

INTER-SOCIETY COLOR COUNCIL

NEWS LETTER

#160

ANNUAL MEETING ISSUE
REPORT OF THE 31ST ANNUAL MEETING
STATLER HILTON HOTEL, NEW YORK, NEW YORK
MARCH 12, 13, 1962

"LIGHTING FOR COLOR"
THEME OF 1962 MEETING

Psychology and appearance were widely discussed at the 31st Annual Meeting of the Inter-Society Color Council. Demonstrations of effects and souvenirs added interest to the subject. Of particular interest were the examples of metamerism prepared by Roland Derby, G. L. Erikson, Walter Granville, Ralph Pike, Warren Reese, and the folder on metamerism by Walter Granville.

The Problems Subcommittee meetings continue to be one of the more fruitful and interesting activities of the Council. Ten sessions were held on Monday, March 12. They included Subcommittees on Problems 2, 7, 10, 14, 16, 17, 18, 21, 22, and 23. A session was scheduled to consider new problems suggested by participants.

Sunday, March 11. Board of Directors Meeting

Monday, March 12. Problems Subcommittee Meetings

Tuesday, March 13. Business Session

A. M. Reports of Officers Committees, Delegations, and Representatives

P. M. Symposium on "Lighting for Color"

Moderator: Mr. C. L. Crouch, Technical Director of the Illuminating Engineering Society, New York City

"Psychology in our Luminous Atmosphere"

Mr. Ronald C. Allison
The T. Eaton Company, Ltd.
Toronto, Canada

"Color Rendering Properties of Common Light Sources and Methods for Rating Them"

Miss Dorothy Nickerson
Dept. of Agriculture
Washington, D. C.

"Dynamic Metamerism"

Mr. Walter Granville
Industrial Color Consultant
Libertyville, Illinois

"Color Clicks On and Off as Light Goes Up and Down"

Miss Gladys Miller, Editor
 New Homes Guide
 Holt, Rinehart & Winston, Inc.
 New York, New York

Banquet Lecture

"Hue, Saturation and Lightness in Photography and Television"

Mr. Ralph M. Evans
 Director Color Technology
 Eastman Kodak Company
 Rochester, New York

ANNUAL REPORT OF THE BOARD
 OF DIRECTORS, RALPH M. EVANS

The Board of Directors has held two
 regular meetings since the last annual
 meeting. On October 10, the Board of

Directors held a meeting at the Statler Hilton Hotel, New York, New York. The report of the Nominating Committee was accepted, and it was recommended that a brief biographical sketch of each nominee be sent to the voting delegates, instead of merely listing their names. This information would also be included in the News Letter.

Mr. Charles W. Jerome and Mr. Warren B. Reese, cochairmen for the 1962 meeting, reported their plans for this meeting. Mr. Calvin Hathaway, Director of the Museum for the Arts of Decoration at the Cooper Union, was present to discuss the 1964 annual meeting, which is to be held in cooperation with Cooper Union. Mr. Roland Derby, Jr. reported on progress that had been made to date by the Bibliography Committee. Mr. Norman Macbeth gave the Treasurer's report, after which the Board passed a motion empowering Mr. Macbeth to transfer \$1,500 from the present cash position and invest it in the Putnam Growth Fund.

Mr. Ralph Pike, Chairman of the Problems Committee, reported on the subcommittees that are now active. He noted that the final draft of the report from the subcommittee for Problem 20, "Basic Elements of Color Education," had the approval of both the Editorial Committee and the Board of Directors, and that the next step would be to print adequate copies to be sent to the voting delegates for their approval. The Board authorized this printing and asked Mr. Pike to send a letter explaining the work of this subcommittee to the voting delegates and directed the Secretary's office to send out copies of the report at the same time. The Secretary was also asked to obtain copyright protection on this report.

On March 11, 1962, the Board of Directors held a meeting at the Statler Hilton Hotel in New York City. The Treasurer's report and the Finance Committee were approved and recommended for favorable action at the annual meeting in New York City on March 13.

The report of the Election Committee was read and the officers and directors for a two-year term starting at the end of this annual meeting are:

President	William J. Kiernan
Vice-President	Ralph E. Pike
Secretary	Ralph M. Evans
Treasurer	Norman Macbeth
Directors	Mrs. Blanche R. Bellamy
	Hugh R. Davidson
	Randall M. Hanes
	Richard S. Hunter

According to the By-Laws, the vice-president is the president-elect and succeeds to the presidency, and the retiring president (G. L. Erikson) automatically becomes a director for a period of two years.

The applications for admission as member bodies by the Dry Color Manufacturers' Association and the Society of Plastic Engineers Inc. were recommended for favorable action by the voting delegates at the 31st annual business meeting.

It was decided to hold the 1963 annual meeting at the Statler Hilton, New York City, March 11 and 12. The 1964 meeting will also be in New York and will be held in cooperation with the Cooper Union Museum as voted earlier.

REPORT OF THE SECRETARY
RALPH M. EVANS

The Inter-Society Color Council now consists of 29 Member Bodies. There are 200 delegates and 416 individual members. During the year there have been 12 resignations and the loss of two members by death, namely: Dr. Brooks Brice and Mr. Fred Cooper. Twenty-eight new members were approved at the October 10, 1961 Board meeting, and 21 at the March 11, 1962 meeting.

At the Board meeting October 10, 1961:

Willard Allphin, Howard L. Amberson, Ralph W. Brocklebank, Raymond M. Cohen, Gerald Cooper, Donald V. Drury, M. Steven Fineberg, Paul M. Fisher, Frederick J. Francis, Velma Smith Gaston, Lynwood I. Gibson, Henry W. Godshalk, Maurice Green, Rhoda J. Hakim, Philip H. Harris, V. Robert Hendrickson, Robert F. Hoban, Ira R. Kohlman, Romuald Lakowski, Dr. Lucy M. Maltby, Mary C. Miller, Shizuo Murakami, Jack E. Pinney, Calvin W. Shaw, Robert E. Sherman, Dr. Michael H. Siegel, Evalyn A. Simms, Hanns P. Struck

At the Board meeting March 11, 1962:

Richard G. Alexander, George E. Baer, C. Wesley Bullock, Dr. Chester E. Claff, Jr., Dr. Stewart Clare, Grant E. Davidson, B. B. Dieter, Howard Kenn Elliot, Simao Goldman, Ken Helms, Charles H. Keen, Henry W. Levison, Warren G. Lewis, Sara Little, Richard Lurie, Dr. Sidney M. Newhall, Malcolm D. Paterson, Lloyd R. St. Romain, Robert B. Sankey, Robert E. Sherman, Roy C. Trammel

During the year the book "Wood Color in Relation to Illumination and Color Environment" authored by Walter C. Granville was sent out to the membership through the courtesy of the American Marietta Co.

The final draft of the report of Subcommittee on Problem 20 "Basic Elements of Color Education" which had been approved by the Editorial Committee, was submitted to the Board of Directors who approved this report and recommended that the Secretary send copies to the voting delegates for their consideration and approval. A total of 47 ballots from 25 of the 27 member bodies were returned to the Secretary's office. 44 ballots approved this report and 3 ballots did not approve the report. The Secretary therefore reported to the Board of Directors that this report stood approved by the voting delegates. All societies from whom ballots were received had a majority of approving delegates, i.e., no society voted against approval of this report.

REPORT OF THE TREASURER
NORMAN MACBETH

The Treasurer submitted a report from Gremmel and Wuerfel, accountants, who had examined ISCC records for 1961. This report, on file in the Secretary's Office, is summarized as follows.

Balance Sheet as of December 31, 1961

ASSETS

Cash		
The Columbus Trust Company		
Savings and Loan Association of Newburgh, N. Y.		\$ 6,996.91
Investments		5,941.92
Dues Receivable - Individual Members	\$ 186.00	
Member Bodies	70.00	
		<u>256.00</u>
TOTAL ASSETS		\$ 13,194.83

LIABILITIES AND SURPLUS

Accounts Payable		\$ 402.25
Surplus		
Balance, January 1, 1961	\$11,298.22	
Add: Excess of Income over		
Expenses - Current Year	1,494.36	
		<u>12,792.58</u>
TOTAL LIABILITIES AND SURPLUS		\$ 13,194.83

Statement of Income and Expenses for Year Ended December 31, 1961INCOME

Dues		\$ 3,280.00
Publication Sales		
News Letters	104.00	
Bibliography	22.50	
Centroids	500.00	
Miscellaneous - Color Problems in the Graphic Arts	1,290.48	1,916.98
Interest and Dividends		281.88
Premium on Foreign Checks		.70
Annual Meeting		<u>162.11</u>
TOTAL INCOME		5,641.67

EXPENSES

Secretary's Office	6.07	
Treasurer's Office	73.13	
News Letters	2,148.55	
Publication Expense	1,311.07	
Special Book Expense	533.49	
Legal Expense	<u>75.00</u>	
TOTAL EXPENSES		4,147.31
EXCESS OF INCOME OVER EXPENSES		<u>\$ 1,494.36</u>

1961 Budget Analysis

	<u>Budget</u>	<u>Expenses</u>	<u>Under or Over Budget</u>
President's Office	\$ 100.00	\$ 0	\$ 100.00
Secretary's Office	100.00	6.07	93.93
Treasurer's Office	100.00	73.13	26.87
News Letter	2,300.00	2,148.55	151.45
Special Publications	800.00	1,844.56	-1,044.56
Annual Meeting	200.00	- 162.11	362.11
Contingency Fund	<u>432.00</u>	<u>75.00</u>	<u>357.00</u>
TOTALS	\$ 4,032.00	3,985.20	46.80

I. H. Godlove Award Fund

Statement of Receipts and Disbursements for Year Ended December 31, 1961

Balance, January 1, 1961	\$ 950.58
Receipts	<u>25.00</u>
TOTAL	\$ 975.58
Disbursements	0
Balance, December 31, 1961	<u>\$ 975.58</u>

REPORT OF THE FINANCE COMMITTEE
AND RECOMMENDATIONS FOR A BUDGET
FOR THE YEAR - 1962

The Finance Committee has reviewed the Treasurer's report for the fiscal year, ended December 31, 1961, and notes that of the budget pro-

posed and adopted, namely, \$4,032.00 that expenditures charged against this budget, totalled \$3,985, leaving an unexpended balance of \$46.80.

However, the income of the Inter-Society Color Council, instead of being \$4,032 as budgeted, came to \$5,641. It is necessary for the Finance Committee to be conservative on estimated publication sales. In the income budget for 1961, as estimated, the publication sales were set at \$200 whereas the booklet, "Color Problems in the Graphic Arts", released in 1961, produced an income on the order of \$1290, plus the sale of an additional set of Centroids at \$500, thus increasing our income, as well as income from reservations and registrations for the annual meeting, which was approximately \$162, in excess of actual cost. The Inter-Society Color Council, therefore, had an excess of income over expenses of \$1494 which was added to surplus for the year 1961.

In the forthcoming year, 1962, the Finance Committee has evaluated the possibilities as to income and it is estimated that income will be as follows:

416 Individual Members @ \$6.00 each	\$ 2,496.00
26 Member Bodies at \$35.00 each	910.00
Publication Sales, Newsletter	94.00
"Color in the Graphic Arts"	100.00
Estimated income from investments	<u>280.00</u>
TOTAL INCOME	\$ 3,880.00

After consultation with the officers, the following budget for expenses is recommended by the Finance Committee:

President's Office		\$ 100.00
Secretary's Office		100.00
Treasurer's Office		100.00
Newsletter		2,400.00
Special Publications Required:		
(a) Membership List	\$ 500.	
(b) Reprinting-new By-Laws	400.	
(c) Jiffy Bags for mailing "Color in the Graphic Arts"	20.	920.00
Annual Meeting		100.00
Contingency Fund		160.00
		<hr/>
	TOTAL	\$ 3,880.00

In the fiscal year, 1961, the actual expenditures for the Newsletter were \$2,148 and we believe that increasing costs, plus increased distribution, will raise our expense for this item to the budgeted amount of \$2,400.00.

The Finance Committee recommends that \$4,000 presently on deposit with the Savings & Loan Association, Newburgh, New York, which is presently earning interest at the rate of 3-3/4%, be withdrawn from said institution and a new account opened with a mutual savings bank in New York City where the money earns 3-3/4%, plus 1/4% credited annually, making a total of 4%; further, that the cash requirements enable the Inter-Society Color Council to remove from its demand account, \$1,000 and that this sum be added to the \$4,000, referred to above, so that it will earn additional income for the Inter-Society Color Council.

The Finance Committee requests approval of the recommended budget and acceptance of this report.

Respectfully Submitted:

Dorothy Nickerson
Roland E. Derby, Jr.
Norman Macbeth, Chairman

REPORT OF MEMBERSHIP COMMITTEE
WALTER C. GRANVILLE, CHAIRMAN

During this year two organizations applied for admission as member bodies of the Council. One application was from the Dry Color Manufacturers' Association and the other was from the Society of Plastics Engineers. Both applications were acted upon favorably at the Board of Directors meeting on March 11. I have read the by-laws of both organizations and feel that they meet the requirements for membership in this classification. I would recommend that the voting delegates approve both organizations later on in this business meeting which would then bring the total number of member bodies to 29.

PROBLEMS COMMITTEE
REPORT

Subcommittee on Problem 2, Color Names,
Kenneth L. Kelly, Chairman

ISCC Subcommittee on Problem 2, Color Names, has seen little action during the past year since its main function, the production of prototype centroid colors

by Davidson and Hemmendinger, has been completed. It was for this reason that it requested discharge at the last annual meeting.

During the year, Subcommittee on Problem 2 acted mainly in an advisory capacity to ISCC Subcommittee for Problem 23, the Expression of Historical Color Usage, and to Subcommittee for Problem 17, Color in the Building Industry. In connection with both Subcommittees, a paper entitled Some Problems of Color Identification was presented before the Fall Conference of the Building Research Institute, of the National Academy of Sciences - National Research Council. This paper was published in the March issue of the Journal of the American Institute of Architects.

Unofficially, about one half of the mass-produced centroids have been accepted as meeting the tolerances stated in the contract in sample form. It is planned that when completed, the centroid chart sets will be sold through the Standard Reference Materials Program, at the National Bureau of Standards. The price is estimated at less than \$3.00 per set.

Subcommittee on Problem 7, Methods of Color Specification, Francis Scofield, Chairman

On March 12, 1962, the meeting to reactivate this Subcommittee was called to order at 9:30 A.M., with the following signing the roster as present:

Hayes G. Shimp, Jr.	Hayes G. Shimp, Inc.
Bruce W. Preston	Ford Motor Company
Henry Parker	Pittsburgh Plate Glass Co., Glass Div.
R. P. Brace	Beckman Instruments, Inc.
Art Goldman	Claremont Polychemicals Corp.
H. W. Godshalk	Holland Color & Chemical Co.
Robert Wood	Western Printing Ink & Litho Co.
Ruth Johnston	Pittsburgh Plate Glass Co., Paint Div.
W. J. Kiernan	Bell Telephone Labs.
Gordon E. Challeen	Minnesota Mining & Manufacturing Co.
Charles H. Mertz	Ford Motor Co.
William N. Welch	Gravure Research
S. Leonard Davidson	National Lead Company
Walter C. Granville	Color Consultant
Max Saltzman	National Aniline Division
Erwin Jaffe	ANPA Research Institute
E. Everhard	Squibb Institute
John Blowers	H. G. Shimp, Inc.
Robert F. Hoban	Sandoz, Inc.
William L. Matthews, Jr.	Chemstrand Corporation
Francis Scofield	National Paint, Varnish & Lacquer Assn.

The previous report of Subcommittee 7, published in 1955, was examined and discussed. It was agreed that this was an excellent report but was now out of date. A revision should be prepared.

The scope of the revision was discussed at length. It was pointed out that the report would be more useful if some indication could be given as to the

preferred method for various purposes. However, this could be a long-drawn-out process and it did not seem desirable to hold up the revision until a meeting of the minds could be reached on preferences for various purposes.

It was decided that the new revision would follow, in general, the format of the previous report, but that an effort would be made to make the coverage more uniform as to types of material included in the various sections, and also that methods or materials that were no longer in use or available would be indicated as of historical interest only.

The Chairman is to solicit volunteers to work on the various sections of the report and bring together and edit these revisions as they are received.

The meeting adjourned at 11:30 A.M.

Subcommittee on Problem 10, Color Aptitude Test, F. L. Dimmick and C. E. Foss, Co-Chairmen

The Federation of P & V P Checks representatives have reported the near exhaustion of the present edition of the CAT. They wish to continue to provide the CAT and inquired about possible revisions. It was the feeling of the committee that it would be best to duplicate the present test in identical form as Edition II. The committee felt that suggested revisions be made the subject of new experimental work before any commercial publication is considered. It is of special interest to note that a large minority of those attending the meeting expressed the need for color training material and procedures. The committee is studying this proposal to see if it comes under the present committee's scope.

Subcommittee on Problem 14, The Colorimetry of Transparent Materials, R. C. Stillman, Chairman

The entire work of this Subcommittee during the past year has been confined to the preparation of an interim report designed to put into writing all of the work which has been done by the Subcommittee up to the present time. This report was discussed in detail at the Subcommittee meeting on Monday, March 12. The Committee recommended at this session that the completed interim report be submitted to the ISCC as a report of the Subcommittee with the recommendation that publication with suitable editorial revisions be authorized.

Subcommittee on Problem 16, Standard Methods for Mounting Textile Samples for Colorimetric Measurements, Richard Landry, Chairman

At the 1959 meeting of the ISCC Subcommittee on Problem 16, it was proposed that an evaluation of all known methods for preparing textiles for colorimetric measurement be evaluated and presented in a consumer report type of analysis.

At the 1960 meeting each member was requested to write up the methods in use at their companies and submit them to the Chairman. These methods are not to be published without the consent of the respective companies, but would provide a basis for determining what working techniques should be evaluated. This Subcommittee met at the last annual meeting in 1961 and optimistically

set a target date for writing up of the first four methods as June 30, 1961. These methods were to be forwarded to the Chairman and circulated round-robin style to members of the Committee, who were to review them and add their comments.

These objectives have not been met this past year, much to the delight of the Chairman and most of the members of the Committee. In 1959 the Chairman in an annual report expressed hope that the publication of these methods would stir up some interest and result in constructive criticism. During the past year several members have re-examined these methods and are now forthcoming with data pro and con.

A new target has now been set up of September 1, 1962 for the completion of the written reports on the proposed methods. This will enable the members of the Committee to have time to complete their data and digest and analyze the results.

One member of the Committee, Mr. L. Easley of Tennessee Eastman Corp, resigned, and Mr. W. A. O'Brien of the Celanese Fibers Company, Charlotte, North Carolina, asked to be included on the Committee. An up-to-date list of Committee members is attached herewith.

Subcommittee on Problem 17, Color in the Building Industry, Waldron Faulkner, Chairman

In the past the work of the Subcommittee has been directed toward the standardization of colors in the building industry, as one answer to the problems of the architect, the designer, the builder, the owner and the producer.

Recently the desirability of standard colors has been questioned. This point was raised in an article which appeared in the Architectural and Engineering News in September, 1961, called "Color: should it be standardized?"

In November, 1961, the Fall Conference of the Building Research Institute was held in Washington on the subject of A Color Identification System for the Building Industry, under the chairmanship of Milo Folley.

Papers were read by Kenneth Kelly, Blanche Bellamy and Everett Call. These were followed by a panel discussion in which the following took part: - Henry Bixby, Beatrice West, Gladys Miller, Jerome Miller, Waldron Faulkner and Richard N. Jones.

There were several preparatory meetings attended by members of Subcommittees #17 and #23, and others. A considerable part of the discussions centered on the problem of the desirability of standard colors in the building industry.

This question must be resolved before Subcommittee #17 can continue its work.

Subcommittee on Problem 18, Colorimetry of Fluorescent Materials, Eugene Allen, Chairman

The Subcommittee held its annual meeting on March 12, 1962. The chairman presented a brief summary of the progress of the Subcommittee to date. He pointed

out that the fundamental problem which must be solved is the specification of a light source for the colorimetry of fluorescent materials. This problem, of course, is intimately related to the problem of specification of light sources for ordinary colorimetry. It was brought out in discussion that revision of the standard light sources is now being considered, and it would be best for our Subcommittee to wait before making a final recommendation. An interim report is being prepared which will embody the results of our study so far.

The future program of the Subcommittee will be discussed with the Council after the issuance of the interim report. Possible areas of investigation would be a consideration of the experimental methods used for the colorimetry of fluorescent pigments and dyes, and the study of appropriate methods for specifying the color of fluorescent whitening agents.

Subcommittee on Problem 20, Basic Elements of Color Education,
Randall M. Hanes, Chairman

Since Problem 20 has been under study for nearly eight years and since a final report has been submitted and voted upon, it seems that a brief review of the history of the work, as well as a statement of the present status of the report, might prove interesting to the members of the Council.

The effort of the first several years was directed primarily toward clarification of a working definition of the problem and the resolution of philosophical differences among individuals with very different backgrounds and interests. Suggestions concerning scope, specific content, and format were systematically reviewed until a working outline of the report was achieved in 1956. Then came perhaps the most difficult stage of the work, that is, the efforts by R. W. Burnham, who was chairman of the subcommittee at that time, to get anyone to help him in the actual writing of the report. He succeeded, nevertheless, in forming a working group which produced a first complete draft in 1958.

That draft was sent for comment to 33 individuals in the U.S. and abroad. More or less detailed comments were received from 19 reviewers, and, as reported by Burnham at the annual meeting in 1959, opinion ranged from "I disagree heartily with the entire approach..." to "I think your committee has done a fine job in every way." Perhaps the most cogent comment of all was made by W. D. Wright -- "I should imagine...that you must have very real difficulties in getting unanimous agreement of the final draft." (The accuracy of Wright's prediction is indicated by the fact that the past three years have been spent largely in attempting to reach something even approaching unanimous agreement.)

After all the suggestions by the reviewers had been acted upon, a draft of the final report was submitted to the Board of Directors in December 1959. At that time the original subcommittee was formally disbanded, and a new subcommittee, as well as an editorial committee, was formed. Editing and reediting of the text plus selection and development of illustrations occupied the editorial committee and the subcommittee during 1960 and until October, 1961, when a final draft, approved by the editorial committee, was submitted to the Board of Directors. The Board of Directors approved this final draft report and recommended that the copies be sent to all voting delegates of the Council for

their approval. Copies of the report were then distributed by the Secretary's office. The Secretary's office has reported that this final draft report was approved by the voting delegates.

Along with their votes, several delegates submitted suggestions for changes. Most of these suggestions were concerned with changes in only one or a few words in a number of different statements throughout the text. A few of the recommended changes did point up some embarrassing errors, and three criticisms were particularly disturbing, albeit for quite different reasons. One of these was a statement that the wording "could stand a good editing job". The second had to do with a condemnation of the report as "an attempt to revise nomenclature" and "...a camouflaged criticism of a report" of another committee. The third was the statement that "there appears to be too much emphasis on color!"

All of these comments were considered by the editorial committee and, where possible, were discussed with the critics themselves. All essential changes have been noted, and the text is considered to be virtually complete. Final decisions about the number and nature of the illustrations cannot be made until the method of publication has been determined. Inquiry into publication possibilities suggests that it may be possible to have the report published as a commercial effort.

All this brings us to the time for the annual prediction. As a prelude to this year's guess, consider the following extracts from the reports for the past three years:

- 1959: "It is our hope that the report can be in a publisher's hands by December, 1959..."
- 1960: "...it is expected that the report will be ready for publication this year."
- 1961: "The editorial committee....has now completed all major editing of the text. The only important problem remaining unresolved has to do with the illustrations."

In view of these indications of a very singular lack of ability in prognostication, you will understand why this year's prophecy takes the following form: There is a possibility, that is, there is definitely some chance, that the report of Subcommittee 20 will be ready for publication before the next annual meeting.

Subcommittee on Problem 21, Standard Practice for Visual Examination of Small Color Differences, N. R. Pugh, Chairman

The subcommittee met on March 12 with 35 members and guests. After the chairman reviewed the history and previous activity of this subcommittee, he reviewed the (very limited) results of last year's questionnaire on (1) ASTM D-1 Sub X "Recommended Practice for Visual Examination of Color Difference in Opaque Materials", and (2) The usefulness of a "minus red" source for checking color differences.

Each person in attendance was asked to describe his or her experience in use of visual judgments, standards used, points of misunderstanding, and so on. As in previous meetings, it was apparent that there are many aspects of color control common to a number of industries. Further, there is considerable need for improved means of communication, particularly between customer and supplier, so that marketing and technical considerations can be properly taken into account, balanced in a reasonably objective way.

The problem of this subcommittee, however, is to reach some tangible conclusions, and to that end it was agreed a 3-group breakdown would be in order, and those in attendance were asked to express their interest in each.

Group I would include those interested in physics of color, particularly cross-checking visual results with instrumental results.

Group II covers psychology and psychophysics of consumer color choices, and other technology related to styling, and merchandising of color.

Group III would include color matching and color process control, with emphasis on the supplier's point of view.

After discussion with interested parties, however, the chairman recognized that these future plans involved considerable more than Problem 21 published scope. Therefore, the following recommendations were made to the Problems Committee, and now are being made to the officers of ISCC.

Recommendations

- I. Create a Task Group for the general area of Industrial Color Selection, Color Matching, and Color Process Control. Responsibilities would include:
 - A. Keeping in close touch with progress in other activities (ASTM, ASA, etc.) within their assigned scope.
 - B. Providing a means of communication for suggested solutions to industrial problems involving color fundamentals--perhaps a question and answer section in the News Letter. (This might eventually be consolidated into a Color Primer.)
 - C. Coordinating the work of the following Problem Subcommittees:
 1. Procedures for selecting and qualifying jurors for visual evaluation of color. (Probably should be part of Problem 10.)
 2. Effect of lighting (intensity and spectral characteristics) on judgment of small color differences.
 3. Lighting and viewing for making merchandising decisions.

4. Good practices in industrial color matching and process control.
 - a. Visual
 - b. Instrumental

Subcommittee on Problem 22, Material Standards for the Colorimetry of Opaque, Translucent and Transparent Materials, Fred W. Billmeyer, Jr., Chairman

At its fifth annual meeting, the Subcommittee heard reports on the following programs associated with its initial objective of selecting suitable materials for transparent and opaque standards:

1. A first round-robin study of instrumental color measurement was initiated, with 14 laboratories equipped with G.E. spectrophotometers participating. Preliminary results from two laboratories were presented, indicating agreement to within about one MacAdam unit of color difference. A second round-robin, including other instruments, is planned for the fall of this year.
2. Interim reports were received on programs of measurement of long-term color permanence for the following materials: ceramic tile, acrylic plastic, and alkyd-melamine enamel. The study of these and other materials is continuing. In each case, the variability in the color of the samples appeared, on the average, to be about the same as the expected error of the measurements, i.e., one MacAdam unit.

The Subcommittee then agreed upon the following recommendation:

Provided that suitable combinations of colorant and material are selected, the following materials are broadly recommended as suitable for use in colorimetric standards: glass, ceramic tile, porcelain enamel, acrylic plastics, alkyd-melamine enamels. For special purposes, or as more data become available, other materials may be added to this list.

The recommendation was supported by a Table indicating the performance of each material in the categories of color permanence, hardness, smoothness, gamut of colors, compatible pigments, availability, cost, uniformity, and ease of preservation.

The Subcommittee then turned its attention to the uses of instrumental color standards, as a preliminary to formulating more specific recommendations regarding the selection and preparation of standards. The Chairman agreed to solicit and correlate members' opinions on this subject for discussion at an interim meeting planned for this fall of this year.

Subcommittee on Problem 23, Expression of Historical Color Usage, Everett R. Call, Chairman

When Problem 23 was accepted by the ISCC in late 1957, the objectives were "to derive compatible methods for recording historical consumer color preferences

for products in individual industries, to publicize these methods and encourage all industries to adopt them so that (1) useful historical records of consumer preference trends of their products may be available within individual industries, and (2) the interrelationship of consumer color preference of one product upon the choice of another product may be established among industries."

In November 1960, the Board of Directors of the ISCC approved the method developed by this Subcommittee.

During the past year many individual companies and industries, on the manufacturing level as well as the retail level, have adopted this method for internal use. Further, a good many of these are currently involved in a program where the interrelationship of consumer color preference of one product upon the choice of another product may be established among industries.

At the last ISCC Annual Meeting in Rochester, a joint meeting with Subcommittee 17 resulted in a program consisting of members of the two committees being presented before the Fall Conference of the Building Research Institute, Academy of Sciences. The individual papers were presented by Mrs. Blanche Bellamy, Mrs. Gladys Miller, Mrs. Beatrice West, Kenneth Kelly, Waldron Faulkner, Henry Bixby and Everett Call and were distributed widely, including the method developed by this Subcommittee. Also, this material has become a permanent part of the Academy's library.

It is expected that the method will have been in use long enough and utilized by enough manufacturers and retailers so as to permit final evaluation by this Subcommittee by the next ISCC Annual Meeting.

At our meeting on March 12, 1962, problems in implementing this method were discussed. The consensus of the meeting was that consideration should be given to changing the name and objectives of this Problem Subcommittee so as to include committee action in seeking solutions of problems arising from application of this method by the various industries.

REPORT OF THE NEWSLETTER
COMMITTEE, WARREN L. RHODES,
EDITOR

This year, as before, the Newsletter Committee published six issues of the Newsletter. And, as before, one of the issues was the report of the Annual Meeting, and another was a report of the Problems Committee.

A few changes are anticipated in the Newsletter.

1. The change in the method of selecting items for the bibliography to exclude all articles except those of general interest to two or more member bodies.
2. The addition of a member to the committee who will compile a meeting calendar of member bodies.
3. The Newsletter editor will investigate methods of improving the type face used in typing the Newsletter.
4. The editor will investigate the possibility of obtaining art work for a color cover to be used on the Newsletter.

REPORT OF THE
PUBLICATION COMMITTEE,
WARREN L. RHODES, CHAIRMAN

Subject: "Color Problems in the Graphic Arts"

Since its publication approximately 90 copies of the book were sent to editors of journals of the graphic arts. 400 were sold to the Research & Engineering Council, and almost 700 additional copies at \$2 have been sold. There are only approximately 100 copies remaining, and the orders continue to come in rapidly. It is expected that these 100 copies will be sold within the next few months.

NEW BUSINESS

Mr. Frank Wright made a motion seconded by Miss Dorothy Nickerson that the Treasurer's report that had been adopted earlier by the Board of Directors be approved by the voting delegates of the Council. The vote was unanimous. Mr. William Kiernan made a motion seconded by Mr. Ralph Pike that the report of the Finance Committee that had been adopted earlier by the Board of Directors be approved by the voting delegates of the Council. The vote was unanimous.

Mr. Walter C. Granville, Chairman of the Membership Committee, had stated in his report given earlier in the meeting that two national societies had applied for admission as member bodies to the Inter-Society Color Council. These were the Dry Color Manufacturers' Association and the Society of Plastics Engineers. Mr. Granville had noted that both societies met the requirements for membership. Mr. Frank Scofield made a motion that both the Dry Color Manufacturers' Association and the Society of Plastics Engineers be accepted as member bodies of the Council. The motion was seconded by Mr. Frank Wright. The vote on this motion by the voting delegates was unanimous.

A motion was then made and seconded that the Council express its thanks to Warren ("Dusty") Rhodes for his excellent job in editing and getting out the News Letter during the past year. All present heartily approved this motion. A motion was also made, seconded and approved, that all members of the Problems Subcommittees, and in particular the chairmen of these committees, be thanked for carrying forward this part of the Council program during the past year.

REPORT FROM THE AMERICAN
ARTISTS PROFESSIONAL LEAGUE
DELEGATES, JOHN SCOTT WILLIAMS,
CHAIRMAN

The Color Committee of the American Artists Professional League appreciates and has approved the Council's publication of the final draft of "Basic Elements of Color Education."

Mr. Frank Wright of the committee has been specially enthusiastic about this research.

I have recently prepared material for a session at the Architectural League of New York on newer developments of the Porcelain Enamel field and its possibilities for an expanded artistic expression coordinated with industry. Seaporcel Metals Inc. of Long Island City and Pemco Corporation of Baltimore are co-operating in this problem. Seaporcel is including a class of 20 professional artists who have been familiar with small kiln firing and showing them the range and capacity of large operations and new techniques. Physics and chemistry as well as the magic of heat are included in the program. I have assumed responsibility in guiding this program and find it very interesting.

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

Most of the millions of yards of textile material produced annually are colored. One of the major factors in the sale of a textile is the appeal of its color or design. This fact generates a widespread interest in all aspects of color phenomena.

The AATCC has a number of research committees whose function is to develop and recommend test methods which indicate the suitability of a dye-fiber system for a specific end-use. These procedures are periodically reviewed and published annually in the AATCC Year Book.

A committee specifically concerned with color problems is under the chairmanship of Hugh R. Davidson. At the moment they are concerned with two problems:

- (1) Constructing an improved grey scale for measuring color differences and
- (2) Exploring the feasibility of providing a supplement to the Color Index which would contain spectrophotometric data in the form of reflectance and transmittance curves for the thousand of colorants whose other properties are tabulated in the index.

The grey scale presently used was developed by The Society of Dyers and Colorists. This scale is widely used to equate visually the color difference arising from such degradative processes as light and chemicals to a common denominator.

The present scale consists of five pairs of chips representing constant multiples of color difference. They are numbered from 5 to 1. This permits assigning whole values and estimating half values. In practice it would appear that an expanded scale having intermediate steps would be useful. Sample scales of this type have been constructed by Hugh Davidson and are being evaluated. The availability of such scales should encourage a wider use of this simple method of expressing color differences. The precision is sufficient for many practical problems and the apparatus is inexpensive.

Included with this report was a bibliography of articles on color appearing in "The American Dyestuff Reporter" or "The Journal of the Society of Dyers and Colourists" during the past year which will appear later in the News Letter Bibliography.

REPORT FROM THE AMERICAN
CERAMIC SOCIETY DELEGATES,
H. D. BIXBY, CHAIRMAN

During the year the American Ceramic Society and its several divisions have continued a high degree of activity and interest in color designation, specification,

and usage. This was especially true of the Design Division which presented an excellent program at the 1961 Annual Meeting of the American Ceramic Society, under the able direction of F. J. Von Tury. In the Materials and Equipment Division a symposium of technical papers was presented covering the usage of various oxides in glaze stains and the range of colors thereby obtained. The Structural Clay Products Division also contributed several papers concerning various aspects of color in structural clay products.

Additional interest and activity has been demonstrated by new color styling in architectural porcelain enamel panels, and in the dinnerware and wall tile fields.

I will be contacting the members of the ACS delegation by letter in the near future urging them to participate actively in the ISCC programs, with special emphasis on the desirability of attendance at the annual meeting and participation in the various Problem Subcommittees.

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

The delegates from the A.I.A. to the Council for the coming year are: Eric Pawley of the A.I.A. staff, Walter A. Taylor, Milo D. Folley and Waldron F. Faulkner, Chairman.

A Church Architectural Conference was held in Pittsburgh in April, 1961, which was sponsored by the National Council of Churches, the Church Architectural Guild, the Pittsburgh Chapter of the American Institute of Architects and the Pittsburgh Architectural Club.

Among the other addresses was a paper on Color in Church Architecture by Waldron Faulkner.

In January, 1962, The Journal of the American Institute of Architects published an article on Color in Design by Everett R. Call. The A.I.A. Journal also reprinted in its March issue papers read at the Fall Conference of the Building Institute held in Washington in November, 1961. These papers were Color and Its Problems by Kenneth L. Kelly; Color Chaos to Order by Blanche Bellamy and Color Identification in Industry by Everett R. Call.

REPORT FROM THE AMERICAN
INSTITUTE OF INTERIOR
DESIGNERS DELEGATES,
HAROLD W. GRIEVE, CHAIRMAN

The American Institute of Interior Designers has, with the cooperation of the New York City Library, just compiled and published an Interior Design and Decoration Bibliography. This is the second such

Bibliography to ever be published, the first one being published in 1938 by the American Institute of Decorators. Of course, publications on color are listed in this book. This selective Book has been prepared as an effective working list, a tool of the trade.

The Bibliography is available through A.I.D. local chapters over the country, or at National Headquarters, 673 Fifth Avenue, New York 22, New York, at \$3.50 per copy.

REPORT FROM THE AMERICAN OIL
CHEMISTS' SOCIETY DELEGATES,
W. T. COLEMAN, CHAIRMAN

The A.O.C.S. Color Committee held two meetings during the 1961 year. These were held at the time of the A.O.C.S. Conventions. During the year, satisfac-

tory agreement was reached on color glass standards to be obtained from the Lovibond Tintometer Limited. Tintometer Limited will furnish to the oil industry standardized glasses to meet the A.O.C.S. Tintometer scale. Tolerances for these glasses have been established and certified standard glass sets are held, one at the Bureau of Standards, and one at Tintometer Limited in England. This work completes a problem which has been worked on for a number of years.

There was only one article on color which appeared in the A.O.C.S. Journal in 1961:

BLEACHING OF OFF-COLORED COTTONSEED OILS

Walter A. Pons, Jr., James C. Kuck, and Vernon L. Frampton, Southern Regional Research Laboratory, New Orleans, Louisiana
J. Am. Oil Chemists' Soc., Volume 38, February 1961
Pages 104 to 107.

REPORT FROM THE AMERICAN
PSYCHOLOGICAL ASSOCIATION
DELEGATES, LEO M. HURVICH,
CHAIRMAN

Interest in sensory and perceptual processes seems to be at a new high level. Many developments in related areas appear to be contributory factors. A good deal of the churning may be traced to engineers

whose primary goals are improved electronic sensing devices, electrophysiologists now working with improved electrodes and more sensitive recording and integrating devices, to psychologists whose work normally lies in the clinical and personality areas, and to research workers and engineers in the computer and information processing areas.

Psychologists primarily concerned with the lawful properties of the visual system, as manifested mainly in the behavior of intact organisms, find these new developments stimulating and in turn are able to offer persons relatively new to the field the benefits of their own considerable experience. Much interchange has occurred at symposia and meetings arranged specifically for persons whose interests are predominantly in vision but whose areas of specialization are electron microscopy, biochemistry, electrophysiology, psychophysics, neurology, etc. Meetings of this sort have been held during the past few years at Teddington (England), Paris, Caracas (Venezuela), Cleveland, Freiburg (Germany), New York and Washington. Members of the American Psychological Association and delegates to the I S C C have been present at all of these symposia and reported upon their continuing researches into various aspects of vision and color vision.

As noted in earlier reports the research efforts of psychologists in vision are of a long-term nature. Annual statements by the members of the delegation of their own work and those of their associates often refer to projects mentioned in earlier reports. It does seem obvious on review, however, that problems of flicker, induction and temporally varied stimulation are now especially high on the list. Summary reports forwarded by members of the American Psychological Association follow.

Dr. Dimmick's vision laboratory at the Medical Research Laboratory at New London has completed or is working on the following problems: the preparation of hue series for a new edition of the Color Aptitude test, factors affecting induced color, binocular brightness summation, the effect of bandwidth and wavelength on discrimination of color, the interaction of moving and stationary stimuli, the comparison of different psychophysical methods, phase relations in flicker fusion and the effect of body function on the meridional variations of visual acuity. This research program is being carried out by Dr. Dimmick and Jo Ann Kinney, Mary Connors, Michael Siegel and S. M. Luria.

Dr. Boynton at the University of Rochester reports that his measurements of scattered light carried out at Teddington with F. J. J. Clarke will soon be published and that data have been collected on positive and negative increment thresholds with Stiles and M. Ikeda. Dr. Judith Onley continues her work on scaling problems and is at present concerned with saturation scaling.

Professor Graham of Columbia University reports further research on unilateral color blindness. At the moment, a case of acquired tritanopia is under study. Other problems under investigation are "color settings" as functions of surround colors and the intensity - time function in peripheral vision. Conrad Mueller of Columbia is also working in collaboration with Hartline and Ratliff at the Rockefeller Institute, primarily on problems of an electrophysiological nature in lower organisms.

Dr. Rita Halsey of the Human Factors Department at IBM at Kingston, New York, is working on the selection and specification of color codes and has completed a portion of a projected comprehensive bibliography on the use of color on displays. Dr. R. Hanes at the Applied Physics laboratory of the Johns Hopkins University continues his studies on absolute color identification and is exploring the effect of memory color in two-color projection. Dr. H. Sperling at the Minneapolis-Honeywell laboratories continues to explore the integration of the relative luminous efficiency function from fundamental sensation curves and aspects of temporal variations in stimulation.

Dr. Lorrin Riggs is collecting data on fusion frequency and wavelength. Functions are being obtained for flashes of one wavelength that alternate with flashes of another wavelength and they are being contrasted with a flickering situation employing a single wavelength. Mr. Siegfried is pursuing this problem and Mr. Cavonius is similarly engaged but adds to his research measures of the human electroretinogram. The work is still in progress and interpretations are still preliminary.

Mr. Leonard Evans has also been investigating the effects on critical fusion frequency of homochromatic and heterochromatic stimulus alternation. This research, carried out under Dr. Fred Mote's direction at the University of Wisconsin, is aimed at determining whether wavelength differences affect the integration of luminances. Differences are reported among a series of heterochromatic flicker functions as well as a significant difference between every heterochromatic situation tested and a homochromatic one treated as the standard function.

Dr. Krauskopf at Rutgers University is exploring the effects of chromatic adaptation on dichromatic color matches, Dr. R. de Valois continues his work on color vision mechanisms in the monkey, and H. R. Blackwell and O. M. Blackwell, whose research on the theory of threshold effects continues at Ohio State University, have completed their analysis of receptor mechanisms in typical and atypical congenital achromatopsia.

Professor Harry Helson, now at Kansas State University, is continuing his attack on the complex of problems related to adaptation, contrast and constancy. He has investigated the Gelb effect in quantitative experimental fashion and shown its relation to contrast. At the moment, he is exploring a series of parameters to determine conditions which make for "classical contrast" as opposed to assimilation or reversal of contrast and has advanced a tentative theory to integrate the data available to date.

L. M. Hurvich and Dorothea Jameson and their students at New York University have been exploring the following problems: quantitative theory of brightness contrast, quantitative theory of color contrast, the role of area and contiguity in color contrast, the role of time in color discrimination and color contrast, the relations between spectral brightness and spectral luminosity, the role of area and time in increment thresholds, "pulsative after-images" in a two-flash situation and the relations between anomalous and normal Rayleigh equations and spectral hue perceptions.

Among the new pieces of equipment reported, there is one by Graham which makes use of a Maxwellian view for visual stimulation in reaction time experiments, Boynton and Wetherill's four-variable filter colorimeter and a two-color threshold apparatus for color vision testing, and Riggs' use of the Mnemotron Cat II computer for averaging ERG responses.

Committee memberships of APA delegates to the Color Council are as follows: Dimmick, Graham, Halsey, Hanes, Helson, Hurvich and Riggs on the Armed-Forces-NRC Committee on Vision; Hanes is serving on Working Group VI of this body and on ISCC subcommittee 20, whose volume on Basic Elements of Color Education is nearing completion. Riggs continues on the Sensory Diseases Study Section of the NIH; and Dimmick serves on the U.S. National Technical Committee (CIE Sl.4.1) and the OSA Committee on Uniform Color Scales.

A representative but by no means exhaustive sample of papers published by the APA delegates, their associates and other members of the APA during the past year was attached to this report and will appear in the Bibliography Section of a later issue of the News Letter.

REPORT FROM THE AMERICAN SOCIETY
OF INDUSTRIAL DESIGNERS DELEGATES,
EGMONT ARENS, CHAIRMAN

Each year members of ASID cull their experiences and observations concerning color as a basis for this annual report on current

color trends and their most likely future direction. For the first time this year, several non-ASID designers and colorists with major responsibilities for defining current public color preferences and divining future trends are contributors to this report.

A striking feature of this year's contributions, considering the diversity of location and activity of the observers and the many levels of consumer preference reported, is the degree of congruence in their observations. Particularly in the area of mass-produced artifacts, the similarities observed are notable.

Whether caused by a revulsion against the garish colors popular in the mid-fifties or by a growing sophistication, this observer cannot say surely, but today's big colors are the "colorless" white and black families, with beige or sand rising fast.

The highways and parking lots provide the most dramatic demonstration of this trend. Last week I parked at a Long Island restaurant in a line of eight cars. All eight were off-white. Mine was pale beige, almost off-white too. Here's what a specially invited, non-ASID contributor has to say about this trend. He is Gene Bordinat, Director of Styling at Ford Motor Company:

"Our most popular color is white--or off-white; and our second most popular is black.

"There is a strong trend toward the beige family and to red and its derivatives--chestnut and black cherry. These are new families which have not been popular for ten years.

"There is a trend away from contrasting exterior and interior colors. Rather the trend is to match or blend. In keeping with the blend tendency is a definite trend to simple, clean trim."

General Motors' J. S. McDaniel, Director of Automotive Interior Design and Color, also a special contributor to this report, makes these observations:

"Today white is by far the most popular exterior automotive finish. And many blues, blacks and grays are popular.

"Geographic variations play a part in car color preference. The climate and soil of the American southwest have helped increase the popularity of beige, which was a non-existent preference in 1959. Colors in the beige area are very popular today through all GM's automotive lines, regardless of price.

"We've also observed an increase in acceptance of colors in the turquoise range. We call our own such colors 'aqua', since they tend more toward the blue than toward green.

"Medium metallic colors with a more reserved, sedate look are increasingly popular, in keeping with the trend toward more muted colors over the past three years."

Mr. McDaniel also noted a comeback for black from a low in popularity five years ago, and a return of an old favorite, the maroon range. In interior colors, Mr. McDaniel bears out Mr. Bordinat in stressing interior-exterior color matching or compatibility. "Beige has replaced gray as the basic interior color of the Chevrolet and Pontiac lines," he notes. Even the bucket-seat models are now demanded in monochromatic color schemes.

Turning now to ASID members, let us see what they have to say about those other typical mass-produced artifacts of our time--household appliances large and small.

ASID Fellow Robert Hose reports from Summit, N. J., "In appliances: the usual white but with strong blue and gunmetal areas accented by light grey, red and chrome in control areas." In business machines, Mr. Hose notes "Gunmetal base masses with off-white work areas and upper housings. Control area accents in blue, red, and natural satin metallic finishes."

Mr. Hose concludes by observing, "It seems that color is being used more sparingly and therefore with more punch now that relatively neutral values are used for large form areas and sharp accent colors applied for attention and interest. I wonder if design interest in good form isn't tending to reduce the need for obvious over-all color usage."

Herbert Gosweller, ASID, Manager, Product Design for Philco Corporation reports that "White, black and beige are most popular in radio and portable TV receivers. Light French Grays have made an appearance and are well received. Browns and coffee tones are being specified for blend with wood cabinetry. Strong colors are still being used only as accent."

From General Electric Co. in Bridgeport, Conn., O. E. Haggstrom, ASID, Manager Industrial Design - Housewares, and his associate William Judson report on "outstandingly popular sandalwood evolved from the beiges." Other top current housewares colors are bone and oyster white, celadon, aqua and lavenders. Mr. Judson also cites yellow as the "most popular non-neutral color now used in the housewares field - a clean tone on the lemon side." A muted yellow, mixed with considerable white is a neutral counterpart. Mr. Judson ascribes the popularity of bright yellow for these small accent wares as "probably following in the wake of fatigue with the previous non-neutral favorite, red."

Though blue, green, and purple are not now important in the housewares color palate, according to Mr. Judson, "there are indications that blue in particular may be on the way in. One device which seems to have had a great deal to do with the high style success of blue is that of using it in combination with colors which would have been considered impossible with it ten years ago, such as green and purple. This intimate association with other colors produces a more lively effect than using pure blues on their own."

From ASID Fellow Arthur N. BecVar, Industrial Design Manager for General Electric's Major Appliance Division in Louisville, Ky., comes word that the big color news in GE major appliances is "Coppertone" with other exterior color leaders white, turquoise, yellow, pink and woodtone brown.

"The interest in 'Coppertone' appliances started on the West Coast and has spread across the country," he reports. "Since this has a two-tone effect, we believe its acceptance fits in well with natural wood interiors and the current popularity of Early and Federal American interiors."

"The increasing awareness of color in major appliances has been evident in new home construction where a high percentage of kitchens are installed in color," he notes.

As for control areas, these tend to be "neutral statements so that they can harmonize with any interior. Trim characteristics continue to be highlighted with chrome, while glass and clear plastics predominate in control areas."

Harper Landell, ASID, writes from Philadelphia: "Now ranges are following home laundry equipment in the use of color, namely white, black and gray with chrome on the backsplashes."

A bright note from abroad: Mr. Landell reports a French client using "shades of orchid accented with bright and satin chrome" on refrigerator interiors.

Continuing our review of mass-produced artifacts, ASID Fellow Peter Muller-Munk states, "Some very important color influences come from the field of architecture, and where we deal with space, such as in exhibits and gasoline stations, we seem to be using more white than before, with other primary colors as accents. Coupled with this is a strong trend toward textures combined with color and vice versa."

Re appliances, he notes, "I think the computers with their delicate grays and well-organized control panels are having an influence on other appliances."

As for general color trends, Mr. Muller-Munk notes growing preference for "darker and richer color combinations -- and at the other extreme, brighter, more intense, color accents. It is my opinion that the pastel ecstasy is over."

Bernard A. Grae, ASID, Manager Instrument Design for RCA's Home Instrument Division in Indianapolis, Ind., reports: "Both radio and television receivers in table model and portable categories show a tremendous preference toward the off-whites as the leading color. We are also experiencing great success with the off-tans, off-yellows and off-blacks."

The following tabulation indicates Mr. Grae's experience with leading two-tone appliance color combinations. In each case the combination is with off-white:

1. Off-blacks and off-white
2. Beige "
3. Maple sugar "
4. Aqua "
5. Turquoise "

Where men have more influence over the purchase, as in the small pocket portables, Mr. Grae notes a preference toward darker case colors combined with contrasting lighter colors.

ASIDER R. C. Sandin, Manager-Industrial Design for Hotpoint in Chicago, bears out much of Mr. BecVar's thinking. Hotpoint is a GE Division and its major appliances are produced in the same range of colors. Mr. Sandin particularly notes the metal finishes, Coppertone, stainless steel and brushed chrome and believes refrigerator interiors will stick with the cool blues and blue-greens plus white in his company. For 1963, he writes, "We will continue to have a warm white on the cabinet liner and breaker strips, light blue door liner accented with strong turquoise, and bright aluminum for door shelves, pan fronts and the like."

J. McLeod Little, ASID, reports from Toledo, Ohio, that the top sellers in all-purpose outdoor furniture are: "Turquoise or light blue combined with white, followed by yellow combined with white." On the West Coast he finds "Raspberry to grape to lavender tones combined with white coming up strong."

In appliances, particularly in the laundry field, Mr. Little notes "Demand for an additional color - golden tan, to meet the trend to outdoor installation of these appliances on patios and in car ports." Your editor finds this a somewhat enigmatic observation as he has not yet seen a washing machine installed on a patio. However, the color trend noted is right in line.

Before moving on to a review of general color trends, it is tempting to comment on the almost complete unanimity of our reporters so far, dealing with every sort of mass-produced artifact from the pocket portable, through small housewares, major appliances, autos, and even patio furniture. The whites have never been bigger. But they aren't "Knock 'em dead whites". They're

warm whites, bone and oyster whites, and many of the favored beige tones such as sandalwood are almost-whites.

The use of metallic tones is also big and growing. Contrasting metallic tones and accents on back-splashes, control areas and identification panels with use of textured metallic effects is growing fast and has been much used by this designer in designs for major appliances and housewares of The Hobart Manufacturing Company this year and for Associated Merchandising Corp. 1963 refrigerators.

Colors that "belong", that are comfortable, though they may be either rich or gay, have made the scene. Shock colors screaming their presence such as raspberry-chartreuse combinations, once so popular, today have joined the dodo.

So much for trends in mass-produced objects. What of architecture, interiors, and high-fashion trends?

Richard S. Latham, ASID, writes from Chicago (where so many of last year's observers saw stronger, garisher colors than the rest of us) and he isn't letting Chicago's honor down. Here's his report: "Color trend follows last year's direction of using many brilliant hues together -- colors are somewhat deeper, more jewel toned. The use of dark walls has once again become prominent to allay the shock of the number of contrasting colors used in one scheme.

"There is still a conservative element who prefer a more tasteful monochromatic scheme with one brilliant color accent." (Ed. Note: This is reassuring.) "Deeper, richer tones of color seem to be coming back in all areas (note Burgundy red and deep, dark navy and green for Lincoln and Cadillac cars)."

Also from Chicago a guest contributor, Margaret Hutchison, Color Stylist for Martin Senour Paints, reports, "A substantial and dramatic increase in the use of deep wall colors by interior designers. Colors are: First charcoal and bronze green; next come a variety of off-beat 'dirty' browns that range from greenish thru yellowish to orange. The more familiar reddish browns seem to be out of the running. Red figures importantly as an accent wall and also by the roomful. Navy blue, deep violet, blue-green and sharp green are definitely part of the picture."

Moving from high-style to volume wall colors, Miss Hutchison finds, "The mass of our sales remains in the beige and pale tints or soft muted areas of color. It can be presumed that the return to deeper colors will follow the lead decorators have taken, but perhaps more conservatively."

Frederick W. Priess, ASID, Manager Product & Package Design for Montgomery Ward in Chicago, reports that "Peach, now a high fashion color, is predicted to become an important color trend in home furnishings and decorating." He also notes "the return of gray and continued interest in bitter greens and gold" in this area.

Colors for such small appliances as hair dryers and vacuum cleaners "are trending to the more subtle, in the pastel area," according to Mr. Priess. "Colors for refrigerator interiors continue in a high key vein, emphasizing freshness and the visual appearance of size. Exterior color trim reflects the

influence of the warm-toned wood finishes of kitchen cabinets. Indications are that color trends for outdoor living items, outboard motors, boats, etc., are becoming less bold and more refined," he concludes.

G. Harold Hart, ASID, writes from Chicago of his work for the Bowling Division of Brunswick Corp. "When the Golden Sixties line of bowling equipment was introduced in a spectrum of colors, in contrast to the former drab greens and browns, it was enthusiastically received. In the line were blue, green, gold, tangerine, coral and classic white, with charcoal as a neutral base color. Sales of the emerald green and coral proved low in acceptance," he reports. "These two colors have been replaced this year with more vibrant ranges of olive green and cardinal red. The tangerine color range has proved to be the most popular color, with classic white a close second, followed by blue and gold, which are about equal in sales."

Tangerine, gold, blue, and classic white are bringing new life to the old game of billiards too, now sold for home recreation. Here again, tangerine with white is most popular, accounting for some 50% of sales, Mr. Hart notes.

Two further reports round out our contributions from the Chicago area. Jean Reinecke, Fellow, ASID, comments: "Probably the trend we notice most is the use of dissonant combinations such as orange with purple or blue with green. Another popular variation is a grayed color used with a pure, brilliant one. White is still being used as a background for brilliant accents. Gaiety, daring and a more skillful use of color are apparent today."

An invited contributor, Chicago researcher and colorist Louis Cheskin, introduces an area largely undiscussed by most informants -- color in packaging. His observations reveal orange and the orange family as generally high in appeal, both for food and non-foods. In detergents, yellow and blue are on top. Turquoise is high, "as it has greater appeal to women than a true blue and also is associated with cleanliness. However, it does not have the strength of a true blue," Mr. Cheskin notes. Peach, pink and gold are also rated high in acceptance as packaging colors.

Several members commented on improved coating and boards widening the color range available for packaging. Our own "hot" packaging color is pink, which we are using for such varied products as duPont sponges, baked goods and soft goods. We have felt pink increasing in acceptance as a packaging color for five years. Now it is, we think, at its peak.

Notable in our own packaging work this year is the use of sophisticated "off" color combination such as blue with green (noted by both Reinecke and Haggstrom), purple with lavender, orange with red, for various mass market designs. Such color combinations would have been unthinkable for mass packaging even a year or two ago.

James K. Fogleman, ASID, Administrative Design Director for Ciba Corp., Summit, N. J., observes, "Technological advances are making color increasingly available and as a result it will be used more and more. I believe we are seeing a strong trend to a more sophisticated use of color as we move along." In fabrics, Mr. Fogleman notes, "Bright shades continue on the increase, largely due to new innovations in dyeing. Especially noteworthy are the reactive dyes which, for the first time, are bringing bright shades with no loss in fastness."

Colorist Frederic Rahr, a guest contributor from New York, observes color reactions "symptomatic of the early phases of a buyers' market, with too many product items made in too many colors that are not demanded by the consumer."

We close this year's color trend roundup with this contribution from Henry Dreyfuss of New York and Pasadena, Calif., a Founder and Fellow of ASID. Mr. Dreyfuss writes: "While there is a stability of limited color application in many lines of consumer products, it is noticed with great interest that a good many conservative manufacturers are now beginning to introduce a variety of color in their products.

"We see trends toward much lighter colors that are pleasing to the eye and easy to live with. Trends in color bring about new marketing and sales techniques as exemplified by products where the consumer may select the color combination desired and even change colors at the retail level.

"In architecture there is a definite revival of interest in stone, especially 'natural' colors in granite and marble. This will have specific effect on many basic materials that are used in conjunction with stone." (Ed. Note: Much as use of wood in kitchen cabinetry has exerted a strong influence on kitchen appliance colors.)

In concluding Mr. Dreyfuss observes: "Throughout heavy industry use of color is beginning to spread. Many industrial manufacturers are finding that color compliments and enhances their products surprisingly."

REPORT FROM THE AMERICAN SOCIETY
FOR TESTING MATERIALS DELEGATES,
GEORGE W. INGLE, CHAIRMAN

In 1961 the complexion of the color-related activities in the whole of ASTM (collected by ASTM Committee E-12) broadened noticeably to empha-

size factors of appearance other than color. This is interpreted to mean that the more straight-forward elements of color and of color difference important to industry have been well enough defined to permit study of more difficult problems, such as appearance of metallic surfaces and of characters typed and duplicated by carbon paper. This change also reflects the application of appearance studies to a broader spectrum of materials. This trend is evident in the change of name to (American Society) for Testing and Materials and, in the case of E-12 to (Appearance) of Materials. In the latter case, the change of name was made to define more readily, to those less familiar with this kind of technology, the true scope of E-12's interests.

An increased number of appearance-related studies was transferred from one materials committee within ASTM to Committee E-12 which has jurisdiction over this field of technology regardless of material. For example, D-1 on Paint, Varnish, Lacquer and Related Products asked E-12 to take terms relating to appearance properties from method D-16 "Definitions of Terms Relating to Paint, Varnish, Lacquer and Related Products" and compile these from other materials. The product of this work will ultimately be a glossary of such terms. Included in this will be that broad gamut of terms now being developed by D-12's own Task Group 5 on Carbon Papers and Typewriter Ribbons.

In addition ASTM D-20 on Plastics requested that E-12 prepare an up-to-date consolidated form of ASTM methods D-307 and D-791 which are primary industry

standards for spectrophotometry and colorimetry. The objective is to provide an ASTM standard for adoption as recommended procedure by the International Standards Organization. This effort is made by simultaneous Task Forces in E-12 and in ISO's Technical Committee 61 on Plastics. The first draft of the consolidation procedures has been made; while necessarily continuing its emphasis on fundamentals well known to this Council, emphasis is made on recent advances in exploiting high-speed computation to unlock for industrial purposes the power of spectrophotometry and colorimetry.

Last year we reported that Committee E-12 had put new spirit into its Subcommittee I on Intercommittee Relations, to correlate and encourage activities on appearance problems within the seventy-one individual ASTM committees concerned with specific materials. Eighteen committees have some positive degree of interest in direct association with E-12.

The unevenness in the technological advancement across these committees is sometimes difficult for E-12--less advanced groups have hesitated to attack problems of apparently excessive complexity. Thorough analysis frequently reveals that bases for solving the problem have already been established in other sectors. These situations create opportunities for E-12 to serve effectively as a clearing house for the diversified information characteristic of appearance technology. One such area of interest is that of Pictorial Representation, E-12's Subcommittee III. A group of outstanding contributors has been recruited to devise a Recommended Practice for Pictorially Presenting Appearance Factors of Materials and Objects of Engineering Interest. To further stimulate this activity, Symposium is being prepared for the forthcoming June meeting of ASTM in New York. The titles of the four papers so far scheduled show the nature of this meeting, titled "New Ideas in Solving Problems of Appearance of Materials":

1. Micromorphology in Appearance Problems by R. J. Clark, Monsanto Chemical Company, Plastics Division, Springfield, Massachusetts.
2. Appearance Problems of Carbon Papers by W. E. Grady, The Carter's Ink Company.
3. Control of Appearance of Aluminum Surfaces by R. V. Paulson, Kaiser Aluminum and Chemical Corporation.
4. Industrial Applications of Photogrammetry to Define and Measure Irregular Complex Surfaces by Dr. Ennio M. Gherardi, Lockwood, Kessler and Bartlett, Inc.

Another illustration of Committee E-12's coordination of appearance studies across a broad range of materials is its review of test methods developed by other materials committees. In 1961 its "Ad Hoc Method Review Committee" suggested refinements in test methods concerned with appearance factors of shellac, fatty acids in protective coatings, solid aromatic hydrocarbons, white architectural enamels, glycerin and with the visual evaluation of color differences of opaque materials. Methods now under similar study include those for turbidity of water and transparency of plastic sheeting.

Finally, three members of ASTM E-12 Committee received distinctive honors for their impressive technical contributions to this science:

Mr. Isidore Nimeroff received an academic leave from the National Bureau of Standards to study optical properties of materials under Dr. Wright at the Imperial College of Science and Technology, University of London, for the present academic year. Mr. Nimeroff is Chairman of E-12's Task Group I on "Appearance Manual".

Mr. Richard S. Hunter received an ASTM Award of Merit, at the June, 1961, Annual Meeting of ASTM. Mr. Hunter is currently Chairman of E-12's Task Group 8 on "Test Methods for Whiteness and Components of Whiteness."

Dr. J. A. Van den Akker, of the Institute of Paper Chemistry, received a Fulbright Scholarship to teach Physics at the University of Manchester, also in England. Dr. Van den Akker is well known for his "Instrumentation Studies" including those of instruments concerned with measuring aspects in the appearance of pulp and paper products. He was active in Committee E-12 as Chairman of Subcommittee II on Color from 1955 to 1958.

ASTM has been honored by ISCC's selection of its president from the ASTM delegation to ISCC.

There were no articles on appearance and related factors in "Standards and Materials" during 1961, but Committee E-12 did promote the publication of an ASTM Special Technical Publication comprising D. B. Judd's paper "A Five Attribute System of Describing Visual Appearance", not published elsewhere.

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

(Before we start, I'd like to define the term "fashion colors" which is used in this report. By "fashion colors" we mean new,

seasonal, changing colors as opposed to staple shades. Their inspiration frequently has a fashion source, but they appear in all fields, not just ready-to-wear.)

In a year's time the world has undergone drastic changes, which can be documented in terms of color.

Within the sphere of the color activities of our Association these include:

First, the wider use of color. More and more types of products are turning to color in styling their lines. Manufacturers all over the world are thinking in terms of "fashion" colors. This is particularly true in the case of synthetic materials, where color is a great aid in adding character to the product.

Men's wear is also an excellent example. For our first color card the committee selected olive and gold and felt this was adequate. When asked about showing more colors their reply was, "Why show more? Everyone knows the right gray, blue and brown for men's wear." Now,

three years later, the card just issued for Spring 1963 has fifty colors, plus 12 shades of yarn and 12 in leather!

Secondly, color lines are much longer. Even though this poses inventory problems, merchants find that increased sales are directly related to the strength of their "fashion" colors.

A third change comes with the increased pace of industry operation. Because of the volume involved, everyone is working farther and farther ahead. Our own schedule has been advanced by two months. The first fall colors were issued in August, rather than October and resort colors in January rather than March.

The fourth change has come in the expanding use of color coordination, bringing quite diverse fields or products into closer relationship through color planning. (Entire buildings are color planned, from exterior to equipment to furniture and furnishings - even to having softly tinted glass so the secretaries will look prettier as the sun shines on them!)

An example from the fashion field shows this changing color concept. The term status symbol has become a common phrase. We have had the mink coat, the swimming pool, the motor boat. We now have a new symbol. This might even be termed THE YEAR OF THE WIG. Sales of wigs are increasing rapidly and many women now own two or three. Hair tinting and wigs are important, not only as a fad, but because of their relation to color. With greater emphasis on softer, lighter tones and with women changing their colorings, it affects not only the shades of cosmetics, but also the colors they wear. Many are suddenly wearing whole new ranges of costume shades they never tried before.

In the world at large there have been equally important color developments.

First, the world has become so small we can circle it thrice in an afternoon. Thus all ideas, developments, trends are known around the world immediately. Paris no longer sets color trends as it once did. The American influence is so strong its leadership is felt in fashion as well as in hard goods, marketing, communications, etc. It is akin to the awakening which occurred in the Orient with the Open Door policy. All Europe moves with a new tempo and a new philology. They too, have caught the cult of youth. They are styling for and catering to the young market.

Secondly, the inception of the Common Market has brought another change. With new customers right next door, they can use the same patterns and colors they have been showing for the past few seasons, rather than push to create new things. Thus, Europe is less important as a source of inspiration.

As production increases and Europe has new machinery to keep in operation, rising wage rates, more self service and more packaging, greater attention will be given to mass styling and less to creative design. Color is being used to help sell merchandise, rather than to create trends.

Increasing trade and greater interdependence throughout the world brings added demand for accurate color communication. The same colors are used simultaneously throughout the world, for items produced all over the world to coordinate at the point of sale. In recent months the number of our requests for additional swatches for such coordinated color work has quadrupled.

There is a third, and perhaps even more vital, color development. It is the paradox that while color is bringing the free world closer together, it is also the great divider - just as definite and positive as the iron curtain itself.

Our greater use of clear, bright colors reflects our thinking and our way of life. In our free world we use color unrestrictedly to be gay, to make machines interesting and give variety to our life, to express individuality; but behind the iron curtain WHO NEEDS COLOR?

Colors excite, they inspire, they make people happy, they foster individuality; they furnish a means of self expression. Can you imagine what might happen if those suppressed people had an opportunity to use color as we use it?

How dangerous it would be!

For those of us working in color there is a great challenge and a real responsibility. We must keep our world bright, happy and full of color.
FOR IF WE KEEP IT COLORFUL WE CAN ALSO KEEP IT FREE!

REPORT FROM THE FEDERATION OF
SOCIETIES FOR PAINT TECHNOLOGY
DELEGATES, S. LEONARD DAVIDSON,
CHAIRMAN

Previous reports of this delegation to the Inter-Society Color Council have indicated that the importance of Color and Color Technology to the Paint Industry has been growing.

This is still true.

As you know, the Federation of Societies for Paint Technology is composed of several constituent societies. This year, three of these societies have had or are in the midst of courses on Color Technology.

The New York Society, through its Education Committee, presented a course on Color and Color Measurement at the Peter Cooper Museum. This course consisted of nine lectures by Mr. Richard Landry of Davidson and Hemmendinger and one lecture by Mr. Richard Hunter of Hunter Associates Laboratory, Inc. The response to the course was enthusiastic and it is planned to make the course available on an annual basis.

The New England Society, through its Education Committee, is presenting a lecture series on Color at the Museum of Science. This series consists of the following four lectures:

1. Basic Elements of Color and Light by
Mr. Andrew M. Moore, MacBeth Daylighting Corporation.

2. Color Measurement by
Mr. Harry K. Hammond III, U. S. Bureau of Standards.
3. Attitudes and Trends in Color Usage by
Mr. Walter C. Granville, Industrial Color Consultant.
4. Practical Applications of Basic Color Principles to Paint Problems by
Mr. Ralph E. Pike, E. I. duPont de Nemours & Co., Inc.

The Philadelphia Society, through its Seminar Committee, is presenting a series of five lectures on color, its attributes, measurement and control at the Philadelphia College of Textiles and Science. The first three lectures on Color Physics will be given by Mr. Hugh Davidson of Davidson and Hemmendinger. The lecture on Psychophysics of Color will be given by Mr. Richard Hunter of Hunter Associates Laboratory, Inc. The final lecture on Psychology of Color will be given by Mr. Robert Stafford of the Philadelphia Textile Institute.

Besides the courses in color, the New York Society, through its Technical Committee, is studying the problem of how to set color tolerances.

A long time member of the Federation and a Delegate to the Inter-Society Color Council for many years, Mr. A. J. Bruning, passed away this summer. His company, the H. B. Davis Company of Baltimore, Maryland has established the Armin J. Bruning Award which will be presented by the Federation of Societies for Paint Technology at its Annual Meeting for an outstanding contribution to the science of color in the field of Decorative and Protective Coatings. The first award will be made at the meeting in St. Louis, Missouri in October 1962. The committee for this award will hold its first meeting at the Annual Inter-Society Color Council.

Plans are now being made to present a program on color at our annual meeting in St. Louis. Our tentative speakers are Miss Ruth Johnston of Pittsburgh Plate Glass, Dr. Fred Billmeyer of E. I. duPont de Nemours, Inc. and Mr. Max Saltzman of the National Aniline Division of Allied Chemical & Dye Corp. The program will be in the form of a round table discussion and will be moderated by Mr. S. L. Davidson of the National Lead Company.

While the Federation is progressing in the field of color, we would like to thank the many members of the Inter-Society Color Council that have helped us to progress. We want you to know that we value highly our association with you and your cooperation.

REPORT FROM THE FOLDING PAPER
BOX ASSOCIATION OF AMERICA DELEGATES,
ALBERT KNER, CHAIRMAN

No report

REPORT FROM THE GRAVURE TECHNICAL
ASSOCIATION, INC. DELEGATES, OSCAR
SMIEL, CHAIRMAN

The Gravure Technical Association this past year decided to print a G.T.A. Ink Standards tone scale for distribution to printers,

engravers, ink manufacturers and advertising agencies in the gravure industry. The 12-step tone scale will be in the respective four process colors Yellow, Magenta, Cyan and Black. Each step represents a tonal value of the average picture to be reproduced in gravure supplements and magazines. The transmission

values of the G.T.A. Standard Positive on a densitometer run from 1.55 in the deepest shadow to .25 in the lightest highlight. The etched and printed tone scale corresponds to these positive density values.

The G.T.A. Standard Inks for supplements which were agreed upon by the industry two years ago will be used on 34 lb. supplement stock, while various magazine stocks will be printed in the special inks required by the respective magazines. The book containing these printed tone scales will be 9 x 12 on a heavy cover stock attractively designed in four process colors. In addition to positive density values, $1\frac{1}{2}$ inch square solid blocks will be included for making spectrophotometric reflection density readings. These scales will not only be an aid to art directors who wish to designate specific tint values, but a help to retouchers, finishers, and pressmen when checking color correction and ink hues.

As an added feature, the G.T.A. by permission of Gravure Research Institute is going to print from G.R.I.'s cylinders enough four color charts to supply everyone in gravure who wishes them. These four color charts were designed by G.R.I. and embody the majority of colors used in gravure printing and reproduction of art work. The charts will be printed on various stocks and will be distributed to the packaging industry as well as everyone in the publication industry. Due to deterioration and aging all charts and tone scales will have to be reprinted periodically in order to be of any value when matching colors.

REPORT FROM THE ILLUMINATING
ENGINEERING SOCIETY DELEGATES,
NORMAN MACBETH, CHAIRMAN

It is my pleasure to report that the I.E.S. Sub-Committee on Color Rendition (under Light Sources Committee of I.E.S.) has completed its work in providing a method for evaluating the color rendition of light sources, as compared to a standard light source of approximately the same color temperature. Extensive work has been done by this committee and particularly by its chairman, Miss Dorothy Nickerson, as will be reported in her paper before the I.S.C.C. at this meeting and which has been accepted and will be published by Illuminating Engineering Society later this year.

This work is a tremendous contribution in the C.I.E. Committee E.1.3.2. which, in essence, is substantially in agreement with the proposal being set forth by the I.E.S. Sub-Committee on Color Rendition.

It is the sub-committee's hope that its work will be published in time to be submitted to the C.I.E. Committee E.1.3.2. at its next meeting in Geneva in June 1962 as it is possible that action on these efforts may be formalized at the meeting of the C.I.E. in Vienna in June 1963.

Members of the I.S.C.C. and the I.E.S. Sub-Committee on Color Rendering have met in Düsseldorf in May 1961 with Mr. Munch, Chairman of Committee E.1.3.2. Those members attending were Miss Dorothy Nickerson, Mr. Charles W. Jerome, Dr. Deane B. Judd and the writer from the United States. Members from other countries also attended.

REPORT FROM THE INDUSTRIAL
DESIGNERS' INSTITUTE DELEGATES,
HOWARD KETCHAM, CHAIRMAN

Production housing has advanced to the point where a 12,200 square foot house, completely decorated inside and out can be erected in one day. Colored facings are molded to a core of expandable polystyrene foam. General Homes

Production housing has advanced to the point where a 12,200 square foot house, completely decorated inside and out can be erected in one day. Colored

delivers every component in a single 40 foot van trailer. Koppers furnishes the panels.

A colorful packaging showcase is under development for the New York World's Fair to display packaging for the "Foods of Tomorrow".

In a survey to determine how well present corporate symbols speak for themselves, only 9 of 48 emblems, all abstractions or designs based on corporate names or initials, submitted "blind" to 1000 key executives in all business and management areas achieved over 80% recognition. Of these, Shell, G.E. and Cities Service benefited most from distinctive corporate color.

In the development of successful corporate identity programs, successful departures from conventional colors are a vital asset in the struggle for instant and unmistakable recognition, for perceptibility, memorability and suggestiveness.

The automatic vending field desperately needs packaging containers that are esthetic looking. Consumers don't want and will not accept present vending machine packaging in spite of the merchandising push. This is the most neglected field in packaging.

In the graphic arts field, designers believe too many specifiers of printing underspend on color. Too many printers think colorless printing can sell itself. Both overlook the power of color to make an impression -- good or bad. Not enough planning is done to exploit the selling opportunities of color in the printed page. The proper use of color combinations in printing elicits reader responses that condition desired reactions.

Today's letterheads lack vitality. Although full color is available at low cost to small users as well as large corporations through automated color separation and gang-run lithographing methods, the letterhead lags far behind the package in utilizing corporate identity and merchandising possibilities. Letterheads can supplement advertising by featuring plants, products, packages, catalogues, services, functions, locales and corporate colors. Using colored stock, artwork and graphics in color and colored ribbons adds realism and power to communications. Color heightens the personal flavor of the message and the "stand-out" quality of the letter. Color is concrete, words - abstract, so color tells the story with more meaning than words. It exerts an immediate and primitive impact on the emotions.

Store color is affecting sales as much as are displays. Interior colors that provide an ideal buying atmosphere for the merchandise -- that upgrade the store image and the apparent value of the merchandise -- are essential. According to Life magazine's recent survey, women base their store preference primarily on 3 factors:

1. Convenience of location
2. Price appeal
3. Store appearance appeal

Younger women shop less frequently than older women, but they make larger purchases when they do. Therefore it is important to feature store colors that appeal to younger women, to spark more "impulse" sales and profits.

Planned color changes in a retail store renew shoppers' interest in the store. Familiarity on the part of women shoppers with the layout of a (supermarket, discount, drug, variety) store results in smaller dollar purchases. Consumers who are familiar with the layout of a store tend to plan their trips through the store so they are as short as possible. The store offering no surprises to shoppers may be losing sales. Such losses could be prevented by making planned changes in display location, merchandise arrangements and colors at key areas in a store, which would renew shoppers' interest in the store and in the things sold.

Women are wearing contact lenses in color to change the color of their eyes.

Filing clerks have discovered different colors in envelopes used for filing or routing save time and trouble. Different colors for different departments and destinations are proving a boon.

According to Benjamin Werremeyer, Chairman, IDI Chicago Chapter, "...fabric manufacturers pick horrendous colors and color combinations year after year despite magnificently coordinated colors to choose from. Why do they consistently do this? The designer can and should be of some influence on this, but there seems to be a short circuit somewhere. When it comes to selecting fabrics for various upholstered lines, designers regret their efforts to do a good design job when they are faced with a fabric choice that is next to nil.

"Why must the manufacturers of high pressure laminates, as well as soft plastics, change colors year in and year out? True, automobile styles change, usually on a schedule of body change every other year. Why can't these manufacturers do something of the same sort? We had an example of this recently. Two years ago, we had a special top made up for our conference room, and 15 months later we wanted to use the same coral for another table and found that the supplier couldn't supply an acceptable match. Why must this condition exist?"

The Mink Breeders Association is leaning on color to swing outmoded furs back to popularity. They are pondering a campaign to create a new fashion image and a desire for dyed furs.

Light colors are being specified on vacuum cleaners to make them seem lighter, easier to use. Dark colors are being introduced on alarm clocks to make them seem heavier, a desirable sales attribute for this item.

Lt. Col. Glenn paid tribute to the importance of color-engineering by designing the instrument panel for Friendship 7. He color-coded his instrument panel, arranged the 165 meters, dials, toggles, levers and lamps to suit his taste and needs. His practical color system was adopted by McDonnell Aircraft Corporation, designer and builder of the space craft.

Fashion of the Future. Fabric coated with ultra-thin aluminum foil may be used in clothing for men in space as well as fire fighters and arctic explorers. The U. S. Army is checking to evaluate the protection afforded by foil from temperature extremes and gamma radiation.

Color Waste. Paint and dye manufacturers customarily delegate one individual to handle the job of determining when a color match to a desired sample is reached. As a result, year after year they needlessly discard color batches.

The unnecessary rejection of color batches has become a luxury that American industry can ill afford (this does not mean manufacturers should not have close tolerances for standard or well-established shades).

For example: dyed batches of carpeting are frequently so close in shade to the standard that when the standard and a sample of the batch are woven side by side in a carpet, it is difficult to see any difference in shade. The rejection and redyeing of such batches is costly, because it slows production and wastes manpower. Yet the carpet and upholstery industries spend millions of dollars annually redyeing batches that were close enough to pass muster in the first place.

Mr. Ira W. Simons, Chairman, Ohio Valley Chapter, poses the problem of specifying color for finishes, plastics, etc. "Manufacturers -- with the exception of a few paint suppliers -- don't use comprehensive color standards. Generally the designer is obliged to create samples of all colors required. Since most manufacturers fail to make use of standard color directories such as Munsell, the designer must also establish standards for his clients and designate allowable commercial limits for all color requirements." To avoid this problem, Mr. Simons relies on charts of automotive finishes for his color specification and reference work. These color standards are readily available throughout the country.

It is obvious from designers' comments that the need for color standards in industry is imperative. Like the designer, those who use color constantly in their work find that they have to establish their own standards for the most part. It is time for manufacturers to give concerted attention to remedying this need.

Brunswick billiard tables have taken to color. Gone are the wooden tables and familiar green baize felt tops. They have been superseded by fiberglass tables in colors, such as blue, white, tangerine and gold. The felt comes in these same colors. By varying the combination of table and felt color a wide variety of visually exciting color blends are achieved, such as tangerine table with gold felt, gold table with blue felt, etc. Tangerine is proving extremely popular.

As a result of this switch the familiar green cue chalk is becoming obsolete and chalk colors to match the felt colors are becoming a must. Here again color is serving to revive a waning pastime -- and, at the same time color makes it possible to up table prices to as high as \$1,500!

REPORT FROM THE NATIONAL ASSOCIATION
OF PRINTING INK MAKERS, INC.,
DELEGATES, F. L. WURZBURG, JR.,
CHAIRMAN

During the past year NATIONAL
PRINTING INK RESEARCH INSTITUTE
(NPIRI) has continued its work
with the Quartermaster Corps
reported last year. The purpose

of this work is to develop specifications characterizing a set of ten base offset inks for map printing in the field. The specifications are to be

written so that neither wet samples nor instrumentation would be required for an ink manufacturer to comply with them. In addition, the specifications must insure that the base colors give reasonably consistent color mixtures. The specification will suggest the pigments to be used (all the bases are single pigment colors) and will depend primarily upon the preparation of reasonably permanent color chips. These color chips will show the colors of prints of the full strength bases, the colors of thick film drawdowns of bleaches of the bases, and also the colors of prints made by selected mixtures of the base colors, two at a time. Tolerances will be set up in terms of the permissible variations in the formulas required to match both the bleaches and the inter-mix colors.

NPIRI has completed a study of the effect of the particle size of phthalocyanine blue pigments on the color of prints of inks made from them as well as on dilute suspensions. The most interesting result has been the observation, based on solutions of PC in hot chlor-naphthalene, that the short-wavelength portion of the spectrophotometric curve is effected primarily by scattering while the long-wavelength portion is non-specific with respect to particle size. It is expected that the results of this work will be published soon.

A basic research project on Mie scattering is being conducted at Lehigh towards fulfillment of the requirements for a doctorate in physical chemistry. This work is under the direction of NPIRI and is concerned primarily with an attempt to predict the behavior of aqueous dispersions of spheres of cobalt glass of different but closely controlled sizes. It is hoped that this work will help eventually in predicting the behavior of pigments of known particle size distribution in inks.

During the summer of 1961, NPIRI again sponsored a week-long training course on printing ink technology for technical men from the ink industry. G. L. Erikson and F. L. Wurzburg, Jr., both contributed instruction to the group on different aspects of color.

MISCELLANEOUS INDUSTRY ACTIVITIES IN THE FIELD OF COLOR. F. L. Wurzburg, Jr. again conducted a three-day color control seminar for graphic arts personnel under the auspices of the Rochester Institute of Technology. As has been true in the past few years, the seminar was over subscribed.

At the forthcoming annual convention of the Ink Association Tiny Erikson will demonstrate to the executives of the industry the various tests for color blindness and color aptitude. The participants will be urged to take the tests so that they may familiarize themselves with their potential use in the ink industry.

The attempts of the groups representing the advertising agencies (AAAA), the magazine publishers (MPA), photoengravers (APA), and the magazine printers (PIA) to standardize on four-color inks for proofing engravings for high-speed wet magazine printing continues. Although a good deal of progress has been made, it will probably be some time yet before general agreement is reached. The Ink Association has cooperated very closely with this project and will, of course, continue to do so.

This delegation is sorry to learn that Charles Conquergood has requested that his resignation as a voting delegate be accepted. Charlie has been a member

of the ISCC since its inception and, as all of you know, has always been one of its mainstays. Although we will regretfully accede to his request, we will nevertheless keep him on the roster of non-voting delegates and hope that he will be able to attend many meetings in the future.

REPORT FROM THE NATIONAL PAINT,
VARNISH AND LACQUER ASSOCIATION
DELEGATES, ROBERT A. ROLAND,
CHAIRMAN

During the past year, about the only activity of the National Paint, Varnish, and Lacquer Association in the field of color has been their "Color Survey", showing trends in

color preference, as indicated by the sales of various colors of various types of paints. This is a continuing effort. Copies of the current report are available on request from Association Headquarters.

The book, "Color and How to Use It", published by the Association, is still creating interest. Copies are available from Association Headquarters, for \$3.00.

REPORT FROM THE NATIONAL
SOCIETY OF INTERIOR DESIGNERS,
INC., DELEGATES
MRS. EDITH GECKER, CHAIRMAN

No report.

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

The Journal of the Optical Society has continued in 1961 to publish many papers on color and vision. A 2-page list, taken from the subject

index to volume 51, is attached. It covers references to book reviews, color, colorimeters, colorimetry, reflectance, reflectometers, spectrophotometry, spectroradiometry, and vision. The 1962 spring meeting in Washington includes a symposium on Physiological Optics, a joint session of the Armed Forces - NRC Committee on Vision, and the Inter-Society Color Council.

On December 1, 1961, with 14 members and guests present, an all-day meeting of the OSA committee on Uniform Color Scales was held, to go over statistical data based on the last observational step completed on the committee program, and to decide on the next step in the long range plan of the committee work. Although progress seems slow, it is steady.

Active work by OSA members has continued with CIE committee E-1.3.1 (Colorimetry), and E-1.3.2 (Color Rendering of Light Sources), both of which met in 1961, E-1.3.1 in London, May 19, and E-1.3.2 in Düsseldorf, May 27.

In E-1.3.1 work continues regarding color matching functions, with further field trials to be made before the 1963 meeting. Agreement was reached regarding conditions of interest for developing a uniformly based solid for surface colors: extended field 2° to 10° , juxtaposed, and slightly separated with neutral gray; daylight adaptation, minimum 50 lumens/sq. ft.; the surround to average middle gray, 25%. It was also agreed that reaction be explored in each country to the views expressed in the committee regarding formation of a new proposal for standard sources in 1963. This question was raised following successful development of glass filters suggested for replacement of the liquid filters now used in defining CIE Sources B and C. By

raising this question, others were raised that it felt should be answered also if a change of any sort is to be made. For example, there are present disadvantages with Sources B and C:

1. They do not define sources of greatest interest (typical phases of natural daylight are greener than the Planckian colors).
2. Filters are not precisely reproducible.
3. They do not provide the same source for computation and observation.
4. They are inconvenient and expensive because of obsolescence.
5. Change is premature, because xenon lamp discussion is not yet complete.
6. Filters do not yield a suitable ultra-violet distribution.

(Impromptu meetings of ISCC members interested in this subject were held March 12, prior to this ISCC meeting. Anyone who missed it, but desires to express his views on this subject, should contact the USNC E-1.3.1 committee. A summary of the May 1961 CIE committee discussion on this subject is available on request.)

The work of E-1.3.2 on color rendering is reviewed in a report by the I.E.S. committee on color rendering, soon to be published in IE.

In 1961 Deane B. Judd became editor of the Journal of the Optical Society. As a consequence, he felt it necessary that he be relieved of the chairmanship of OSA representatives to the ISCC, a position he has held for many years. Delegates appointed this year include Blanche R. Bellamy, Carl E. Foss, Glenn A. Fry, Walter C. Granville, Arthur C. Hardy, George Ingle, Deane B. Judd, with voting delegates Richard S. Hunter, David L. MacAdam, Dorothy Nickerson. A brief meeting of these delegates is scheduled during the OSA meetings in Washington.

REPORT FROM THE PACKAGE
DESIGNERS COUNCIL DELEGATES,
KARL FINK, CHAIRMAN

No report.

REPORT FROM THE PACKAGING
INSTITUTE DELEGATES, F. L.
WURZBURG, JR., CHAIRMAN

No report.

REPORT FROM RESEARCH AND
ENGINEERING COUNCIL OF THE
GRAPHIC ARTS INDUSTRY, INC.
DELEGATES, PAUL LYLE,
CHAIRMAN

No report.

REPORT FROM THE SOCIETY OF
MOTION PICTURE AND TELEVISION
ENGINEERS DELEGATES, RALPH M.
EVANS, CHAIRMAN

Our report this year consists of a list of articles published in the SMPTE Journal which will appear later in the News Letter bibliography.

REPORT FROM THE SOCIETY OF
PHOTOGRAPHIC SCIENTISTS AND
ENGINEERS DELEGATES, ALBERT
J. DERR, CHAIRMAN

The highlight of the past year for this Society has been the successful Annual Conference with its two sessions devoted to the problem of color in photography.

As these are published in Photographic Science and Engineering they will be included in the bibliography which is submitted with our annual reports.

This year's conference is scheduled for Boston, May 7 - 11, and the members of this council are cordially invited to attend.

We wish to introduce two new members of our delegation, Mr. William Woodbury, of Eastman Kodak Co., who joined last May, and Mr. Fordyce Brown, who is joining now. Mr. Brown is Engineering Vice-President of S.P.S.E.

The Society is happy to have had one of its delegates, Mr. James Bartleson, participate in the preparation of "Facts of Color", the report of the Problem Subcommittee #20.

REPORT FROM THE SOCIETY
OF PLASTICS ENGINEERS,
FRED W. BILLMEYER, JR.,
CHAIRMAN

(The Society of Plastics Engineers was approved as a member body of the Council at the business meeting March 13, 1962, after which Dr. Fred W. Billmeyer, Jr., an individual member of the Council who had been designated as the Chairman of this delegation by the SPE, gave the following report.)

In 1960 a Professional Activity Group on the Coloring of Plastics was formed within the Society of Plastics Engineers. Primarily concerned with the problems of plastics processors in producing colored products, the group includes on its Executive Committee (see attached list of officers) a number of color scientists who act in an advisory capacity to the industry.

The PAG recognizes that a major problem in the coloring of plastics lies in the education of its members in the field of color technology. To this end, it sponsored a program of papers on color at the SPE's Annual Technical Conference (ANTEC) in Pittsburgh in January, 1962 and will sponsor a similar program at the 1963 ANTEC. In addition, it is working closely with the Rochester Section of the SPE which is holding a Regional Technical Conference (RETEC) on Color and Coloring of Plastics on April 12, 1962.

Another project, the preparation of an elementary book on color for the plastics industry, has been deferred until the PAG can assess the value to its members of current and forthcoming literature in the field.

A young but active group, the Coloring of Plastics PAG looks forward to association with the ISCC, and expects to benefit greatly from its assistance and advice in technical and educational problems relating to color.

List of Officers SPE Coloring of Plastics PAG:

Chairman: Maret Bacci
 Vice-Chairman L. R. Sherman
 Secretary I. L. Podell
 Exec. Com.:

W. N. Hale	Munsell Color Co.
W. E. Hansen	Polymer Dispersions
H. Hemmendinger	Davidson & Hemmendinger
J. Serpico	Marhon Chemical Co.
R. H. Zabel	DuPont
R. L. Benemelis	Ridgway Color
M. M. Gerson	Sandoz, Inc.
G. W. Ingle	Monsanto Chemical Co.
L. J. Radi	Interchemical Corp.
W. J. Slack	Premier Thermoplastics
F. W. Billmeyer, Jr.	DuPont
R. H. Dunning	Bee Chemical Co.
W. G. Merrill	Plastics Molders Supply Co.
M. Saltzman	Allied Chemical Co.
K. S. Wade	Wilson Products Co.

REPORT FROM THE TANNERS' COUNCIL
 OF AMERICA, INC. DELEGATES,
 MRS. RUTH H. K. FRIES, CHAIRMAN

Color has become the important ingredient for enhancing the appearance and textural beauty of all types of leathers for modern products except the most basic utilitarian leathers for industrial purposes. Member tanners of this trade association are engaged in the processing of a wide diversity of types of skins and hides, transformed by the most modern tanning techniques into leathers for shoes, handbags, luggage, personal leather goods, bookbinding, saddles, military procurement, apparel and upholstery.

Each type of leather requires its particular method of production, and the coloring of various kinds of skins is based on a variety of new chemical formulas. Seasonal color requirements for fashion products also contribute to the new complexities of color production in American tanneries.

Color specifications for leather are more exacting than ever before, and trained color specialists serve in more important capacities in leather production than previously. The chemist, the tanner, the finishing expert, must also be part of the color production team in the modern tannery. This is one reason why three sets of Color Aptitude Test kits are in constant circulation among the member tanners of the Council. Since expert color matching is of such paramount importance in American leather tanneries, it is imperative that each individual technician's color aptitude be established. These Color Aptitude kits from the Inter-Society Color Council are filling a genuine need in the leather industry.

REPORT FROM THE TECHNICAL
 ASSOCIATION OF THE GRAPHIC
 ARTS DELEGATES, J. A. C. YULE,
 CHAIRMAN

The TAGA Color Committee has undertaken to look into the problem of evaluating the gamut of colors covered by a set of printing inks.

At the last meeting of the committee, in June 1961, there was considerable disagreement as to how this should be done, and difficulty in weighting the

relative importance of various colors was anticipated. However, it was agreed that experimental work rather than discussion is needed at this point. Several members offered to carry out parts of the investigation, and since that time several sets of inks containing different pigments have been made, and a set of negatives for printing a color chart has been prepared. For the first exploratory test only two sets of inks were printed, and the resulting prints have been circulated to members of the committee who are each using their own methods of evaluating them. Unfortunately, the marked difference which these inks had previously shown in picture tests was not evident in these color charts, for reasons which are not fully understood, but sufficient information can probably be obtained from this preliminary test to plan a larger scale experiment.

Spectrophotometric data have been obtained both with an integrating sphere spectrophotometer and with 45° - 90° illumination. The latter seem to conform more closely to the visual appearance, but no integrator for computing tristimulus values appears to be available with this type of instrument, which makes the computation too time-consuming.

REPORT FROM THE TECHNICAL
ASSOCIATION OF THE PULP AND
PAPER INDUSTRY DELEGATES,
D. NOEL OBENSHAIN, CHAIRMAN

Concern with color in TAPPI is focussed on product groups and in the Testing Division which prepares standard test procedures. The product groups interested in color deal with graphic arts, bleaching

and paper coatings. (The TAPPI 1962 Testing Conference to be held this September in Philadelphia will feature graphic arts and have a number of papers in the color and appearance areas.)

In the Optical Methods Committee of the Testing Division, there are active projects on:

- a. Brightness (blue reflectance) of pulp and paper
- b. Brightness in the presence of fluorescent brightness
- c. Whiteness
- d. Illumination for visual color matching
- e. Gloss of ink films
- f. Microphotography by tangent illumination

Papers on each of the first two subjects were published by the Association during 1962.

Newsletter Committee:

Warren L. Rhodes, Chairman
Katherine Chandler
Waldron Faulkner
Calvin S. Hathaway

William J. Kiernan
Dorothy Nickerson
Helen D. Taylor

Send Newsletter Items to Editor,
Warren L. Rhodes
Graphic Arts Research Department
Rochester Institute of Technology
Rochester 8, New York

Other Correspondence to Secretary,
Ralph M. Evans
Color Technology Division
Eastman Kodak Company
Rochester 4, New York
