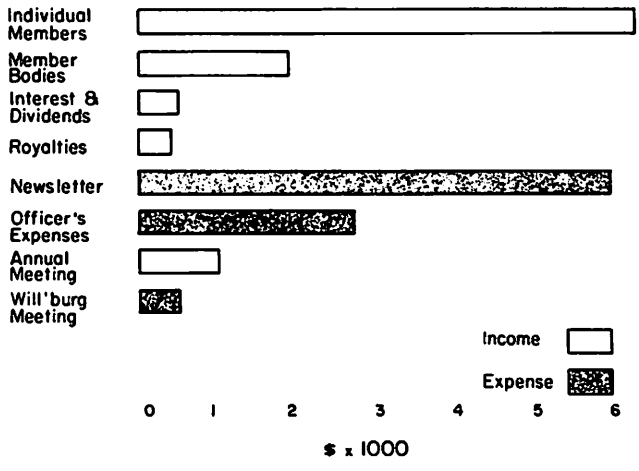
REPORT OF THE TREASURER WARREN B. REESE

AND

REPORT OF THE FINANCE COMMITTEE, WARREN B. REESE, CHAIRMAN

These two reports consist of the accompanying tables of financial data and bar graphs. (FWB)

ISCC 1972 PROJECTION



INTER-SOCIETY COLOR COUNCIL, INCORPORATED

BALANCE SHEET

DECEMBER 31, 1971

ASSETS

GENERAL FUND		
Cash		
Empire National Bank – regular	$ 4,225.42	
Empire National Bank – savings	8,727.77	
Bowery Savings Bank	1,344.83	
New York Savings Bank	116.13	
Greenwich Savings Bank	149.34	$14,563.49
Investments, at cost		
Affiliated Fund, Inc. – 373 shares (market value – $2,601.75)	2,862.93	
Putnam Growth Fund – 249 shares (market value – $2,756.64)	2,654.71	5,517.64
Dues receivable		76.00
		20,157.13
I. H. GODLOVE AWARD FUND		1,108.13
		$21,265.26

LIABILITIES

GENERAL FUND		
Accrued liabilities		$ 3,218.80
Equity		
Balance, beginning of year	$16,094.50	
Add excess of income over expenses for the year	843.83	
Balance, end of year		16,938.33
I. H. GODLOVE AWARD FUND		
Balance, beginning of year	1,109.47	
Less excess of expenses over income for the year	(1.34)	
Balance, end of year		1,108.13
		$21,265.26

INTER-SOCIETY COLOR COUNCIL

NET INCOME

SOURCE	1966	1967	1968	1969	1970	1971	Budgeted 1972
Individual Members	$3,144	$3,356	$3,274	$3,556	$3,207	$ 5,638	$6,300
Member-Bodies	1,015	1,015	1,015	980	1,085	1,800	1,860
Interest & Dividends	1,158	1,075	860	1,032	818	604	450
Royalties	293	1,216	346	454	432	432	350
Newsletter	165	166	164	152	32	35	–
Special Publications	24	5	58	11	8	–	–
Annual Meeting	(44)*	149	(2,017)*	(448)*	(333)*	430	1,000
Williamsburg Meeting	(85)*	–	–	(649)*	–	1,466	(500)*
Miscellaneous	–	2	4	–	–	–	–
TOTAL	$5,670	$6,984	$3,704	$5,088	$5,249	$10,405	$9,460

*Expense exceeded income.

INTER-SOCIETY COLOR COUNCIL

NET EXPENSES

CLASSIFICATION	1966	1967	1968	1969	1970	1971	Budgeted 1972
Newsletter	$2,055	$2,837	$2,977	$3,553	$5,968	$5,554	$6,000
Special Publications	462	3,213	584	–	–	–	–
President's Office	61	139	57	693	367	536	250
Secretary's Office	112	672	304	557	1,941	3,096	2,200
Contingency Fund	154	420	4,693	–	–	–	–
Treasurer's Office	96	78	50	25	161	370	200
Cooper Union	1,000	1,000	–	–	–	–	–
Miscellaneous	–	–	–	–	42	5	–
TOTAL	$3,940	$8,359	$8,665	$4,828	$8,479	$9,561	$8,650

INTER-SOCIETY COLOR COUNCIL, INCORPORATED

GENERAL FUND

STATEMENT OF INCOME AND EXPENSES

YEAR ENDED DECEMBER 31, 1971

Income		
Dues		
581 individual members* and 30 member-bodies		$ 7,438.00
Publication sales		
Newsletter	$ 35.00	
Royalties	432.21	467.21
Interest and dividends		
Savings banks	305.76	
Certificate of deposit	61.23	
Affiliated Fund, Inc.	192.55	
Putnam Growth Fund	44.36	603.90
Other income (expenses)		
Annual meeting		
Reservations and registrations	2,480.88	
Cost of dinner and expenses	(2,050.93)	429.95
Williamsburg Symposium		
Registration fees	6,560.00	
Cost of dinner and expenses	(5,093.83)	1,466.17
		10,405.23
Expenses		
President's office	536.58	
Treasurer's office	370.25	
Secretary's office	3,095.87	
Newsletter	5,554.09	
Other	4.61	9,561.40
Excess of income over expenses		$ 843.83

*Includes seventeen honorary members at no charge.

INTER-SOCIETY COLOR COUNCIL, INCORPORATED

GENERAL FUND

SCHEDULE OF CERTAIN EXPENSES COMPARED TO BUDGET

YEAR ENDED DECEMBER 31, 1971

	Expenses		Under or (over) budget
	Budget	Actual	
President's office	$ 600.00	$ 536.58	$ 63.42
Treasurer's office	200.00	370.25	(170.25)
Secretary's office	2,000.00	3,095.87	(1,095.87)
Newsletter	6,000.00	5,554.09	445.91
Annual Meeting	300.00	(429.95)	729.95
	$9,100.00	$9,126.84	$ (26.84)

INTER-SOCIETY COLOR COUNCIL, INCORPORATED

I. H. GODLOVE AWARD FUND

STATEMENT OF CHANGES IN FUND

YEAR ENDED DECEMBER 31, 1971

Balance, beginning of year		
Cash on deposit	$243.94	
U.S. Treasury bond, 2-1/2%, maturing 9/15/72, at cost	865.53	$1,109.47
Receipts		
Interest, U.S. Treasury bond		25.00
Disbursements		(26.34)
		$1,108.13
Balance, end of year		
Cash on deposit	$242.60	
U.S. Treasury bond, 2-1/2%, maturing 9/15/72, at cost	865.53	$1,108.13

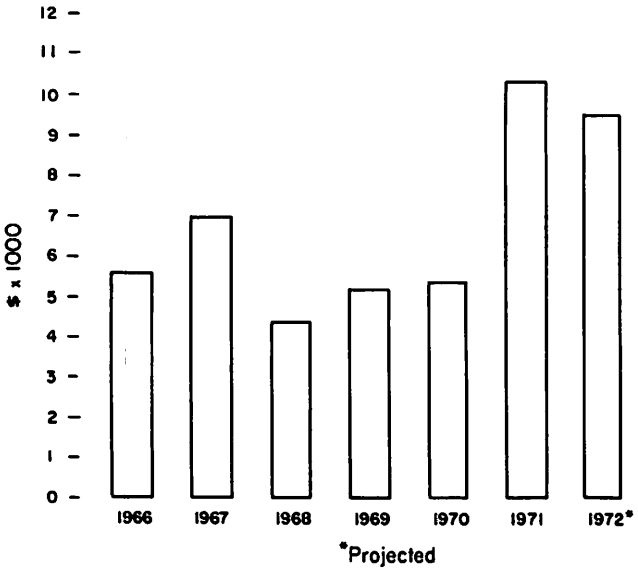
INTER-SOCIETY COLOR COUNCIL

INCOME VS EXPENSE

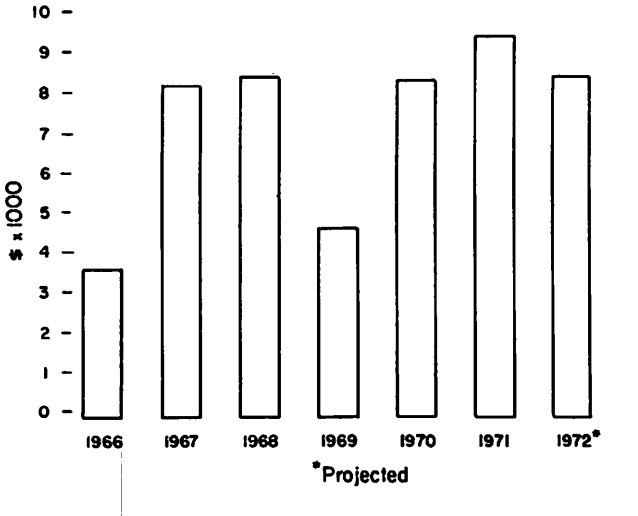
YEAR	INCOME OVER EXPENSE
1966	1,730
1967	(1,375)*
1968	(4,961)*
1969	260
1970	(3,230)*
1971	844
1972 Budgeted	810

*Expense exceeded income.

ISCC - NET INCOME



ISCC - NET EXPENSES



REPORT OF THE MEMBERSHIP COMMITTEE, WALTER C. GRANVILLE, CHAIRMAN

At the end of 1971 the Council membership consisted of 30 Member-Bodies and 630 Individual Members.

Since the last Annual Meeting the American College of Prosthodontists has applied for membership, and their election as the 31st member-body took place at this Annual Meeting. An item describing the activities of the College is being prepared for submission to the Newsletter. Col. Robert C. Sproull has been largely responsible for bringing about this affiliation and we wish to express appreciation for his perseverance.

No other affiliations are pending but we continue to look for likely prospects that will enhance the scope of the Council's work.

REPORT OF THE COMMITTEE ON PUBLICATIONS, ROBERT W. BURNHAM, CHAIRMAN

During the year, this Committee was reconstituted by enlisting representatives from graphic arts, color measurement, design, and scientific areas. Their names are listed on the last page of each issue of the Newsletter.

We made several recommendations to the Board of Directors which were accepted.

1. The Rochester Institute of Technology was permitted, at their request, to handle the distribution and sale of the Proceedings for the 1971 Williamsburg Conference (after the distribution to all ISCC members) to help defray their expenses beyond what was contributed by ISCC.

2. It was agreed that we shall not include inserts with the Newsletter, except for reprints of Committee Reports or publications directly related to ISCC business.

3. The Board also approved a recommendation to permit the mailing list of the ISCC to be used for disseminating advertising material, with a direct charge from Mimeoform Service, Inc., 1320 F Street, N.W., Washington, D.C. 20004, which publishes the Newsletter and maintains the list.

4. It was also agreed by the Board that publications of Problems Subcommittees and Conferences, and other official ISCC reports, be channeled through this Committee for uniformity of editorial policy, and to assure ordering reprints at the time of publication.

The Committee has offered to examine ways and means to arrange for the translation of key or major articles in the foreign literature dealing with significant areas of color (possibly by employing foreign members through the Association Internationale de Couleur).

We discussed the possibility of developing an information storage and retrieval system for important literature. One system, which combines the capability of producing film or paper images of articles, after a computer search, was demonstrated to the Committee. No action is planned at present, because it was recognized that this kind of activity may very well overlap the functions of the newly reconstituted Information Bureau.

One of our Committee members apprised us of a new resource at the Berkeley campus of the University of California for selectively searching literature in the general area of visual science. We requested and received (gratis) several sample searches of technical literature on "color" and were pleasantly surprised at the breadth of coverage (although the searches begin at present with 1970 literature).

We have made arrangements with the new Journal of Color and Appearance to publish the bibliography of the British Colour Group. The entire 1971 bibliography is now in press, and reprints will be made available by J.C.A. (at no cost) for inclusion as an insert to the Newsletter. Their plan for the future is to publish the accumulating bibliography on a bi-monthly basis with reprints for all ISCC members.

Two of our members contacted the Japanese Color Planning Center and offered to be a central clearinghouse in this country for the many (apparently) interesting articles which they currently publish only in Japanese. They agreed to make translations into English, but at a price which was well beyond our meager budget. We would like to pursue this further, and hope we can arrive at some interaction that will be mutually beneficial.

REPORT OF THE PROBLEMS COMMITTEE, R. E. DERBY, JR., CHAIRMAN

The meetings of the various problems subcommittees are always a highlight of the Annual ISCC Meeting and 1972 was no exception.

Nine subcommittees held very productive sessions. The details of their work and progress are outlined in the following reports by the respective subcommittee chairmen.

Particularly good progress is being made by the subcommittees on Problem 18 and Problem 25. An excellent report has recently been published in the Journal of Color and Appearance by Problem 24 under the title "Color Measuring Instruments: A Guide to Their Selection."

REPORT OF SUBCOMMITTEE FOR PROBLEM 7 -- SURVEY OF AMERICAN COLOR SPECIFICATIONS, ROBERT F. HOBAN, CHAIRMAN

No report was received from Mr. Hoban. However, the Board of Directors approved on February 7, 1972, the distribution of the report of the Subcommittee for Problem 7 in for form of a computer printout, by announcing in the Newsletter its availability without cost to Council members and at a nominal charge to others. (FWB)

REPORT OF SUBCOMMITTEE FOR PROBLEM 10 -- COLOR APTITUDE TEST, ANGELA C. LITTLE AND L. A. GRAHAM, CO-CHAIRMEN

The subcommittee was convened by Mr. Graham in the absence of the co-chairman, Dr. Angela Little. Twenty-five persons were in attendance. Mr. S. Leonard Davidson of FSPT asked for and received the floor. He announced that the FSPT had contracted with the Munsell Color Company for a third edition of the ISCC-FSPT Color Aptitude Test. The original and second editions were developed by the first Color Aptitude subcommittee working under the direction of Dr. Forrest Dimmick and Carl Foss.

Mr. Davidson asked Mr. W. Nick Hale of Munsell to outline the plans. Mr. Hale reported as follows:

1. The clear plastic for the chips would be molded as this gives more precise control of thickness than was possible with the sheet plastic previously used.

2. The pigments to be used would be reinvestigated in hopes of eliminating the undesirable Hansa Yellow G previously used.

3. The bluish gray background would be replaced with a more neutral gray, probably at Munsell Value 5.

4. The chroma spread had been measured and found to range from 0.9 to 1.6 Munsell steps. Mr. Hale stated that the range in the new test would be 1.2 to 1.3 steps. On a question from the floor Mr. Hale did not comment on the expected tolerance for hue and lightness other than that these would be small.

5. New instructions would be written.

6. The recommended illumination level would be changed. Mr. Davidson prefers 75 to 125 footcandles; Mr. Hale wants a level closer to 200 footcandles.

7. One of the biggest complaints with the present test is glare (specular reflection). Mr. Hale sketched one possible form of the test in a rotatable box arrangement. This would present one hue at a time to the viewer. No mockups have been made to date and, on question, Mr. Hale said he had not decided whether the present random order of loose chip presentation would be retained or not. Mr. Hale discussed his idea that a negative viewing angle be used (tilted away from the viewer). The new design is expected to make chip holding easier also.

8. A better box for the chips would be designed, and a better shipping configuration developed.

Mr. Davidson stated that the new design would be completed and the necessary mockups and prototypes constructed so that Dr. Little can conduct the test validation at the University of California. The tests would be available, he said, in the fall of 1972 at a price in excess of the present $200.00 for the exhausted 1964 2nd Edition.

Dr. Kinney and Mr. Dan Smith reviewed the present chroma spread to note that Dr. Dimmick established distribution curves to determine ranking values on each chip used.

After floor discussion on such problems as specular reflection from room objects and clothing, the co-chairman called for ideas on other possible color aptitude tests. Dan Smith suggested a version with samples distributed along the lines of confusion for color defective observers. Mr. Hale discussed and exhibited some of his work with printing inks. He used a gray and three blues in a tetrahedral step variation. He suggested this could be the basis some day soon for a three-dimensional version of a color test which the Munsell Company would develop.

On call from the chair the usual good response was received for a volunteer testing group.

REPORT OF THE SUBCOMMITTEE FOR PROBLEM 18 -- COLORIMETRY OF FLUORESCENT MATERIALS, FRANC GRUM, CHAIRMAN

The meeting opened with a review of the subcommittee's work by the chairman, Franc Grum. The most recent activities of the subcommittee include six inter-laboratory tests (three on white samples and three on chromatic samples) with interim reports having been prepared on two of these tests and two more to follow shortly. Other tasks have been the determination of how to measure and specify relative spectral radiance factor (SRF), verification of the necessity for standardizing the illumination condition for evaluating fluorescent materials, and the establishment of two active task forces. Task force one deals with the visual appraisal of fluorescent whitened samples under controlled conditions, and task force two deals with the separation of true reflectance from spectral radiance factor information.

Possible future activities for the subcommittee are:

1. A continuation of task force one to investigate the correlation between visual and physical specifications of whiteness.

2. Validity in selection of whiteness formulas.

3. The effect of intensity in spectral variations of the irradiating source on the spectral radiance factor data.

4. Conversion of SRF curves from one illuminant to another.

It was indicated that a CIE TC1.3 subcommittee on whiteness is doing work closely paralleling that of Problem 18. A report of this subcommittee's function was presented by Dr. Stensby in which he stated that their purpose was to study the relationship between small differences in whiteness determined by observers as compared to instrumental means.

Task force one has indicated that the data are now available from all four laboratories participating in its test. This test is the visual evaluation of whiteness samples for paper, textiles, and plastics. Those laboratories participating in the tests were Ciba-Geigy, Kodak, Intracolor, and Proctor & Gamble. The tests were conducted using paired comparisons and two methods of ranking with five observers from each laboratory. The visual assessments were also compared with instrumental measurements. Information on this data is available through Problem Subcommittee 18.

Task force two proposed a project by which a number of laboratories would try to determine the true reflectance of fluorescent materials using two different methods. One method, proposed by Dr. Allen and presented at the Williamsburg Conference on Fluorescence, employs a use of a spectrophotometer having white light illumination and monochromatic pickup. Such an instrument should also have the ability to place a filter between the source and the sample. The second method of evaluation was proposed by Professor Simon and is referred to as a two-mode method in which spectrophotometry employing both monochromatic illumination and total pickup and white light illumination and monochromatic pickup are used. It is believed that instrumentation exists in certain laboratories that would enable them to carry out these two types of

analysis and the purpose of the project is to evaluate the two techniques for determining true reflectance.

(Milton Pearson, Subcommittee Secretary)

REPORT OF SUBCOMMITTEE FOR PROBLEM 22 -- PROCEDURES AND MATERIAL STANDARDS FOR ACCURATE COLOR MEASUREMENT, JOSEPH T. ATKINS, CHAIRMAN

Over the last several years, much effort has been directed to developing procedures whereby comparable results may be obtained by different laboratories on the same samples. From this work, it is now evident that the available standards are inadequate to properly calibrate reflectance-measuring instruments. Discussions in the meeting resulted in a list of four categories of needed reflectance standards.

1. Standards for evaluating performance and calibration of spectrophotometers.

A series of samples, similar in function to the NBS 2100 series of transmittance standards, is required. In addition, samples for evaluating stray light, possible asymmetry of the integrating sphere, and efficiency of rejection of the specular beam are also needed.

2. Standards to evaluate performance of tristimulus colorimeters.

The set discussed above may satisfy this function as well. It is recognized that adjustment of the colorimeter by the user will not be feasible (an inherent limitation of filter instruments).

3. Reference white(s) of certified absolute reflectance.

It is essential that this standard be as opaque as possible. Problems with some instrument designs are a result of the translucency of the currently supplied "Vitrolite" tiles.

4. Standards of product color to be used in the buyer-seller commercial relationship.

This category of standards is outside the scope of any standardizing organization. They are most properly developed and agreed to by the parties to the transaction.

REPORT OF SUBCOMMITTEE FOR PROBLEM 24 -- CATALOG OF COLOR MEASURING INSTRUMENTS, HARRY K. HAMMOND III, CHAIRMAN

No report was received from Mr. Hammond. The preamble to the report of the Subcommittee for Problem 24 was published in the Journal of Color and Appearance, Vol. 1, issue 2, pp. 27-38, September/October, 1971, under the title "Color Measuring Instruments: A Guide to Their Selection," by Ruth M. Johnston. Reprints were distributed to all members of the Council, and extra copies of either the reprint or the entire report are available for $1.00 prepaid, from the Secretary. (FWB)

REPORT OF SUBCOMMITTEE FOR PROBLEM 25 -- STRENGTH OF COLORANTS -- PIGMENT SECTION, RICHARD W. HAROLD, CO-CHAIRMAN

The Pigments Section of the Subcommittee for Problem 25 is currently collecting methods from industry that are being used for instrumental determination of pigment strength. When this work is completed, an interim report will be issued. Meanwhile, we urge all members to submit methods for incorporation into the planned report.

REPORT OF SUBCOMMITTEE FOR PROBLEM 25 -- STRENGTH OF COLORANTS -- DYES SECTION, ROLF KUEHNI, CO-CHAIRMAN

1. Meetings

Two interim all day meeting with good attendance were held in September 1971 and January 1972 in order to further the work of the subcommittee.

2. Completed Report

A report by the subcommittee "A General Procedure for the Determination of Relative Dye Strength by Spectrophotometric Transmittance Measurement" has received approval of the Board of ISCC as well as of the member-body delegates. This report has in the meantime also been approved by Committee RA36 of the American Association of Textile Chemists and Colorists and was published in the Textile Chemist and Colorist, Vol. 4, issue 5, pp. 133-142 (May, 1972).

3. Work in Progress

a. Three round robins determining accuracy and repeatability of relative strength evaluation of dye samples (acid, disperse, direct dyes) have been performed, with approximately 11 laboratories taking part in each case. The results have been extensively analyzed by statistical methods and an early publication of the results is planned.

b. Therese Commerford has written a review of "Difficulties in Preparing Dye Solutions for Accurate Strength Measurements" with her own illustrative data and data supplied by other members of the subcommittee. Comments to the report have been invited from the membership. An early publication under Miss Commerford's name as a project of this subcommittee is planned.

c. A second draft of a document "A General Procedure for the Determination of Relative Dye Strength by Spectrophotometric Reflectance Measurement" has recently been distributed and will be discussed at length at the annual meeting.

d. A second draft of "A Systematic Approach to Developing a Method for the Determination of Relative Strength by Spectrophotometric Transmittance Measurement" was recently distributed to the members for extensive discussion at the annual meeting.

e. Standard Depth Determination

A modified version of Gall's computer program FIAF, called SDGAL, has been prepared by the writer and was approved for distribution to interested users in the U.S. by Dr. Gall. The program allows the rapid determination of standard depth according to Gall's method.

A brief paper "Aids for the Colorimetric Determination of Standard Depth According to Gall," describing the background and the availability of the computer program and the graphical aids, authored by Rolf Kuehni, was published in the Journal of Color and Appearance, Vol. 1, issue 4, pp. 35-36 (February-March, 1972), as a project of this subcommittee.

REPORT OF SUBCOMMITTEE FOR PROBLEM 27 -- METAMERISM INDICES, HENRY HEMMENDINGER, CHAIRMAN

Work is being undertaken to evaluate the relation between existing industrial practice in making metameric matches and the definition of the Special Index on Illuminant Metamerism recently recommended by the CIE. The very large number of metameric matches which are needed as a consequence of the new Federal regulation restricting the use of lead pigments in paints presents an unique opportunity to obtain a substantial number of metameric pairs. Provisions will be made for measurement of a substantial number of these samples, and for computation of specifications for various observer-illuminant systems, in order that the existing practice can be related to the newly-defined CIE Index.

REPORT OF SUBCOMMITTEE FOR PROBLEM 30 -- COLOR IN THE BUILDING INDUSTRY, MILO D. FOLLEY, CHAIRMAN

This report is unfortunately similar to that of the past three years. To the chairman, this is a disturbing factor. However, progress is being made and the subcommittee is fully aware that the task is a large one, but of great importance.

It is obvious that more exposure is necessary in order to build a base of wide acceptance. This subcommittee requests that each member of the ISCC who represents a member-body, request that his society review our program and write a letter to us advising of their acceptance of the Universal Color Language proposal. This will add more clout to our program.

The Appearance Folio which this subcommittee proposes, is the vehicle for the Color Language. It is visualized as a file drawer receptacle, expandable as required, made up of space compartments where identified colors may be filed. It will contain the Centroid color chips, a gloss scale, a black and white tolerance scale and a section on color and gloss data with reprints from other ISCC subcommittees and others which deal with the mechanics of color identification. ISCC subcommittees which have material suitable for the folio are requested to consider it for inclusion in the folio and advise this subcommittee.

Problems of sponsorship of the Folio are recognized and requests are made for interested publication sources and for initial financing. It is hoped that ISCC can find a method to secure funds to finance the production of the Folio. It is the opinion of this subcommittee that everyone dealing with color will require the Folio as a working source, therefore, it is possible that this may be a profitable undertaking.

Discussion at the meeting involved coordination with ASTM and other standards organizations and a liaison with international color groups.

Although progress is not always obvious, the subcommittee is encouraged by the number of letters received from universitites, manufacturers and

individuals expressing interest in the Color Language.

Subcommittee 30 held a workshop entitled "Color in Construction" during the Fall Conference held at the Shoreham Hotel, Washington, D.C., September 30, 1971. The Chairman was Milo D. Folley and speakers from the subcommittee included Nick Hale, Dick Hunter and Ken Kelly.

Among those attending were representatives of the Navy, Veterans Administration, major manufacturers, architects and universities. The workshop presented facts concerning the Universal Color Language and its application to industry. Discussion also included the forthcoming "Appearance Folio" and the necessity of considering all the aspects of color specification.

REPORT OF SUBCOMMITTEE FOR PROBLEM 31 -- STANDARD METHODS OF MEASURING AND SPECIFYING THE COLOR OF EXPOSED AND PROCESSED COLOR TRANSPARENCIES, RUSSELL E. ZIMMERMAN, CHAIRMAN

No report was received from Mr. Zimmerman.

REPORT OF SUBCOMMITTEE FOR PROBLEM 32 -- COLORIMETRY AND SPECTROPHOTOMETRY IN THE GRAPHIC ARTS, JOHN A. C. YULE, CHAIRMAN

(This subcommittee has not yet met. The Board of Directors recommended that the following outline by the Chairman be published at this time to serve as an introduction to this new problem subcommittee area. FWB)

Introduction

Although color is important in the printing industry, color measurement is not often used, and it seems that the time is ripe for using it more widely. To make this possible, we need to decide when it is appropriate to use true color measurement (as opposed to densitometry) and how it should be done. Then we must disseminate this information. That is the object of setting up this problem subcommittee. We have made it an ISCC problem rather than a TAGA (Technical Association of the Graphic Arts) problem because of the large amount of colorimetric expertise available in ISCC; because the colorimetric experience of other industries (member-bodies of ISCC) will be helpful; and because most of the graphic arts associations are members of ISCC.

Specific Projects

1. Assembling the Subcommittee. One working committee member representing each of the following: pigments, inks, paper, printers, buyers of printing, instrument manufacturers, and each of the appropriate U.S. educational, research or trade associations. This, with the addition of someone who can write, would provide the working nucleus. In addition, each color measuring instrument manufacturer, and each of the foreign research institutes, would be invited to provide a representative. Other individuals could join if interested.

2. Collecting Information. The first step would be to find out what is now being done in the industry. Who is using colorimetry; what is it used for; how is it done; do any colorimetric specifications now exist (not forgetting tolerances and absolute or relative color strength measurements). A simple questionnaire (draft attached) would be advisable, the positive responses being followed up with more detailed questions. But each of the committee members who is collecting information would do it in his own way. Color specifications from foreign countries, some of which have advanced further than we have, would be included. We should find out not only where color measurement is being used, but also where people feel a need for it.

3. Preliminary Survey. The information collected under heading (2.) would be compiled in a preliminary survey and circulated at least to the committee members.

4. Discussion of Methods. The subcommittee would try to agree on methods for measuring and specifying color in the printing industry, and these tentative recommendations would be circulated widely. Methods used in other industries would be taken into account.

5. Standard Methods. When these methods had shown signs of being adequate and acceptable to the industry, steps would be taken to have them adopted as an official standard.

Discussion

We should try to start out in a small way and not attempt to make the preliminary survey complete. The collected information will tend to fall into categories, and the preliminary survey for all the categories need not be circulated at the same time. Some of the categories might be:

1. Standard Process Inks

2. Other Ink Standards

3. Paper

4. Pigments

5. Determining and Expressing Color Tolerances

6. Color Strength of Inks

7. Comparing Originals and Reproductions

8. When to Use True Color Measurement Rather Than Densitometry.

Draft Questionnaire on Colorimetry in the Graphic Arts

The object of this questionnaire is to find out about the use of colorimetry in the printing industry, with a view to preparing recommendations on how and when true colorimetry (as opposed to densitometry) should be used in the industry.

1. How do you check colors in your organization?

a. Spectrophotometer

b. Colorimeter

c. Densitometer

d. Visual Comparison

e. Other

2. What colorimetric measurements do you now make or feel a need for?

	Now	Needed
a. Paper		
b. Process Inks		
c. Other Inks		
d. Light Sources		
e. Originals and/or Reproductions		
f. Other		

3. If you now make color measurements, what are they used for?

a. Communication with suppliers

b. Communication with customers

c. In-plant use only

4. Do you make use of any numerical color specifications? If so, what type of specifications and tolerances?

5. General comments, including suggested further sources of information.

6. If descriptions of your colorimetric methods are available, please attach a copy to this questionnaire.

7. If this information confidential?

MEMBER-BODY DELEGATES

REPORT FROM AMERICAN ARTISTS PROFESSIONAL LEAGUE DELEGATES, FRANK C. WRIGHT, CHAIRMAN

The past year has been a momentous one for the graphic arts.

The public has by now seen all of the extremes of fads with shock value -- and the tide is now running strongly to "realism."

Realism is now "in." Relevance is the "in" word. Relevance to life, particularly to "nature," is now the public preference. There is a great public demand for what is "meaningful," and the extreme faddists have gone overboard on technical innovations. The press is recognizing this trend, the critics, the museums, the artists and even the dealers have faced up in increasing numbers and are recognizing the appalling dead end into which fads have lead us.

Arts had been fragmentated and abstracted to a point where innovation for the sake of innovation had lost its value. Technical innovation is now distinguishable from creation in the sense of artistic innovation.

There is now a strong movement towards standards. The need is urgent, first for technical standards for artists' materials, particularly in the field of artists' pigments. Acrylics and the large range of new colorants are now under study with the objective of establishment of workable standards on light fastness, vehicle, etc.

Substantive standards for judging works of art are also under consideration. What the artist is trying to say is now becoming a matter of primary consideration. Then comes the next question, "How important is it?" Both of these questions are substantive, which any intelligent layman can properly ask of a "work of art."

If these questions are answerable in the work, then comes the question, "How well has the artist presented his subject?" This is where technical considerations can be brought into play. Color, light and dark, line patterns and form, can then be considered after the substantive questions have been satisfactorily answered.

(Mr. Wright appended the following: "I would like to

(add) a salute to the increasing importance and usefulness of the ISCC, whose reach is now out into the range of orbital cameras; also . . . . to pay our highest respects to the valiant job done by (retiring President) Randy Hanes." FWB)

REPORT FROM AMERICAN ASSOCIATION OF TEXTILE CHEMISTS & COLORISTS DELEGATES, ROLAND E. DERBY, JR., CHAIRMAN

Color is such an important factor in the utilization of the millions of yards of textile material produced each year, that widespread interest in color science and its application to textile color problems is inevitable.

The direct focal point for such problems and their possible solutions is the Color Technology Committee (RA36), a research committee of the American Association of Textile Chemists and Colorists (AATCC). This committee meets regularly, usually three times a year to consider color problems or topics submitted by AATCC members on other research committees.

In the past year the committee has examined several projects with the following results:

1. They reviewed and edited the report of ISCC Problem 25 "Determination of the Strength of Colorants" for publication in the Textile Colorist. It was published in May, 1972. Reprints will be provided for all ISCC members.

2. Many discussions were held on the possibility of recommending a color difference equation for general use in evaluation of textile color differences which may occur due to process variables or color degradation. Although the International Standards Organization (ISO) and the Society of Dyers and Colourists have tentatively designated the Adams-Nickerson equation as the preferred one, no such agreement was reached by the AATCC Color Committee. It was felt that there were still many questions to be answered and frankly, none of the equations seemed suitable in a broad general sense.

3. It was recommended that the "Standard Depths" system as recommended by ISO be adopted for colorfastness testing using AATCC method. Samples illustrating the standard depths are available from AATCC Headquarters, Research Triangle Park, North Carolina.

In the past, we have attached a list of articles on color appearing during the year in either the official journal or the Journal of the Society of Dyers and Colourists. Since these have been collected already in the British Colour Group Bibliography and will be published in the Journal of Color and Appearance they are not included in this report.

REPORT FROM AMERICAN CERAMIC SOCIETY DELEGATES, F. J. VON TURY, CHAIRMAN

This report was delayed and will be published in a later issue of the Newsletter. (FWB)

REPORT FROM AMERICAN CHEMICAL SOCIETY DELEGATES, SAMUEL M. GERBER, CHAIRMAN

The major activity in 1972 has been the presentation of a symposium cosponsored by the Inter-Society Color Council and Division of Cellulose, Wood and Fiber Chemistry of the American Chemical Society on "Recent Advances in the Dyeing and Finishing of Natural and Synthetic Fibers." The symposium was held on April 12, 1972, as a full-day meeting and it was well attended with maximum attendance of over 100 people. The various aspects of dyeing and finishing from the theoretical study of the diffusion rate to practical applications involving union dyeing of blends were reviewed. A paper on the current important topics of consumer influence on research and development in the area, one on computer color matching and another on disposal of colored effluents were also presented.

Future activities include the evaluation of programs on nomenclature, color specification in scientific articles and possibly a review of education, mill requirements for the wet processing industries as well as dyestuff manufacture.

REPORT FROM AMERICAN COLLEGE OF PROSTHODONTISTS DELEGATES, ROBERT C. SPROULL, CHAIRMAN

(Col. Sproull has provided the following material as an introduction to the newest ISCC member-body. FWB)

The American College of Prosthodontists is a young organization but today, after only two years in existence, the College proudly acknowledges over 600 members. The founding of the College provided, for the first time, an organization in dentistry to which individuals certified as diplomates by the American Board of Prosthodontists could automatically become eligible to join. Both Fellows (diplomates) and Affiliates have had at least two years of advanced specialty training in prosthodontics.

There are three main groups of prosthodontists in the College. The Fixed Prosthodontists are involved primarily with restorations which are permanently

seated or affixed in the mouth. The Removable Prosthodontists are involved primarily in cases involving restoration of partially or completely edentulous areas in the mouth with removable appliances. The Maxillo-Facial prosthodontists are more involved in cases requiring replacement of missing facial, as well as oral, tissues. These tissues may have been lost due to congenital mishaps, trauma or disease. All three groups are closely inter-related and cross training in all three areas is the general rule.

The College sought member-body status in the ISCC because of the realization by the members of the College that (1) help in dentistry's color matching problems was needed, and (2) that the ISCC offered the inter-disciplinary approach needed to insure success.

It is with a feeling of confidence and gratitude that the American College of Prosthodontists approaches the future association with the ISCC.

My personal interest in color dates back a half dozen years to the time I tried to "exactly" duplicate six extracted teeth in porcelain. After four months the realization finally dawned that it was a color matching problem and I had no foundation to understand color. A course with Fred Billmeyer and Max Saltzman at Rensselaer shortly after was the beginning of a most enjoyable exposure to the vagaries of color. The United States Army has funded a research project over the past four years that has been most challenging. Henry Hemmendinger during this period has earned our utmost respect and our deepest gratitude for his unselfish help and guidance whenever and wherever the need arose. Membership of the American College of Prosthodontists is a giant step forward for dentistry that has been long overdue -- and I heartily applaud it.

REPORT FROM AMERICAN INSTITUTE OF ARCHITECTS DELEGATES, WALDRON FAULKNER, CHAIRMAN

The AIA was represented at the annual meeting of the Committee on Vision of the National Research Council held in Washington at the National Academy of Sciences in May, 1971. Several ISCC members presented papers. These included John Flynn, AIA, on "Color and Other Related Influences in Architecture" and Waldron Faulkner on "Color in Architecture," based on his book, "Architecture and Color," published in 1972 by John Wiley & Sons.

The AIA is preparing a seminar on "Color Communications" for its 1972 Convention to be held in Houston, Texas.

REPORT FROM AMERICAN INSTITUTE OF INTERIOR DESIGNERS DELEGATES, BEATRICE WEST, CHAIRMAN

The American Institute of Interior Designers report the year of 1971 a very colorful and active period. Color provided eye-catching appeal in chapter projects in every region.

Of growing interest is the effect of color on the mentally and/or physically ill persons -- and what colors are best suited for the institutional person.

No one, until recently, has raised the questions, and little, if any, interior design works has been recorded with a research approach.

Aware and concerned with bringing interior design into the status of a meaningful and significant twentieth century profession, a few students at Parsons School of Design took it upon themselves to re-design a ward in the Brooklyn State Hospital at the request of the Hospital's Director of Volunteer Services. With no budget and limited experience to draw upon the student volunteers worked out a design plan devised with simple color and pattern and accomplished what had never been done before in converting an over-crowded ward for schizophrenic women into a somewhat pleasing environment. The result -- institutional green and grimy dismal and hopeless walls, curtainless windows and depressingly insipid space turned into acceptable living area.

With the support of the American Institute of Interior Designers and the financial contributions of over $10,000 worth of materials from contract manufacturers, the job was done. More important from hospital reports, the patients have responded overwhelmingly positive . . . to the new and colorful interiors.

On the local scene, the local A.I.D. Chapter, Area II, of Florida, entered into a joint venture benefit with the Art Guild of Boca Raton, whereby colorful vignettes were designed around the paintings, sculpture or photographs of members of the Art Guild. Thirteen vignettes were displayed, built along interesting themes, such as a bright red, white and blue scheme showing a child's portrait and a rocking chair and knitting basket, entitled, "Nana's Corner." In contrast was another, a simulated tent of parrot green and black canvas, built around the Safari photographs of wild animals and sunsets; to a delicate yellow, grey and white room, entitled "Yellow Mooning Room."

Proceeds of this benefit raised considerable sums for the Boca Raton Society of the Retarded on behalf of the A.I.D. members.

Of additional interest, local Florida A.I.D. members

are active in color styling for the "Good Life for the Golf Fan." During the last 15 years or so golf and housing have become so intertwined that in much of South Florida it is almost unthinkable to start a major housing development without a golf course. Golf has become a way of promoting the housing development -- as in the case of Jackie Gleason's Inverrary, where his first golf classic was recently held. Color is necessarily an important part in making it easy for the homebuyer, so a professional A.I.D. member has been retained to do the exterior and interior colors for all the apartments for Environ at Inverrary. In addition to providing green space and a place to play, golf courses have other aspects. The streams and lakes not only provide beauty, but also drainage.

REPORT FROM AMERICAN OIL CHEMISTS SOCIETY DELEGATES

The Secretary's office learned with regret of the resignation of the American Oil Chemists Society as a member-body, between the time of the annual meeting and this issue. (FWB)

REPORT FROM AMERICAN PSYCHOLOGICAL ASSOCIATION DELEGATES, JO ANN S. KINNEY, CHAIRMAN

In my annual report from the APA delegation in 1968, I pointed out the fact that the majority of psychologists interested in color do not study the relationship between feelings, emotions, or personality variables and color. These are the areas which the layman would consider to be the psychological aspects of color and which would have immediate practical applications to many members of the ISCC. At that time I suggested one possible reason for the dearth of activity -- that there may be no lawful relation between color in general and human motivation. If so, psychologists long ago realized this and stopped doing such research; indeed there were more studies of these problems fifty years ago than there are today. At that time I challenged any of my audience who disagreed to write me of evidence to the contrary, but I received no replies.

In this annual report I conclude that the situation is relatively unchanged. There is little in the psychological literature dealing with the effects of color on how people feel. In fact in the most recent review of Color Vision in the Annual Review of Psychology, there are no references to this topic although hundreds of articles are summarized. Color psychologists in the majority are interested in perceptual phenomena and their underlying physiological mechanisms.

There is however a positive trend to report -- a resurgence of interest in investigating this area by a newly reorganized group within the Commission Internationale de l'Eclairage. An interdisciplinary body, Committee TC 3.5, consists of psychologists, architects, lighting engineers and many others. While the area of interest of the group is very general, dealing with the agreeableness of the visual environment, color and lighting are important topics in their considerations. Periodic newsletters are distributed by the group and a number of committee meetings have been held, on both a national and an international level. The goal of the group, to design lighting and color for an agreeable human environment and to base this design on scientific principles, is indeed laudable and I hope to have more to report to you in the future.

Among our APA delegates to the ISCC, I have reports of continued investigations of color phenomena. Dr. Riggs and his group at Brown University are studying color vision in pigeons by electrophysiological techniques. Such investigations are yielding an excellent understanding of the physiological mechanisms of color vision. Dr. Riggs is currently on sabbatical at Cambridge, England.

Drs. Hurvich and Jameson from University of Pennsylvania have completed a major work, the editing of the Handbook of Sensory Physiology. In the Handbook they have three chapters dealing specifically with color, which should summarize a great deal of our knowledge on these topics. Dr. Hurvich too is on sabbatical leave at Columbia University, where he is working with color vision defects.

Color vision defects are also a topic of active investigation at our laboratory. An extensive report summarizing the results of hundreds of color defective individuals on six different tests of color vision has been published. While the data always show some correlation between degree of defect and performance score on the various tests, there are sometimes vast differences among tests in the percentage of color defectives who pass or fail. The report points up the necessity of standardizing tests for color vision defect.

A list of new publications is given below:

Blough, Patricia M., Riggs, L. A. and Schafer, K. L. Photopic spectral sensitivity determined electroretinographically for the pigeon eye. Vision Res. 1972.

Hurvich, L. A. Color Vision Deficiencies. Ch. 23, pp. 582-624. In Handbook of Sensory Physiology, Vol. VII/4 Visual Psychophysics. Jameson, D., and Hurvich, L. M. (Eds.) Berlin: Springer-Verlag 1972.

Jameson, D. Theoretical Issues of Color Vision. Ch. 14, pp. 381-412. In Handbook of Sensory Physiology,

Vol. VII/4 Visual Psychophysics. Jameson, D., and Hurvich, L. M. (Eds.) Berlin: Springer-Verlag 1972.

Jameson, D., Hurvich, L. M. Color Adaptation: Sensitivity, Contrast, After-Images. Ch. 22, pp. 568-581. In Handbook of Sensory Physiology, Vol. VII/4 Visual Psychophysics. Jameson, D., and Hurvich, L. M. (Eds.) Berlin: Springer-Verlag 1972.

Kinney, J. A. S. Color Defectives -- Basic facts on what these individuals see. Color Engineering, 9, 19-24, 1971.

Kinney, J. A. S., McKay, C. L., Mensch, A., and Luria, S. M. The visual evoked cortical response as a measure of stress in Naval environments: Methodology and analysis (1) Slow flash rates. Naval Submarine Medical Center, Groton, Conn., NSMRL Rep. No. 669, 1971.

Luria, S. M. Improvement of vision under water with chromatic filters. Naval Submarine Medical Center, Groton, Conn., NSMRL Rep. No. 679, 1971.

Paulson, H. M. Color Vision Testing in the United States Navy. pp. 164-176. In Visual Science. Pierce, J. R. and Levene, J. R. (Eds.) Bloomington and London: Indiana University Press, 1971.

Paulson, H. M. Comparison of color vision tests used by the military services. Naval Submarine Medical Center, Groton, Conn., NSMRL Rep. No. 685, 1971.

REPORT FROM AMERICAN SOCIETY OF PHOTOGRAMMETRY DELEGATES, JOHN T. SMITH, CHAIRMAN

The American Society of Photogrammetry was founded in 1934, and is dedicated to the task of disseminating information on the art and science of photogrammetry.

The Society has approximately 6,000 individual members and approximately 100 sustaining members.

The American Society of Photogrammetry has co-sponsored three meetings during the 1971-1972 year involving the use of color and color aerial photography. The Society was also responsible to the ISCC for the program of the 41st Annual Meeting on March 20 and 21 at the Statler Hilton Hotel in New York City.

The Society cordially invites any members of the Inter-Society Color Council to attend its functions, which will be noted in the ISCC newsletters as to date and place.

REPORT FROM AMERICAN SOCIETY FOR TESTING AND MATERIALS DELEGATES, HARRY K. HAMMOND III, CHAIRMAN

No report was received from Mr. Hammond (FWB).

REPORT FROM COLOR ASSOCIATION OF THE UNITED STATES DELEGATES, MIDGE WILSON, CHAIRMAN

Changing elements, dominated by economic and social conditions, have greatly affected the color picture, as attention focused on ENVIRONMENT and CONSUMERISM.

New concepts of living influenced the expanded use of color in every field and type of product, producing a fresh, synthetic surround, which places emphasis on multi-functional elements. In interior areas, the sparce, bare look resulting from minimum amounts of furniture, is frequently counter-balanced by wide areas of bright colors, in patterns calculated to alter the shape and dimensions of the rooms. Dark or restricted areas are enlivened by intriguing combinations of light and color. Although great beginnings have been made in the manipulation of light to evoke varying color effects, the full potential has yet to be explored. Thus, a wider range of colors, fresh combinations and the interplay of color and texture, dominate the environmental aspects of color.

Growing emphasis on CONSUMERISM has had a dynamic influence on the range of colors and the manner in which they are employed. FASHION, as a strong color influence, continued to lose ground. Excessive emphasis on "doing your own thing" resulted in a hodge-podge of wardrobe offerings and an equally disorganized attitude toward color planning and merchandising. Retailers concentrated on hot items and anything they thought the young would buy. Now that CONSUMERISM has become a tactical word, and the population peak has moved into the 20-35 year age group, more attention is being given to the entire market -- not just the rock crowd. This shift in emphasis away from the "way out," coupled with the quadrennial cycle of classic styling prompted by an election year, has been accompanied by significant developments colorwise. The market is reverting to its former pattern of separate styling for the two areas -- the teens and the 20s-and-up group. Colors for the two groups are similar, but the applications differ. The teen market still favors more extreme styling and the often strained combinations of colors.

With the consumer the direct target, and rapid stock turnovers the goal, color planning is oriented to the shopping centers and impulse buying. This means

the colors must have zip and impact. It also means that stocks in various departments must be color related, because the consumer is coordination conscious and expects to be able to develop and execute her own color preferences in all areas of merchandise.

World trade patterns can also be traced through colors. As imports continue to increase, foreign manufacturers have concentrated on colors appropriate for the U.S. market, which coordinate with our domestic trends. Clear, bright shades, which we have favored for several seasons, are being adopted more and more widely by foreign stylists.

For many years the U.S. has surpassed other countries in volume production and distribution. As shopping centers crop up all over the world they are being patterned after U.S. marketing concepts, with emphasis on quick sale and no-season styling. They, too, have discovered color's power to attract and sell and consequently are showing more and more merchandise in convincing colors, influenced by color styling from our market.

It is the economic conditions, rather than the fashion climate, which exert the most influence on color developments. The dominance of synthetic fibers reduces the range of textures and effects formerly available from natural fibers, with the result that there is more sameness throughout the market, placing greater importance upon color, as a means of achieving variety and individuality. Preoccupation with volume and price also means compromises are made in fabric constructions, prompting stylists to turn to the strategic use of color to enhance their value. Expansion of layered and no-season dressing has also reduced the range in weights and types of fabrics, requiring many more groups of colors throughout the year to maintain freshness and variety.

Due to general market conditions, many firms have restricted the depth and variety of their lines and concentrated on a compact group of colors. Important color trends include the interest in natural tones (white, off-white, beige-brown), the continued dominance of the sunny shades (yellow-orange-red), the growing importance of pinks and the strength of red violet-purple, with purple now established as a basic shade for many lines. The green family shows more strength in home furnishings than in fashion areas, with olive and moss types losing ground to fresh grassy and apple greens and dark pine. Warm, lively colors have outsold the blues, where navy and denim blues have shown the most strength. The extensive use of white -- alone and in combination with lively colors -- adds to the clarity of the tones. Some interest is evidenced in soft, light shades. This development is closely related to the fibers involved and the end use. Delicate tones have an affinity for natural fibers and more expensive fabrics.

Activities of the Color Association in developing standards for both the Government and industry, continue, encouraged by the ever expanding size and requirements of all types of projects.

REPORT FROM COLOR MARKETING GROUP DELEGATES, LOUIS A. GRAHAM, CHAIRMAN

No report was received from Mr. Graham. (FWB)

REPORT FROM DRY COLOR MANUFACTURERS' ASSOCIATION DELEGATES, MAX SALTZMAN, CHAIRMAN

During the past year, the Dry Color Manufacturers' Association, at their regular scheduled meetings, sponsored several lectures on color in industry. These included:

Mr. William V. Longley of Ford Motor Company on "Automotive Pigment Color Applications" (text of this talk has been published in the Journal of Color and Appearance, Vol. 1, No. 3);

Mr. George W. Ingle of Monsanto on "Colorants and the Environment";

Mr. W. R. Barrett, Sr., of Inmont on the relationship between colorant producers and colorant users.

The Technical Committee of the DCMA (Emil Wich, Chairman) completed its work on standard methods of testing pigments for printing inks. The report of this work is scheduled for early publication in the American Ink Maker. The project was undertaken at the request of the New York Printing Ink Production Club.

Due to the continuing illness of Mr. Ed Hildebrand, Dr. Jack Ackerman, Assistant Secretary, has been acting Secretary of the DCMA.

REPORT FROM FEDERATION OF SOCIETIES FOR PAINT TECHNOLOGY DELEGATES, RUTH M. JOHNSTON, CHAIRMAN

A series of three program sessions on diverse aspects of color were presented at the Society's Annual Meeting held in Detroit in late October in keeping with the theme "Man and His World of

Color." Summaries of these sessions were published in Color and Appearance, Volume 1, No. 3, pages 25-27 (1972). Some of the papers will be published in subsequent issues of the Journal of Paint Technology.

The Bruning Award for the outstanding contribution in the science of color to the paint industry was presented to Sam Huey of Sherwin-Williams Company at the Federation's 1971 annual meeting. Sam is an ISCC delegate from the FSPT.

During 1972, the Federation is celebrating its fiftieth birthday. In keeping with this Golden Anniversary, the theme for the annual meeting is Proud Past -- Colorful Future. It will be held at the Chalfonte-Haddon Hall in Atlantic City, October 24-28. An extra feature of the meeting will be a display of equipment used in the manufacture of yesteryear's paints. A Friday morning general interest session, designed to interest the ladies as well as the predominantly male members, will feature a beautiful film on "Colors in Nature" (by Hilton-Davis Company); a discussion of the interrelationships of color trends in fashion, decorating and industrial design; a description with demonstrations of various types of metamerism and their effect on clothing, decorating, make-up, etc.; and a presentation on the history of the paint industry in Colonial New England. This latter talk is most appropriate for the Golden Anniversary program because the official symbol of the Federation is the Boston Stone, used for grinding pigments by one of the first paint companies in the New World. Of special interest to the ladies also in this presentation is the description of how one of the first paint companies was successfully operated by a woman for many years following the premature death of her husband. (It wasn't easy for a woman then either.)

Papers published in the Journal of Paint Technology during the year 1971, Volume 43, which may be of interest to members of the ISCC are listed below:

1. Burrell, H., "Hiding Without Pigments," August, p. 48.

2. Gerteis, R. L. and Elm, A. C., "Photochemistry of Titanium Dioxide Pigments and its Relationship to Chalking," April, p. 99.

3. Golden, H. J., "Effect of Various Grades of Titanium Dioxide on the Gloss of a Baking Alkyd-Melamine Enamel," September, p. 73.

4. Johnston, R. M., "Colorimetry of Transparent Materials." A condensation of the interim report of ISCC Subcommittee 14, the Colorimetry of Transparent Materials, February, p. 42. (Reprints distributed to ISCC members.)

5. Mitton, P. B. and Komar, L. C., "Calculating Color in Vinyls from Scattering and Absorption Coefficients," January, p. 58.

6. Milton, P. B. and Richards, D. P., "Model for Objective Development of Accelerated Weathering Tests," December, p. 107.

7. Richards, D. P. and Bovenzier, G. W., "Undertone of Tinted Paints," April, p. 84.

8. Ross, W. D., "Theoretical Computation of Light Scattering Power: Comparison between TiO_2 and Air Bubbles," December, p. 49.

9. Stieg, F. B., "Titanium Dioxide -- or Is It?," October, p. 36.

10. Stieg, F. B., "Weatherability of Titanium Dioxide Pigments," February, p. 82.

11. Yamasaki, S., "Intensity Variations of Ultraviolet, Visible and Near Infra-Red Bands of Terrestrial Solar Radiation," April, p. 75.

12. Philadelphia Society for Paint Technology, "Color Difference Acceptability -- Pastels vs. Deeptones," March, p. 81.

13. Southern Society for Paint Technology, "Cold Storage of Panels plus Colorimetric Control: An Approach to Stable Color Standards," January, p. 89.

REPORT FROM GRAPHIC ARTS TECHNICAL FOUNDATION DELEGATES, WILLIAM D. SCHAEFFER, CHAIRMAN

This report summarizes several types of programs involving color and color reproduction in which the Graphic Arts Technical Foundation is engaged. Programs include in-house research projects, cooperative work with other graphic arts industry associations and educational programs.

Research projects include the following:

1970-71 Color Survey: The survey of printed process colors is now completed and will be published in a GATF Research Progress Report. Of the 150 samples examined, approximately two-thirds were derived from the United States and one-third from overseas printers. An overwhelming majority of the samples, 127, were printed by lithography, 10 were printed by letterpress, 8 by gravure and 1 by flexography.

Ink Trapping: A study was conducted to determine the accuracy with which densitometric analysis can be employed to characterize the respective contributions to print color from two superimposed continuous

ink films on a paper substrate. Since the errors involved in this technique have not been defined previously, the densitometric approach was compared to that of gravimetric analysis. On coated papers, the agreement between the two techniques is generally within ± 10%; however, on uncoated papers, errors as large as 50% can arise.

Cooperative Association Studies

AAAA/MPA/GATF Study of Letterpress Proving for Magazine Printing with Process Color, Heatset Inks: This program conducted with the support of the American Association of Advertising Agencies and the Magazine Publishers Association provides guidance and assistance in the standardization of color bars, paper, inks and proving procedures for the generation of proofs from engravings which can be used in the evaluation of production press prints. The introduction of a standard paper for this type of proving has met with considerable success across the large majority of the industry. A standard color bar also has found general acceptance but some modification has been required in the color of the yellow print since it was first introduced. A draft copy of a new Research Progress Report on "A Guide to the Use of the Reflection Densitometer" has been reviewed by the committee and densitometer manufacturers and will be published during the coming year.

Web Offset Proving: An industry committee has been organized under the sponsorship of the American Association of Advertising Agencies, the Magazine Publishers Association and the American Business Publications to determine the extent to which proving procedures for web offset publications can be standardized. A new set of standards has been prepared and will be published during 1972.

Educational Programs

Seminar on Color and Color Reproduction: These seminars have been presented at GATF for those who are experienced in color reproduction and process color work. Seminars have been conducted under the leadership of Mr. Francis L. Cox and Mr. Gary G. Field. Workshops have also been conducted in the same area by Mr. Cox and Mr. Frank Preucil.

Conferences on the Preparation and Reproduction of Color Copy: Conferences on this subject were held in both Chicago and San Francisco during 1971, and a similar conference was scheduled for New York City on May 23 and 24, 1972.

REPORT OF GRAVURE TECHNICAL ASSOCIATION DELEGATES, OSCAR SMIEL, CHAIRMAN

The Gravure Technical Association reports that Ink Standards for all gravure publications remain essentially the same as in previous years. There were some minor changes in the chromaticity of the yellow inks of Group II and Group III but of insufficient significance to affect the 4 color appearance of their advertisements or editorial content. Group II inks are used by magazines such as Family Circle, Woman's Day, American Home, Dell Publications and MacFadden Publications.

Group III inks are used by Seventeen, TV Guide, Ingenue and Glamour. The new color tone scales including Group I and IV inks used by printers and engravers have just recently been reprinted. They are important as a means for checking progressive proofs and film positives supplied by advertising agencies to gravure publishers.

The G.T.A. Annual Convention was held in New York at the Hotel Commodore, April 11th, 12th, and 13th this year. A presentation was made at one of the evening sessions regarding the problems encountered by engravers and printers when color separations have to be made of color prints or color transparencies that have been altered or improved by retouching. It seems that retouching dyes used on original color copy or duplicates of color copy do not photograph or separate as seen by the human observer. What appears to be perfectly good retouching to the eye, photographs as if it had never been retouched; or worse yet, results in complete distortion of the original or intended colors. This is due to incompatibility of retouching dyes used with the dyes inherent in the emulsion of the original color print or transparency.

It is recommended therefore, that only dyes of the same system as recommended by the manufacturer of the original transparencies or color prints be used. In making duplicate transparencies of original transparencies the same theory applies. Best color duplicating is achieved if the duplicating film used is manufactured by the same company as the one who made the film used to photograph the original scene. Keeping everything within the same system is evidently a big part of the solution to the problems and hazards incurred when retouching or duplicating original art intended for color reproduction in the printing and publishing industry, whether it be gravure, letterpress, or offset.

The G.T.A. Color Copy Preparation booklet is now completed and is available from G.T.A. It is a guide for advertising agencies and art studios which create art work for reproduction by rotogravure printing.

The Gravure Technical Association, in cooperation with the American Association of Advertising Agencies, Graphic Arts Technical Foundation, and Magazine Publishers Association has adopted the American National Standards Institute's Standard of 5000 Kelvin Color Temperature for viewing and appraising color copy and reproduction proofs. The 5000 K Standard has finally been officially approved, as of Jan. 21, 1972 by ANSI after almost twenty years of study and discussion during which time most European and Asian countries long ago adopted 5000 K as their standard.

REPORT FROM ILLUMINATING ENGINEERING SOCIETY DELEGATES, CHARLES W. JEROME, CHAIRMAN

An IES Light Art Committee, J. F. Maguire, Chairman, has recently been formed. One of the aims of the committee is to expose all members of IES to the exciting aspects of the use of light in Art. Another goal is to find ways to translate to artists the principles involved in lighting products and techniques that will be of assistance to them in the further development of the art. It is expected that the activities of this committee will closely parallel those of ISCC in this field.

At its last Annual Technical Conference, the following papers on aspects of color were presented:

Influence of Application Conditions on Lumen Output and Chromaticity Characteristics of Metal Halide Lamps.

The Effect of Temperature on the Color Rendering Properties of Fluorescent Lamps.

Flattery Vs Color Rendition.

The Subjective Measurement of Color Shifts with and without Chromatic Adaptation.

A Mercury Lamp for Lighting People.

Most of these papers will appear in the newly constituted Journal of the IES. Additional papers which have also been published in the Journal are: "High Intensity Discharge Sources in Commercial Interior Lighting" (Jan. 1972) which concludes that as these sources improve in efficacy and color rendering they will be used in school and office lighting; and "Should Rear Lights of Motor Vehicles be Color Coded?" It has been suggested that different colors of rear lights be used to show whether a car is cruising, coasting or braking. This paper concludes that this coding should not be used in the near future because of difficulties and disadvantages which have not been adequately investigated.

The other IES publication, Lighting Design and Application (LD&A) had an article (Aug. 1971) by Dr. Judd, "Choosing Pleasant Color Combinations" giving his interpretation and summary of the IERI study by Dr. Helson and Dr. Lansford.

LD&A also published "Checking the Color Match in Print Proofs" (Sept. 1971) which described the installation of high color temperature, high color rendering fluorescent lamps in a print shop for the critical inspection of color printing for precise color match with the original art work.

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

Major effort has been the work of Alexander Styne in trying to get a statement about "Color and Its Effect on Human Behavior" into a definitive scope for approval from the ISCC Board for a problem number assignment.

Dr. Robert Burnham of Eastman Kodak made a color presentation on behalf of the ISCC at the 1972 IDSA convention at Kentucky Dam, Kentucky in October.

Professor Robert Redmann and the Industrial Design Department of University of Bridgeport contributed much time and effort to the design of the MacBeth award emblem being awarded for the first time at this meeting in 1972.

We have a new IDSA delegate, Alfred M. Blumenfeld, who is taking on an active task for the ISCC Board of Directors and we believe will become an active IDSA contributor to our color society.

As a Society, IDSA, through its membership, continues to actively promote and use color over a broad spectrum of human environment; contributions that range from color specifications for operational controls, product colors, technological and specialty environments, such as hospitals, work areas, general office and lounge spaces. In addition, they are doing active individual research on color perception by consumers and how color influences the public and private response of the layman to its immediate surroundings.

This latter subject area is the root of our IDSA collective interests in setting up a problem study for "Color and its Effect on Human Behavior" in whatever form will please the council.

REPORT FROM INSTITUTE OF FOOD TECHNOLOGISTS DELEGATION, JOHN N. YEATMAN, CHAIRMAN

Brief meetings were held individually with the voting delegates, Dr. Angela Little and Dr. F. J. Francis. We agreed to publicize the availability of the report of Problem Subcommittee 24, "Color Measuring Instruments: A Guide to Their Selection" in the Journal of Food Technology. This appeared in the April 1972 issue, Vol. 26, No. 4, page 48.

Dr. Angela Little agreed to speak on appearance attributes at the Quality Assurance Division Symposium, 32nd Annual IFT Meeting in Minneapolis, May 1972.

The American Society for Quality Control (ASQC), Food and Allied Industries Division solicited a short course outline in color science. Angela Little and John Yeatman submitted a detailed outline which they would present jointly in a two-day period. The ASQC is considering supporting the course which would, if presented, further the food technologists understanding of the complexities of this esoteric science.

Dr. Francis and Dr. Clydesdale of the University of Massachusetts continue to keep the subject of color science before the public eye with their series of articles appearing in Food Product Development. This publication is widely distributed.

Our IFT member delegation through its efforts is fulfilling its mission, in some small measure, which is to promulgate dissemination of the science of color to the membership and others in food technology.

REPORT FROM NATIONAL ASSOCIATION OF PRINTING INK MANUFACTURERS DELEGATES, F. L. WURZBURG, CHAIRMAN

Mr. Wurzburg informed the Secretary that no report would be received from the NAPIM Delegation this year. (FWB)

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

(Mr. Call noted the change of name of the former National Paint, Varnish and Lacquer Association to National Paint and Coatings Association. FWB)

The National Paint and Coatings Association continued its work in calling the attention of the consumers to wonders of colors that can be achieved through the use of paint. This work has been carried on through various news media as well as themselves.

Individual company members of the Association are doing a great deal of work in the area of educating consumers regarding the use of color and providing tools for the consumers' needs in this endeavor. The Association will continue this effort through the year 1972, utilizing every medium available.

REPORT FROM THE NATIONAL SOCIETY OF INTERIOR DESIGNERS DELEGATES, LEON BARMACHE, CHAIRMAN

As of 1971, the Secretary's office was advised of the appointment of a new chairman of the NSID Delegation. Regrettably, as in 1970 and 1971, no report from this Delegation was received. (FWB)

REPORT FROM OPTICAL SOCIETY OF AMERICA DELEGATES, DOROTHY NICKERSON, CHAIRMAN

The 1971 Fall meeting of the Optical Society was held October 5-8 in Ottawa, Canada; the 1972 Spring meeting was held at the Statler-Hilton Hotel, New York City, April 11-14.

At Ottawa, the invited papers included a symposium on color and vision arranged by the respective Technical Groups. Part one, under the chairmanship of R. M. Boynton, on "color differences, television, and mechanisms" consisted of four papers: 1. Recent developments of color-difference evaluations by Gunter Wyszecki, National Research Council, Canada; 2. Multidimensional scaling of visual stimuli by J. Douglas Carroll, Bell Telephone Laboratories; 3. Color vision and color television by C. J. Bartleson, Macbeth Research Laboratories; 4. Neurophysiology of color vision by Nigel W. Dow, Washington University Medical School. Part two, "techniques for the improvement and evaluation of visibility, discrimination, and lighting" under the chairmanship of Leo M. Hurvich, consisted of three papers:

1. Optical magnification for subnormal vision, an historical survey by Louise L. Sloan, Wilmer Institute, Johns Hopkins Hospital; 2. Optical magnification in visual microscopy by Gerald Westheimer, University of California, Berkeley; 3. Status of a new technology for evaluation of lighting in terms of visual data by H. R. Blackwell, Institute for Research in Vision, Ohio State University.

Contributed papers in a session on color, chaired by G. L. Howett, covered several studies relating to color vision and color including one by Whitman Richards which will prove both basic and practical if it can be followed through to the conclusion he anticipates. He discussed a one-stage model for color conversion which suggests that if color descriptions for samples under any condition of illumination or adaptation were referred to a single reference illuminant, e.g. "C," it would then be possible, by discounting the illuminant and correcting for Helson's contrast effect, to relate these two effects in a manner that suggests they may be the result of a single physiological process.

Technical group discussions on color, vision, and radiometry and photometry were well attended by color-interested members. The 1971 Tillyer Award was presented to Louise Sloan "in recognition of her many distinguished accomplishments in the field of vision, especially her work in color vision and color deficiencies."

The OSA Committee on Uniform Color Scales met in Ottawa, Dr. MacAdam substituting for the chairman, Dr. Judd, who hopes to wrap up the results of the committee's longtime study some time in the future. At the moment attempts are being made to check the correlation of committee results obtainable with Reilly's recent optimum cube-root type of color space. If correlation between this type of space and the committee experimental results can be shown to approach that achieved by MacAdam's empirical Xi-Eta space, the cube-root representation will be preferable because extrapolation can then be carried out within the same space used to represent the data within the color gamut covered by the committee studies.

Several important papers on color appeared in the Journal of the O.S.A. and in Applied Optics in 1971, principally by Land, Chickering, Richards, Wyszecki, Nayatani, MacAdam, Semmelroth, Faulhaber, Strocka, several of them relating to various aspects of color-difference studies. The December number of the journal contains an index of 1971 papers.

REPORT FROM PACKAGE DESIGNERS COUNCIL DELEGATES, KARL FINK, CHAIRMAN

No report was received from Mr. Fink. (FWB)

REPORT FROM PAPERBOARD PACKAGING COUNCIL DELEGATES

The Secretary's office learned with regret of the resignation of the Paperboard Packaging Council as a member-body, between the time of the annual meeting and this issue. (FWB)

REPORT FROM SOCIETY OF MOTION PICTURE AND TELEVISION ENGINEERS DELEGATES, W. T. WINTRINGHAM, CHAIRMAN

Technical advances in the reproduction of color through the medium of motion picture film or of television continued to be reported during the year 1971 to the semi-annual conferences, the special topic conferences, and the meetings of the local Sections of the Society of Motion Picture and Television Engineers. Much of this new information was published during the year in the Journal of the SMPTE. The papers on the subject are listed under the headings Color, and Television, in the annual index which is published as Part II of the December 1971 issue of the Journal.

The Herbert T. Kalmus Gold Medal Award was presented to Linwood G. Dunn for his highly original contributions and innovations in special color film optical printing and the creation of special optical effects for many notable feature films.

The David Sarnoff Gold Medal Award was presented to Dr. Walter Bruch for his contribution to the development of the PAL system for color television broadcast transmission, now standard in many countries, and for his continuing efforts toward the improvement of color television.

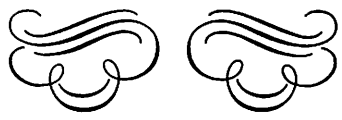
The Society continued to serve as administrative host to the Ad Hoc Committee for the Study of Color Television, which was formed in 1968 by the Joint Committee for Inter-society Coordination. It is believed that the Ad Hoc Committee has discovered most of the causes for the variability of color as seen on the home television receivers; and in consequence, it will have completed its task when the problems are referred to the five organizations that compose the JCIC.

REPORT FROM SOCIETY OF PHOTOGRAPHIC SCIENTISTS AND ENGINEERS DELEGATES, C. JAMES BARTLESON, CHAIRMAN

During 1971 a number of activities of the Society of Photographic Scientists and Engineers bore on the subject of color either directly or indirectly. The Society's Annual Conference was held in Chicago during April 17 through 25. A tutorial seminar on "Image Quality of Photographic Systems" was held in Newton, Massachusetts, during May 12 through 14. The Society's third symposium on "Unconventional

Photographic Systems" was held in Washington, D.C., during October 20 through 23. Many of the papers presented at these meetings have been published in the Society's journal Photographic Science and Engineering. A bibliography of ten papers, dealing with color, that have been published in that journal during 1971 is appended here.

In addition, a Handbook of Photographic Science and Engineering has been prepared by the Society and is scheduled to be published during 1972. That reference book will contain a number of sections or chapters dealing with color, color photography, and colorimetry.



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"Color Gamut Obtainable by the Combination of Subtractive Color Dyes. I. Actual Dyes in Color Film."

(1) Optimum Peak Wavelengths and Breadths of Cyan, Magenta, and Yellow. Noboru Ohta, No. 5, p. 399.

(2) Influence of Unwanted Secondary Absorption Peak. Noboru Ohta, No. 5, p. 416.

"Color Television from Monochrome Transparencies Using Modulated Latent-Image Gratings," C. N. Kurtz, F. C. Eisen, and G. C. Higgins, No. 5, p. 343.

"Effects of Evacuation and Chemical Sensitization on Sensitivity to X-Rays and γ-Rays," W. C. Lewis, T. A. Babcock, and T. H. James, No. 3, p. 209.

"Effect of Multiple Reflections on the Tone Reproduction of Contact Prints from a Paper Original," Yasushi Ohyama, No. 1, p. 64.

"Electron Microscope Study of Surfaces of Dyes AgBr Layers," L. E. Brady and J. F. Hamilton, No. 2, p. 138.

"Major Trends in Masking for Color Improvement: A Review," M. de Ramaix, No. 3, p. 262.

"Morphology of Color Images Formed by Color Development with Substantive Couplers," G. V. van Veelen, No. 3, p. 242.

"Note on a Dye Aggregate Structure Specific to the (100) Face of AgBr," George R. Bird, No. 2, p. 134.

"Reflection Density of Multilayer Color Prints. I. Specular Reflection Density," Noboru Ohta, No. 6, p. 487.

REPORT FROM SOCIETY OF PLASTICS ENGINEERS DELEGATES, M. M. GERSON, CHAIRMAN

The activities of SPE in color, pigmentation, light transmission, and surface characteristics are concentrated in the Color and Appearance Division. The outgoing chairman is James Simpson of Ferro Chemical Company. The incoming chairman is Leonard Komar of Titanium Pigments Division, National Lead Company.

An expanded Newsletter is published twice a year by the Division and circulated to its members as part of their divisional dues benefits. This Newsletter presents special articles of interest on the subject of color, not generally available to SPE members as well as digests of the activities of related organizations such as ISCC.

The CAP Division is also charged with preparing Regional Technical Conferences on the subject of Color and Appearance, as well as a series of sessions on these subjects at the Annual Technical Conference held in May of each year. This year the ANTEC will be held at Chicago, May 15-May 18.

Articles of interest that appeared in the SPE Journal during the year 1971 are:

Plastics in Art: A New Dimension, by Eugene Bolger

Coating Polymers by Electrophoretic Deposition, by E. P. Damm, Jr. and M. A. Fargenbaum.

Guide to Plastic Bottle Decoration, by A. N. Skeels, Jr.

Producing Pigmented Thermoplastics in Volume, by R. L. Adams

How and When to Use Fluorescent Pigments in Plastics, by T. J. Gray

Guide to Mixing Colors for Plastisols, by M. C. Miller and M. M. Gerson

REPORT FROM THE TECHNICAL ASSOCIATION OF THE GRAPHIC ARTS DELEGATES, W. L. RHODES, CHAIRMAN

The TAGA Color Committee will meet at the 1972 Annual Technical Conference, May 14-17, 1972, in Cleveland, Ohio. This Committee, sponsored by the TAGA Delegation, will continue its work on Color Densitometry. Seven papers on color and color reproduction will be presented at the annual meeting:

"Control Chart Approach to Maintaining Uniform Quality in Multicolor Presswork," by R. Loekle

"A Study of Neutral or Gray Balance Requirements for Photomechanical Reproduction of Hard-Dot Rotogravure," by K. K. Puri

"Computation of Dot Areas Required to Match a Colorimetrically Specified Color Using Modified Neugebauer Equation," by I. Pobboravsky

"A Practical Approach to Gray Balance and Tone Reproduction in Process Color," by Z. Elyjiw

"Accuracy of Color Reproduction with the Digital Computer-Scanner System of Color Separation," by Dr. N. I. Korman

"A Television Engineering Approach to Graphic Arts Color Correction with Electronic Scanners." by R. L. Hallows, Jr.

"The 1970-71 GAFT Color Survey," by G. G. Field

REPORT FROM TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY DELEGATES, PETER C. HAMBAUGH, CHAIRMAN

The revision of TAPPI Standards on Spectral Reflectance and Color of Pulp and Paper, T-216 and F-422 was published in the February 1972 issue of TAPPI Magazine as Spectral Reflectance, Transmittance, and Color of Paper and Pulp. T-480, Specular Gloss of Paper and Paperboard at 75^{o}, was published in the December 1971 issue of TAPPI.

Indices for Whiteness and Yellowness and a compilation of Color Difference Formulae will be published as TAPPI Technical Information Sheets.

Mr. Bob Hoban, of Sandoz Colors and Chemicals, is a new member of the TAPPI delegation. Len Dearth, of the Institute of Paper Chemistry, is again a member of the TAPPI delegation. Bob is serving on Franc Grumm's Subcommittee on Problem 18.

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NOTE:

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.