INTER-SOCIETY COLOR COUNCIL
NEWS LETTER

NUMBER 129 May, 1957

Editor: Warren L. Rhodes
Rochester Institute of Technology
Rochester 8, New York

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

Address correspondence regarding subscriptions and missing copies to the Secretary.
Annual subscription to non-members: $4.00.

TEXT OF THE CITATION HONORING DEANE B. JUDD, FIRST RECIPIENT OF THE GODLOVE AWARD PRESENTED AT THE 1957 ANNUAL MEETING

The March issue of the News Letter announced that Dr. Judd received the first Godlove award. Because this is such an important event and because Dr. Balinkin and his committee did such an excellent job, the citation is reprinted in this issue along with the complete bibliography ". . . or one we believe to be complete."

Citation Honoring the First Recipient of the Godlove Award

Mr. President:

On August 14, 1954, the Inter-Society Color Council suffered a great loss in the passing of Dr. I. H. Godlove. Many are the sorrowing friends of Dr. Godlove; they mourn him as a man of science, a man of vision, a man of open mind - a kindly man of open heart. He served the Council with perseverance and devotion as its Chairman, as Editor of its News Letter for sixteen years, and as a member of many committees, to all of which he contributed freely of his time and his talents. We shall remember him always with affection and admiration!

Last year the Inter-Society Color Council accepted a fund established by Mrs. I. H. Godlove, to provide for a Godlove Award, to be presented biennially to a person selected for outstanding contribution to the knowledge of color. To select the first recipient, Mr. President, you appointed a committee, consisting of Miss Dorothy Nickerson, Dr. E. I. Stearns, and myself, as chairman. It is now my privilege to report our recommendation to you. It was an easy task to make this selection, for there was one name that came first and promptly to each of us, that of Deane Brewster Judd, National Bureau of Standards, Washington, D. C.

In recommending Dr. Judd to be the first recipient of the "Godlove Award for Contributions to the Knowledge of Color," we take pride in naming a man, who as past chairman of the Council - the only chairman to serve two terms - has contributed significantly to fulfilling the aims and purposes of the Inter-Society Color Council by stimulating and coordinating the work of our various Member Bodies "leading to the standardization, description and specification of color and promoting the practical applications of these results to the color problems arising in Science, Art, and Industry." In 1954-55 he served with distinction as President of the Optical Society of America.

We honor him for his genius in probing the secrets of nature to bring into focus, through clear and precise language, both words and numbers, the intricate relations which in the subject of color unite physics, chemistry, physiology, and psychology. His extensive publications comprise more than one hundred research papers, innumerable reports, and his book: Color in Business, Science and Industry.

Time does not permit us to enumerate separately and completely all of his contributions to the fund of color knowledge. A complete bibliography - or one we believe to be complete - is appended to this citation as proof of his vigorous productivity. We wish, however, to mention a few of the broad subjects where his scientific insight has illuminated the path for all of us: the standard observer for colorimetry; anomalies of color vision; light scattering properties of materials; chromatic adaptation; uniform color scales; color names; evaluation of color differences, including color tolerances and an index of whiteness.

We recognize his eminence as Director of the Technical Secretariat on Colorimetry of the International Commission on Illumination. No scientist has served in the sphere of international relations in color with greater distinction. Always he has stood firmly for the point of view of American workers in color where he thought it right, and he has been able to draw a sympathetic understanding and respect even from those who may not have agreed with him. Prudent and alert, ever vigilant and masterful, he has exhibited at international meetings the wise leadership of a first-rate diplomat as well as of a scientist and patriot. He comes to us at this meeting fresh from four months in Madrid, where for the third time since 1949 he has gone at the invitation of the Instituto de Óptica "Daza de Valdes," this time as visiting professor.

Two summers ago, while in Holland, a graduate student in the University of Utrecht told me that as a rule all physicists can be divided into three groups: mathematical, theoretical, and experimental. A mathematical physicist can calculate everything but he understands nothing and can do nothing. A theoretical physicist can calculate nothing, understands everything and still can do nothing. And finally, an experimental physicist can calculate nothing, understands nothing, but can do everything.

If this be a rule, Dr. Judd is the exception. We think of him as a physicist in color who can calculate everything, understand everything, and to boot, do everything.

During most of his life-span, Dr. Judd has followed the rainbow, but not to look for the mythical pot of gold at its end. All along that path he has made a legion of friends who esteem him and are proud to know him. Mr. President, we recommend to you our unanimous choice as the first recipient of the Godlove Award of the Inter-Society Color Council, Dr. Deane Brewster Judd!

Isay Balinkin, Chairman
Committee to Select Recipient
for 1957 Godlove Award

PUBLICATIONS BY DEANE B. JUDD

1924 The spectral energy distributions produced by rotary mixing of complementary papers, J. Opt. Soc. Am. and Rev. Sci. Inst., 9, p. 95

1925 Chromatic visibility coefficients by the method of least squares, J. Opt. Soc. Am. and Rev. Sci. Inst., 10, p. 635

1926 Telephone plant value (with A. C. Wright) The relation between the number of telephone subscribers and the plant value of Ohio telephone companies, Ohio State University Studies, Engineering Series, Bulletin No. 32, Columbus, Ohio, State University Press

The computation of colorimetric purity, J. Opt. Soc. Am. and Rev. Sci. Inst., 13, p. 133

1927 Apparatus for the control of stationary light stimuli, Am. J. Psych., 38, p. 107

A quantitative investigation of the Purkinje After-Image, Am. J. Psych., 38, p. 507

1928 A study of 129 Lovibond red glasses with respect to the reliability of their nominal grades (with G. K. Walker) Oil and Fat Industries, 5, p. 16

Effect of temperature change on the color of red and yellow Lovibond glasses, B. S. Jour. Research 1, p. 859, (RP43)

1929 Least retinal illumination by spectral light required to evoke the "Blue Arcs of the Retina," B. S. Jour. Research 2, p. 441; RP43

Calibration of sixty-five 35-Yellow Lovibond glasses (with Priest, Gibson, and Walker), B. S. Jour. Research, 2, p. 793; RP58

1930 Reduction of data on mixture of color stimuli, B. S. Jour. Research, 4, p. 515; RP163

Precision of color temperature measurements under various observing conditions; A new color comparator for incandescent lamps, B. S. Jour. Research, 5, p. 1161; RP252

The mixture data embodied in the tentative curves of Hecht's theory of vision, J. Opt. Sos. Am., 20, p. 647

1931 Extension of the standard visibility function to intervals of 1 millimicron by third-difference osculatory interpolation, B. J. Jour. Research, 6, p. 465; RP289; also J. Opt. Soc. Am. 21, p. 267

Interpolation of the O.S.A. "Excitation" data by the fifth-difference osculatory formula, B. S. Jour. Research, 7, p. 85; RP334; also J. Opt. Soc. Am., 21, p. 531

Comparison of Wright's data on equivalent color stimuli with the O.S.A. data, J. Opt. Sos. Am., 21, p. 699

A general formula for the computation of colorimetric purity, J. Opt. Soc. Am., 21, p. 729

A general formula for the computation of colorimetric purity, B. J. Jour. Research, 7, p. 827; RP377

1932 Chromaticity sensibility to stimulus differences, J. Opt. Soc. Am., 22, p. 72

A study in photopic adaptation (with H. Helson), J. Exp. Psych., 15, p. 380

Resume of progress in colorimetry since 1927 in America, Proc. of the Int. Comm. on Illumination, 8th Meeting, Cambridge, 1931 (University Press, Cambridge, Eng.), p. 658

1933 Sensibility to color-temperature change as a function of temperature, J. Opt. Soc. Am., 23, p. 7

Saturation scale for yellow colors, J. Opt. Soc. Am., 23, p. 35

The 1931 I.C.I. standard observer and coordinate system for colorimetry, J. Opt. Soc. Am., 23, p. 359

1934 Sources of error in measuring opacity of paper by the contrast-ratio method, B. S. Jour. Research, 12, p. 345

Establishment of a scale of color temperature (with Wensel and Roeser), B. S. Jour. Research, 12, p. 527; RP677

Opacity Standards, J. Research NBS, 13, p. 281; RP709

1935 A Maxwell triangle yielding uniform chromaticity scales, J. Research NBS, 14, 41 RP756; also J. Opt. Soc. Am., 25, 24

A method for determining whiteness of paper, Paper Trade Journal, C, No. 21, TS40; also Tech. Assoc. Papers, Series XVIII, No. 1, 392

Dependence of reflectance and opacity on thickness; Relation between contrast ratio and printing opacity, Tech. Assoc. Papers, Series XVIII, No. I, 441; also Paper Trade Journal, CI, No. 5, TS40

1936 Note on the effect of a cover glass in reflectance measurements (with K. S. Gibson), J. Research NBS, 16, 261, RP872

Color-blindness and anomalies of vision, J. Soc. Motion Picture Engineers, 26, 616

A method for determining whiteness of paper, II, Tech. Assoc. Papers, 19, 359; also Paper Trade Journal, 103, No. 8, TS38

Changes in color temperature of tungsten-filament lamps at constant voltage, J. Research NBS, 17, 679; RP937; also J. Opt. Soc. Am. 26, 409

Estimation of chromaticity differences and nearest color temperature on the standard 1931 ICI colorimetric coordinate system, J. Research NBS, 17, 771; RP944; also J. Opt. Soc. Am., 26, 421

1937-1938 Optical specification of light-scattering materials (with the collaboration of W. N. Harrison, B. J. Sweo, E. F. Hickson, A. J. Eickhoff, Merle B. Shaw, and George C. Paffenberger), J. Research NBS 19, 287; RP1026; abridged copy for paper industry published in Paper Trade J. Tech. Sec. 106, 4; also Tech. Assoc. Papers, Series 21, 474

Optical specification of vitreous enamels (with W. M. Harrison and B. J. Sweo), J. Am. Ceramic Soc. 21, 16

Scientific color naming of drugs (with Kenneth L. Kelly), J. Am. Pharmaceutical Assn. 27, 208

Designation of filters for theatrical lighting, J. Opt. Soc. Am. 28, 390

Inter-Society Color Council, Bulletin Am. Ceramic Soc. 17, 379 (letter to the editor)

Review of Vernon W. Grant's "Psychological Optics," Rev. Sci. Instr. 9, 301

1939 Specification of uniform color tolerances for textiles, Textile Research 9, 253, 292

Specification of color tolerances at the National Bureau of Standards, Am. J. Psychol. 52, 383

Development of a method of classifying paints according to gloss (with R. S. Hunter), ASTM Bulletin, p. 11, March, 1939

The physics of color tolerance, Am. Dyestuff Reporter, 28, 441

Method of designating colors (with Kenneth L. Kelly), J. Research NBS, 23, 355

1940 Hue, saturation and lightness of surface colors with chromatic illumination, J. Opt. Soc. Am. 30, 1

Hue, saturation and lightness of surface colors in chromatic illumination, J. Research NBS 24, 203; RP1285

Introductory dialogue for a symposium on spectrophotometry in the pulp and paper industry (with L. C. Lewis), Technical Assoc. Papers 23, 473

Systematic color designations for paper, Technical Assoc. Papers, 23, 512

1941 Introduction to color, Part of symposium on Color, published by the ASTM, March 5, 1941

Color Systems and their inter-relation, Illuminating Engineering, 36, 336

The definition of Black and White, Amer. J. Psychol. 54, 289

A proposed method of designating color (with F. Schofield and R. S. Hunter), ASTM Bulletin, p. 19, May, 1941

Methods of designating color, Bulletin Am. Ceramic Soc. 20, 375

Whiteness of light surface-colors, J. Opt. Soc. Am. 31, 462

1942 Fresnel reflection of diffusely incident light, J. Research NBS, 29, 329

Colorimetry of pulp and paper with special reference to "Brightness" and "Whiteness", Pulp and Paper Magazine of Canada (National Business Publications, Ltd., Garvendale, Quebec) 43, No. 2, 94

1943 Facts of Color-Blindness, J. Opt. Soc. Am. 33, 294

Colorblindness and the detection of camouflage, Science, 97, 544

Final Report of the O.S.A. Subcommittee on the spacing of the Munsell colors, (with Sidney M. Newhall and Dorothy Nickerson), J. Opt. Soc. Am. 33, 385

1944 Color Vision, Reprinted from Medical Physics (Chicago, Year Book Publishers)

Small color differences, Introduction and summary, American Dyestuff Reporter, 33 (May 22 and July 3)

Symposium on the Ostwald color system, Foreword, J. Opt. Soc. Am. 34, 353

1945 Standard response functions for protanopic and deuteranopic vision, J. Research NBS, 33, 407(1944); RP1618; also J. Opt. Soc. Am. 35, 199

A color standard for ruby mica, J. Research NBS, 35, 245; RP1671

1946 Spectrophotometric and colorimetric determination of the colors of the TCCA standard color cards (with G. Reimann and H. J. Keegan), J. Research NBS, 36, 209; RP1700; also J. Opt. Soc. Am. 36, 128

1948 The Bezold-Brücke phenomenon and the Hering theory of vision, J. Opt. Soc. Am. 38, 1095

1949 Color perceptions of deuteranopic and protanopic observers, J. Research NBS 41, 247 (1948); also J. Opt. Soc. Am. 39, 252

Response functions for types of vision according to the Muller theory, J. Research NBS 42, 1

Metameric colors and the macular pigment (with Walter C. Granville) J. Opt. Soc. Am. 39, 632

Current views on colour blindness, Documenta Ophthalnologica 3, 251

A comparison of direct colorimetry of titanium pigments with their indirect colorimetry based on spectrophotometry and a standard observer. J. Research NBS 43, 227; also J. Opt. Soc. Am. 39, 945; errata 40, 52 (1950)

1950 The 1949 Scale of color temperature, J. Research NBS 44, 1

A suggested relocation and respacing of the Union Colorimeter scale for lubricating oil and petrolatum (with Lorenzo Plaza and Marion A. Belknap) J. Research NBS 44, 559. Condensation of this paper appeared in ASTM Bulletin No. 167, 63 (TP145)

Colorimetry. NBS Circular C478; also published with some changes as Measurement and Specification of Color. Chapter 9 in Mellon - Analytical Absorption Spectroscopy (New York, John Wiley & Sons)

El Sistema I.C.I. para la especificacion del color (The CIE system of color specification). Anales de la Real Sociedad Espanola de Fisica y Quimica (A) 46, 123

Tritanopia with abnormally heavy ocular pigmentation (with Lorenzo Plaza and Dean Farnsworth), J. Opt. Soc. Am. 40, 833

Report on the fidelity of color reproduction by the CBS and RCA Systems (with L. Plaza and M. M. Balcom). Annex E to the Present Status of Color Television, Report of the Advisory Committee on Color Television to the Committee on Interstate and Foreign Commerce, United States Senate, July 14, 1950. Also Proc. I.R.E. 38, 1000

1951 Ceguera para el color y teorias de la vision cromatica (Color blindness and color theories). Anales de la Real Sociedad Espanola de Fisica y Quimica (A) 47, 35

Basic correlates of the visual stimulus. Chapter 22 in Stevens - Handbook of Experimental Psychology (New York, John Wiley & Sons, 1951)

1952 Object-color changes from daylight to incandescent filament illumination, (with Harry Helson and Martha H. Warren), Illum. Eng. 47, 221

Color in Business, Science, and Industry, (John Wiley & Sons, New York, 1952) ix + 401

1953 Specification of color-rendering properties of fluorescent lamps (with Charles W. Jerome), Illum. Eng. 48, 259

Enthoptic color-perceptions of the macular pigment by observers of normal and color-defective vision according to a three-components theory, Coloquio sobre Problemas Opticos de la Vision, Volume II (Madrid, Bermejo)

1954 Instruments for measuring gloss, hiding power, and color of paint films American Paint Journal, June 28

Problemas Actuales del Color (translated by Lorenzo Plaza Montero), Consejo Superior de Investigaciones Cientificas, Instituto de Optica "Daza de Valdes" (Madrid, Bermejo)

1955 Radical changes in photometry and colorimetry foreshadowed by C.I.E. actions in Zürich, J. Opt. Soc. Am. 45, 897

Über eine Transformation des Normvalenzsystems in ein empfindungsgemäss gleichabständiges System auf der Gundlage des Munsell-Systems, (with D. Nickerson and G. Wyszecki), Die Farbe, 4, 285

The ISCC-NBS Method of Designating Colors and A Dictionary of Color Names, (with K. L. Kelly) National Bureau of Standards Circular 553, Nov. 1, 1955

1956 Progress Report by Optical Society of America, Committee on Uniform Color Scales, J. Opt. Soc. Am. 45, 673 (1955); Journal of the Illuminating Engineering Society of Japan, 40, 8

Extension of the Munsell renotation system to very dark colors (with G. Wyszecki), J. Opt. Soc. Am. 46, 281

Color rendition with fluorescent sources of illumination (with H. Helson and M. Wilson), Illum. Eng. 51, 329

1957 Description of Color (scheduled to appear in the proceedings of the Perkin Centennial, 1957)

Un nuevo punto de vista en la medida de la luz y el color, Anales de la Real Sociedad Espanola de Fisica y Quimica (scheduled to appear March, 1957)

Color, Article in Collier's Encyclopedia (scheduled for publication in 1957)

Color, Article in The Encyclopedia Americana (scheduled for publication in 1957)

HOOKED RUG EXHIBIT — Announcement is made of the Eighteenth Annual Teachers' Exhibit of Hooked Rugs, May 21-23, Horticultural Hall, Worcester, Massachusetts, with exhibits by teachers from 43 states. Council members are invited by Pearl McGown, ISCC member, to attend this exhibit.

DEATH OF ROBERT F. WILSON — Walter Granville has received word of the death, on February 10, of Robert F. Wilson, art director of the British Colour Council. His death followed a brief illness. No other details are yet available, except that the British Council is "at present re-organizing the staff to carry on the good work that he has created." Mr. Wilson's friends in this country will be sorry to hear of his death.

EDITOR'S OVERSIGHT

The March issue also contained an excellent summary of the history of ISCC. Much as I would like to claim credit for this story, I must confess that due to an editor's oversight, credit was not given where it was due. The real author is Ralph Pike. (Sorry, Ralph.)

BRITISH USE COLORIMETER FOR LEATHER

From the Hilger Journal of November, 1956, we note the following item: "A committee recently set up by the Society of Leather Trades Chemists has given unqualified approval to the Hilger Tristimulus colorimeter. The instrument measures color in terms of the three standard illuminants of the C.I.E. system."

REVIEW OF THE BOUMAN AND THE HESS REPORTS ON THE ISCC COLOR APTITUDE TEST

Interest abroad in the ISCC Color Aptitude Test is exhibited in two studies that have come to our hand recently. The first is an analytical research report from Holland, the second is a description of the use of the test in a practical situation. Both contain observations and information of interest to many members of the Council.

First:

The I.S.C.C. Color Aptitude Test
The Interpretation of Some Testing Results

by

P. L. Walraven, H. J. Leebeek and M. A. Bouman
Instituut voor Zintuigfysiologie R.V.O.-T.N.O.
Report No. WW1956-10

Dr. Bouman and his co-workers set their problem as follows: "What is the relation between test score and usefulness of the man in a definite job. . . . one can say a priori about color deficient persons that they are more or less inapt for some color matching jobs, f.i. matching of colors of different spectral distributions." The general problem as stated in the first sentence quoted from Dr. Bouman is precisely the problem which the Committee has had always before it during the development of the test. Unfortunately, there exists no general measure of color aptitude against which C.A.T. scores can be validated. We must content ourselves, therefore, with the face validity of the color discrimination used in the test and with specific studies of limited groups in which reliable and valid measures of aptitude performance can be established. Some studies of this sort have been carried out independent of Committee work.

Dr. Bouman narrows his problem by making the a priori definition of all color deficient subjects as color "in-apt." The Committee rejected this interpretation early in its experimental exploration of test procedures. The concept of color deficiency is essentially dichotomous. All standard tests separate subjects into those who pass and those who fail. The results are not distributed and it was maintained until recently that there were no degrees of failure, not to speak of degrees of passing. Application of "color blind" tests has divided the male population roughly into 10% who failed in some respect and 90% color normal. The ISCC Committee on the Color Aptitude

Test had succeeded in distributing color normals according to their performance in color matching under standardized conditions.

The results of applying a distribution test to an already dichotomized population are not easy to predict or to interpret. Dr. Bouman's essay in this direction is, therefore, a valuable contribution and very welcome.

In Figure 1 and Table I, Dr. Bouman shows the distributions and the means of the scores of 48 normal subjects and 53 color deficient subjects. The distribution of total score of the 48 normal follow as closely as can be expected the distribution of the 200 standardizing scores and the 756 field test scores reported by the Committee, when size of group and selection of population are taken into account. Dr. Bouman's mean score of 60 agrees with informal information from studies of general populations. The mean score of 70 was established on a population having considerable experience with color matching.

Both the distributions and the means of total scores are very different for color deficient as compared to color normal subjects. For example, the lowest normal score is 47 whereas something near half of the color deficient scores lie below this value. Nevertheless there are "deficient" scores over the whole range of normal scores. The distributions are not dichotomous and against this fact, Dr. Bouman complained. But a test that produces a distribution of scores can not give a dichotomy between groups, in which the performance being measured, is shared. As his data show, color deficient subjects can match colors, though their range of performance covers twice that of the normal group. The surprising thing is that some of them do just as well as any color normal subject, unless special provision is made to confuse them. This is in agreement with common experience and in some measure explains why "color blindness" was not "discovered" until 1777.

It was the considered opinion of the Committee that the most efficient way to deal with the situation was to prescribe a color blindness screening test to precede the application of the C.A.T.

Dr. Bouman presents further interesting analyses of his data. In Tables II and III he shows the distributions of match for all chips by both normal and deficient subjects. The principal difference between these data and those published by us is the greater irregularity of Bouman's distributions. This may be due partly to the smaller number of cases and partly to the fact that all his tests were made with one test set. This latter condition tends to accentuate minute differences that exist among "identical" chips. We have found, also, that the angle and distance of the illumination can produce apparent differences of this sort that cannot be measured.

In Figure 2, Dr. Bouman has plotted all errors from match in each color. These graphs bring out some interesting points. For the yellow and blue series correct matches predominate and few errors of more than ± 2 occur for both normal and deficient subjects. The red and green curves are a little broader for normals and much broader for deficient subjects. Here in the area of their deficiency is as much dichotomy as can be expected from a distribution test.

In Figure 3 Dr. Bouman's results show an almost identical reliability as our data in terms of change of scores from test to retest. In Figure 4 he confirms our experience that the total score is not related to time. However, at least one user has reported that the ratio of time and score provides another index of aptitude which they find significant.

In Figure 5 the C.I.E. coordinate of the color series in the Holland set are compared with the sample set published by us. The Committee's data are based on spectral curves from a standard type set and presumably are adequately specified by the C.I.E. values. Bouman's coordinates were obtained by a matching technique and appear to be modified in the direction of blue. This may be explained by his statement, "Our daylight is somewhat more blue."

In Figure 6 data are presented from an experiment designed to determine on what basis deficient subjects are able to make matches of blue and yellow chips, that are just as accurate as those made by normals. Subjects were required to compare in brightness every chip in a color series with the midpoint chip. In general with two exceptions no consistent differences in brightness appeared throughout a series. This agrees with our data which show a total difference from one end of a series to the other of 1% or less. The first exception lies in the judgments of brightness in the yellow series by the protanomalous observer. He gave the judgment "brighter" for the unsaturated end of the series and "darker" for the saturated end, with consistent gradations between. Bouman interprets this to mean that the protanope sees the series of yellow saturations as a series of brightnesses. Such an interpretation is not warranted. The judgments mean simply that for the protanomalous subject the terms yellowness and brightness are identical and does not identify the corresponding categories for color normal subjects.

The other exception substantiates the fact that one category of verbal response may be wrongly substituted for another. Both normal subjects and protanopic consistently judged the saturated blues to be "brighter." Actually the end chip and the middle chip show a difference in the Y factor of .3 which, when divided into 6 steps of .05, does not give discriminable differences. Differences in purity from chip to chip are 3% which is sufficient for some degree of saturation discrimination. It is more reasonable to assume that in both blue and yellow series all subjects are making essentially the same judgments, i.e. saturation of blue and yellow respectively.

Bouman further bolsters his argument by presenting in Figure 7 the "ratio of reflectance as a function of wavelength of the two end chips, 1 and 6 of the yellow row." This, however, takes us into hypothetical explanations of color-deficiency, which do not affect the reliability and face validity of the C.A.T.

We can agree with Dr. Bouman that the C.A.T. will not screen color defective subjects out of a general population. It was not designed to do so but was conceived as a means for determining differences among the 95% of the population classified as "normal" by any one of the several screening tests for color deficiency. It has been said but probably it should be even more loudly emphasized that the validity of the C.A.T. depends upon the previous color blind screening of the population being tested.

On the other hand, we are indebted to Dr. Bouman for showing just how color defective subjects behave in a discrimination of matching test. While the present system of scoring will not satisfy Dr. Bouman's desire for a continuous scale from extreme color deficiency to superior color matching, it may turn out that another analysis of the data may give insight into the differences of the two groups. From the evidence in his data it is obvious that color defect does not prevent a man from being a good color matcher - though it by no means enhances his chances.

To summarize Dr. Bouman's "Discussion," he has demonstrated that the ISCC C.A.T. is not a test for color deficiency. Although color deficient subjects show matching behaviour quite different from that of normal subjects, the total scores do not exhibit a definitive dichotomy for this 10% of the male population.

Dr. Bouman's attempted explanation of the good performance of protanopes in matching yellow, is inconclusive. Whether a saturation series of yellow is perceived as steps of yellow or as steps of brightness, the matching performance is identical for deficient and for normal subjects.

Dr. Bouman repeats his concern that the Color Aptitude Test is not a color blindness test, so we must repeat, also, that it was not designed to compete with the standard dichotomous tests that are available. It is a color discrimination test applicable only to the 95% of the population which clearly passes such screening tests.

One thing which Dr. Bouman fails to see in his results is the evidence of the falsity of the assumption that color defectives are necessarily poor matchers. Some of them get good scores on the C.A.T. and this test presents a typical matching problem. However, all colors are not all equally well matched and these weaknesses must usually be taken into account. Nevertheless when the defective 10% of males - or 5% of the total population have been eliminated, there remains the problem of who among the 95% are the best color matchers. For the solution of this question the C.A.T. offers valuable information.

Second: Personal Experience with the I.-S.C.C. Colour-Aptitude Test

M. Hess

Journal of Oil & Colour Chemists Assoc. Vol. 40 #2
Symposium Issue Feb. 1957, pp 136-142

In this article, Mr. Hess discusses his experience with the C.A.T. before a Symposium on Color held by the Oil and Color Chemists Association. He restates that "the purpose of the test is to find out . . . the aptitude of persons for discriminating between and for matching of colors." The utility of such information is further elaborated. He warns at the beginning that "The C.-A.T. is no test for colour blindness. . . . The right procedure therefore would be always to test for colour-blindness first and for aptitude afterwards." He is aware from experience that a color-blind man may become a successful paint technician in unusual circumstances.

Testing procedures are fully described and many details pointed out and emphasized where necessary. Many of the precautions about lighting angle and reflections are noted. Instructions are repeated and further interpreted where it is deemed desirable.

Mr. Hess shows a form which he has devised for recording test scores and for reporting them to the subjects. His final conclusions are interesting and significant. "In our works a team of works-study officers has now been trained by me in the taking of the C.A.T. as a matter of routine, and a suitable room has been set aside for the purpose. First of all the present works personnel . . . have been or will be tested. . . . The greatest importance is attached to the testing of new employees. . . . Tests should be repeated periodically. . . . From my experience so far, the C.-A.T. has proved an excellent guide. My recommendations to industries, for which precise colour matching is important, are therefore to introduce this testing method."

Forrest L. Dimmick

PUBLICATION OF THE PAPERS PRESENTED AT THE 1956 ANNUAL MEETING

In the December 1956 issue, the PACIFIC PRINTER PUBLISHER AND LITHOGRAPHER began publishing the papers presented at the 1956 annual meeting. Four issues of the series "Color Problems in the Graphic Arts" have already appeared. It is expected that the series will be concluded in an early issue. When the series is completed, the editor of the Pacific Printer, Ramsey S. Oppenheim, will reprint the series for distribution to the ISCC membership. According to Mr. Oppenheim additional reprints will be available from the publisher, Pacific Printer and Publisher, Inc., 112 Market Street, San Francisco 11, California.

ISCC SUBCOMMITTEE ON PROBLEM 20: BASIC ELEMENTS OF COLOR EDUCATION

The subcommittee on Color Education has been very active. According to the minutes, two meetings have been held this year, one in Washington, D. C., on February 18, and one in New York City on March 5. At the afternoon session in New York, the committee met with the board of directors and the committee chairman, Dr. Robert Burnham; reviewed the work accomplished and summarized the objectives and plans. The Board voiced their approval of the subcommittee's accomplishments. President Ralph Evans expressed the Board's wishes that the work continue on the present basis until a proposed draft is completed. Dr. Burnham hoped that an initial form of the report may be completed in approximately two years.

REPRINTS OF EVERETT CALL'S 26TH ANNUAL MEETING ADDRESS TO BE DISTRIBUTED

The National Paint, Varnish and Lacquer Association has made reprints of Mr. Call's address, "A Statistical Analysis of Color Preference," available for distribution to ISCC membership. Thanks, Everett, your contribution will help to satisfy many hungry appetites for reliable information on the subject of color preference. Many of our members seem to be taking an increasing interest in this important subject.

THE PHYSICAL SOCIETY COLOUR GROUP

The News Letter received two tickets to the 41st Annual Exhibition of the Physical Society at the Royal Horticultural Society's Old and New Halls, Westminster, London. Unfortunately, the tickets arrived too late because the Exhibition was held March 25 to 28th. The Handbook of Scientific Instruments and Apparatus, 1957 is to be published at the end of February. It may be ordered from the Secretary-Editor, 1 Lowther Gardens, Prince Consort Road, London, S.W. 7.

At the Ninety-Eighth Science Meeting held on February 20th, Mr. M. H. Wilson (Goethean Science Foundation, Stourbridge, Worcs.) lectured on "Goethe's Experiments in Colour." Mr. Wilson talked of Goethe's opposition to Newton's physics and his idea of "Polarity-Reunion-Totality," and he gave demonstrations of colored shadows. (See article re Mr. Wilson, page 17.)

After tea, Dr. R. A. Weale spoke on trichromatic Ideas in the Seventeenth and Eighteenth Centuries. Walls had shown that G. Palmer (1781) had originated the trichromatic theory of color deficiency; Seidl had traced the trichromatic theory of vision to Lomonosow (1756); in fact, trichromacy could be traced to Mariotte (+1684). Dr. Weale felt that credit was due to Young for suggesting red, green, and violet, rather than red, yellow, and blue as primary colours; but our views on colour theory were what they are because of the work done by Young's predecessors and owed little to Young himself. The subsequent discussion showed that not everyone was convinced that this was so.

The Colour Group held the Seventeenth Annual General Meeting April 3rd at the Royal Photographic Society. On the agenda was the election of Officers and Committee for 1957-8. The following were nominated: Chairman, Mr. J. W. Perry; Vice-Chairman, Mr. R. G. Horner; Secretary, Dr. R. A. Weale; Committee, Mr. J. M. Adams, Mr. C. L. Boltz, Mr. P. M. Forsyth, Mr. H. L. Gloag, Mr. A. W. S. Tarrant, Prof. W. D. Wright.

As the number of nominations does not exceed the number of vacancies, no ballot will be necessary.

The Ninety-Ninth Science Meeting was held at the Annual Meeting. Mr. R. G. Horner, retiring chairman, presented the Chairman's Address, "Color Systems and C.I.E. Transformations." A comparison of systems representing surface colours was made, with particular reference to the Munsell, Ostwald, Hesselgren and DIN systems. Attempts at representing colour space by mathematical transformations of the C.I.E. system was reviewed.

The Group has purchased 100 reprints of Professor W. D. Wright's article "Symposium on Colorimetry: Its Errors and Accuracy" which appeared in Nature (A Challenge to Colorimetry), which is a report of the Colour Group Symposium held at Imperial College on December 12th, 1956. Requests for reprints, together with stamped, addressed envelopes, should be addressed to Professor W. D. Wright, Technical Optics Section, Imperial College, Imperial Institute Road, S.W.7, who has kindly undertaken to forward reprints to Group Members.

PHILADELPHIA-WILMINGTON COLOR GROUP TWENTY-SIXTH MEETING

Dr. Stanton C. Kelton, Jr. of the Rohm & Haas Company spoke to the Philadelphia-Wilmington Color group Wednesday, April 24th on the subject "Coloring Acrylic Plastics." This is Dr. Kelton's illustrated Perkin Centennial lecture.

For Work?

COLOUR COUNCIL OF TORONTO

Colour Comments is a delightful publication of the Toronto group edited by 'Gene Butt and issued from the office of the secretary, John Gilchrist. Issue No. 19, March 1957, contains some interesting and entertaining copy. For example, 'Gene reprinted "COLOR SYMBOLISM (An Anthropological Diversion)" by Graham Webster. According to Mr. Webster, "This is not meant to be a serious study of what is a highly complicated subject but merely a personal, somewhat disjointed, collection of material." With this beginning, Mr. Webster proceeds in a most delightful way to develop his subject. 'Gene takes editorial liberty to interject an occasional disagreement with the author. "Colour Symbolism" was first presented at the British Colour Council's Designer Conference held at Oriel College, Oxford, September 1955.

'Gene also reports on an article which appeared in the Telegram, "Colour Explosion Hits Ad Media," in which Egmond Ahrens and C. R. Conquergood express their views.

In their last three meetings, the Toronto Council ran the gamut of color subjects. On March 12th Alice Payne Stark talked on "Photography With a Purpose in Colorland." Mrs. Stark is recognized as one of the outstanding colour photographers. She is past president of the Colour of Association of Canada, and she has taught Colour Photography at the Country School of Photography in South Woodstock, Vermont. "Fabric Colours in History" was the subject of the lecture by Betty Brett, Curator of the Textile department, Royal Ontario Museum of Archeology. Miss Brett, who lectures on the history of textiles at the University of Toronto, gave her lecture Thursday, April 11. IPI's wonderful film, "This is Color" will be the main feature of the council's May 14th meeting.

COLOR EXPOSITION AT AMIENS, FRANCE MAY 20 - JUNE 23

A large-scale color exposition will be held in the Picardi Museum at Amiens, France from May 20th to June 23rd. The purpose of the exposition will be to provide a vast synthesis of the applications of color in a wide variety of human activities.

Incidental to the exposition will be a three-day meeting, May 20-22, sponsored by the Color Information Center of Paris, during which papers will be presented by such well known French color authorities as Yves Le Grand and Pierre Fleury.

A special issue of "Couleur," a French publication, will summarize the exhibits, activities, and discussions held during the exposition. This publication will be concerned with the psychophysiology of color, color measurement, color in art, color technology, colorant materials, color in the graphic arts, color in illumination, color in photography, color in textiles, color in plastics, color in decorating, audio-visual techniques and a variety of other

color subjects. The color issue will sell for 300 francs. Information can be obtained from Centre d'Information de la Couleur; 23, rue Notre-Dame des Victoires; Paris 2eme, France.

Translated by
Robert W. Burnham

DESIGN DIVISION NEWS LETTER, AMERICAN CERAMIC SOCIETY

From F. J. Von Tury, trustee of the Design Division, and ACerS delegate to the ISCC, we have a copy of their first NewsLetter. The following is excerpted from the Foreword:

"In appreciation of the fine contributions of our speakers at our annual meetings, and because we feel that the papers printed herein will stimulate and be of great benefit not only to the designers but to the ceramic industry as a whole, we bring forth this first issue of the Design Division Newsletter.

"This material is a review of the progress made in the Design Division of the American Ceramics Society meetings of 1953 in New York, 1954 in Chicago, in 1955 in Cincinnati under the program chairmanship of F. J. Von Tury. It is hoped that it will be possible at another time to extend the coverage to include papers from earlier and current years."

Congratulations to the Design Division! This is a significant and worthwhile enterprise.

AMERICAN INSTITUTE OF DECORATORS ANNUAL COMPETITION

The annual A.I.D. Homefurnishing design competition was held at the Statler-Hilton Hotel in Dallas from April 1 through April 3. Mr. Marc T. Nielsen, National President, announced that 16 awards for outstanding designs were awarded at the competition. Only two first awards were granted by the five members of the Jury of Awards. In the Printed Fabrics Division, Sven Markelius, Kevinge, Stocksund, Sweden received "First Award" for his drapery and slip cover fabric, which was executed by Knoll Textiles, Inc. Buelah Charlat received her "First Award" for a fabric of spun rayon and acetate made into seamless ready-made draperies executed by Scranton Lace Company.

THE COLOR ASSOCIATION ELECTION OF OFFICERS

At the 42nd Annual meeting of the Color Association in New York City April 11, 1957, the current officers were re-elected to office. They are: Mr. Hughlett, president; Armand Schwab, first vice-president; John F. Warner, second vice-president; Estelle M. Tennis, secretary; and Henry C. Van Brederode, treasurer. Mr. Samuel G. Baker, general manager, Organic Chemicals Department, E. I. duPont de Nemours and Company, was elected a director. All other directors were re-elected. According to a press release sent out by the Association, "The wide geographical scope of the Association's members was noted by Miss Tennis. In addition to the United States, they are located in thirty-one foreign countries. The British Commonwealth accounts for the greatest number of foreign affiliations including Canada, England, Scotland, North Ireland, Australia, New Zealand, South Africa and India. Turkey, Egypt, the Philippines and Japan are among other countries represented. Latin American members are located in Mexico, Cuba, Argentina, Brazil, Colombia, Chile, Peru and Uruguay."

Estelle Tennis, in press releases for the Color Association, also announced 1958 Spring and Summer Colors for Woolens and Worsteds and for Man-made Fibers and Silk. Regular editions of both color cards will be issued later.

DR. ALBERT ZETTLEMOYER KEYNOTE SPEAKER AT 35TH ANNUAL MEETING FEDERATION OF PAINT AND VARNISH PRODUCTION CLUBS

Dr. Zettlemoyer, Research Director of National Printing Ink Research Institute, will present the Annual Joseph J. Mattiello Lecture, "Pigment Vehicle Interface."

Milton A. Glaser, president, announced the 35th Annual Meeting of the Federation and the 22nd Paint Industries Show to be held in Philadelphia, October 30 and 31 and November 1 and 2, 1957. The program will also include panel discussions, Constituent Club Technical Committee papers, and research and educational reports to round out a stimulating and educational program. The Annual Meeting of the National Paint, Varnish and Lacquer Association will be held at the Sheraton-Park Hotel, Washington, D. C.

INDUSTRIAL DESIGNER'S INSTITUTE 7TH ANNUAL DESIGN AWARD

Walter C. Granville, Chairman of the Awards Committee announced the appointment of judges for the competition. They are: George A. Beck of the General Electric Company and recently re-elected National President of IDI; Morton Goldsholl of the Chicago Chapter, representing members-at-large; Franklin Q. Hershey of Kaiser Aluminum, representing the West; Paul R. MacAlister, Fellow of IDI and founder of the Award Program; James Shipley of the University of Illinois, representing the Mid-west; and Gerald Thurston, Chairman of the New York Chapter, representing the East.

Walter also published a list of designers who have been honored since the award program was initiated in 1951 by Paul MacAlister, Fellow of the Institute:

1951 - George Cushing and Thomas T. Nevall for the design of the "Tricolator" for the Tricolator Company, Inc.

Carl Otto for the design of the "20" for Schick, Inc.

Charles Eames for his SAX Plastic chair for the Herman Miller Furniture Company.

1952 - Donald L. McFarland for the A-1 All-purpose Fan, General Electric Company.

Henry P. Glass for the "Swing-Line" juvenile furniture line designed for the Fleetwood Furniture Company.

1953 - Donald Dailey, designer of the "Wonderbar" for Servel, Inc.

Carl Otto for the "voicewriter" for Thomas A. Edison, Inc.

1954 - Dave Chapman for the line of school furniture created for Brunswick-Balke-Collender.

Franz Wagner, Richard S. Lathan and Don De Fano, as a team for their design of the "Flight Scale" for Borg-Erickson Corporation.

1955 - Randall D. Faurot, Designer of the "Lectracar Duo" for Versal, Inc.

Richard Montmeat for his design of the "Convertible" clock radio for General Electric Company.

James G. Balmer, Carl B. Denny and Frederick W. Hertzler, another team, for the "Sweepmaster" manufactured by the Billell Carpet Sweeper Company.

1956 - William E. Clements, designer of the "Therma Meter" for Medical Research, Inc.

Jon W. Hauser for the Model HH Payloader developed for the Frank G. Hough Company.

George W. Walker and Elwood P. Engel, Joseph Oros, Eugene Bordinat, Jr., Herbert Tod, Rulo N. Conrad, John Najjar - a team of Ford Motor Company designers for their work on the Lincoln Premier Hardtop.

NATIONAL PAINT, VARNISH AND LACQUER ASSOCIATION

The News Letter has received a copy of the Association's statistical survey of trade sales of exterior oil paints, emulsions and enamels, "Color Survey 1957." This is a beautifully illustrated report which Mr. Call says is available at 50 cents a copy. The address is 1500 Rhode Island Avenue, N. W., Washington 5, D. C.

DEAN OF SPECTRO-PHOTOMETRISTS RETIRES

Earle E. Richardson retired on January 5 after nearly 40 years of service in the Research Laboratories of Eastman Kodak Company. "Dick" Richardson, as he is affectionately known to his many friends, was probably the first full-time spectrophotometrist in American industry. Starting, in the early Twenties, with Hüfner and König-Martens visual spectrophotometers, which he combined with carbon-arc sources to obtain reliably accurate readings at high densities (4+) and in the extremes of the visible spectrum (400-700 mu) Dick struggled manfully to make the first commercial recording spectrophotometer (1928) perform to the same high standards. He succeeded in this effort with the 1936 and later versions of the G.E. and has maintained such enviable quality of results over the years that it has become customary for designers and users of spectrophotometers to consult Dick and to submit their ideas and plans for his opinion. He has trained an impressive number of first-class spectrophotometrists, many of whom have progressed to prominent positions in the Eastman Kodak Company and other organizations.

Dick has chased the bugs out of more spectrophotometers than anyone, excepting (maybe) some of the G.E. Engineers. He is aghast at published reports and suppositions that standard deviations amounting to one percent of full scale, or perversely systematic errors of one-half percent, are to be expected in spectrophotometry. He has not tolerated such errors for over thirty years. He is famous for making and keeping magnesium oxide white standards which changed less than 0.3 percent during periods of from 8 months to over a year.

Dick loves the troubles that get most other spectrophotometrists down. He looks forward to many more years of such activity, and is available for a limited amount of consultation. His address is 252 Merrill Street, Rochester, 15, New York.

ISAY BALINKIN, HOPPING, COLORWISE SPEAKING

In a note from the University of Cincinnati, we learn that Dr. Balinkin is scheduled for four lectures this Spring. In addition to the paper he plans to give in Dallas at the meeting of the American Ceramic Society in May, he is also scheduled to give three popular lecture-demonstrations on color:

1. National Association of Printing Ink Makers, 43rd Annual Convention, Colorado Springs, Colorado, May 3, 1957.

2. Technical Association for the Graphic Arts, Philadelphia, Pennsylvania, May 13, 1957.

3. Federation of Paint and Varnish Production Clubs, Louisville Production Club, Louisville, Kentucky, May 15, 1957.

Dr. Balinkin represented the American Ceramic Society at the International Congress in Vienna, Austria, September 17 through 22. Dr. Balinkin says that interested readers may obtain reprints of his article about the Congress, which appeared in the American Ceramic Bulletin, Volume 35, No. 12, December 15, 1956. Write to Dr. Isay Balinkin, University of Cincinnati for reprints.

COLOR AND COLOR MEASUREMENT IN SCANDINAVIA

G. J. Chamberlin, Managing Director of the Tintometer Limited, Salisbury Road, England presented his lecture, "Colour and Colour Measurement" to the Norwegian Skelskapet for Lyskultur in Oslo, Norway.* Despite the fact that the lecture was in English, the discussion lasted long after the meeting. He presented the same lecture to the Royal Veterinary & Agricultural College in Copenhagen, Denmark. In January, Mr. Chamberlin talked to the Society of Dyers and Colourists in London on the subject "Kippers, Cocktails, Confectionery, and Colour."

PROCTER THOMSON RETIRES FROM PROCTER AND GAMBLE

Procter Thomson was born in Astoria, Oregon, August 16, 1888. At an early age his family moved to Independence, Missouri where he attended high school. Though his father was a lawyer, Procter studied Civil engineering for three years at the University of Missouri and then transferred to Chemical engineering. He received his Ch.E. degree in 1912 and went immediately to work as a chemical engineer for the Forest Products Company in Memphis, Tennessee. Successively he worked for the Solvay Process Company of Detroit, Sears Roebuck and Company of Chicago, Brunswick-Balke-Collender Company of Muskegon, the U.S. Government, and back to Sears Roebuck and Company. He joined the Procter and Gamble Company on March 1, 1920.

In the Procter and Gamble Company, Mr. Thomson was engaged in Oil Mill operation, industrial engineering, Factory Standards, and Patent work. He retired from active duty on October 31, 1956.

*Illuminating Engineering Society

Procter's specialties have been largely in the fields of deodorization, hydrogenation catalysts, quality control, factory methods and the measurement and specification of color. These interests have led to membership in the American Chemical Society, American Institute of Chemical Engineers, the American Oil Chemists Society and the American Statistical Association.

For several years Mr. Thomson was the Chairman of the A.O.C.S. Color Committee and Chairman of the A.O.C.S. delegation to the Inter-Society Color Council, where he served on the ISCC board and as a member of several working committees. His interest in color was widespread and his association with the ISCC members and their problems a real pleasure and stimulus to him.

It is with real regret that we learn of Mr. Thomson's retirement but from his many friends and associates in ISCC, congratulations on a job well done and best wishes for a full and happy retirement.

R. C. Stillman

WALTER C. GRANVILLE ESTABLISHES INDEPENDENT CONSULTING PRACTICE

The News Letter has just received notice that Walter Granville has resigned as assistant director of design for the Container Corporation of America to establish an independent practice as color consultant to Design Dynamics, Inc., a Chicago industrial design firm.

Walter's interest in color is indicated by his active participation on many organizations:

Vice-President, Inter-Society Color Council
Chairman, Chicago Chapter, Industrial Designers' Institute
Chairman, Seventh Annual IDI Design Award Program
Fellow, Design Directors in Industry
Member, Illuminating Engineering Society
Life Member, Optical Society of America

Walter joined Container Corporation in 1945 to revise and supervise the production of the company's Color Harmony Manual. He superintended the recent redecoration of the Chicago Lying-In Hospital and was color consultant for the office area of the new Appliance Park of the General Electric Company in Louisville.

While working for the Interchemical Corporation and Philip Ruxton, Inc., one of the parent companies, Walter planned the American Colortype Exhibit, "A Century of Progress"; he did research on color measurement with the G.E. recording spectrophotometer; and he conducted extensive studies on the Munsell and Ostwald color systems.

Congratulations, Walter, and success in your new enterprise.

(We received the next item just in time for inclusion. It should appear with the section on color groups. Thanks, Dorothy. WLR)

WASHINGTON AND BALTIMORE COLORISTS MEET

A meeting of the Washington and Baltimore Colorists is scheduled for May 21. Its guest, Dr. Linda VanNorden of the University of California (Davis campus), is in Washington on a Guggenheim Fellowship, working at the Folger Library and the Library of Congress gathering material for a book on color - chiefly on black. Her research goes back to medieval and renaissance sources. Some of her very interesting material has come from books on alchemy that are a part of the Houdini collection recently acquired by the Library of Congress. Tentatively her book is titled: The Black Feet of The Peacock. After dinner she will talk to the group informally about her book, the origin of her interest, and the type of information she has uncovered. Another speaker at this meeting of the Colorists is Dr. Deane B. Judd, who recently spent four months in Spain (on color, of course!). He will tell the group something of his work in Madrid, and of impressions he and Mrs. Judd gained of life in Spain. Local members of all ISCC Member Bodies are invited to join in this meeting.

D.N.

MICHAEL H. WILSON TO LECTURE IN UNITED STATES

Michael H. Wilson, of the Goethean Science Foundation, Stourbridge, England, expects to arrive in this country in late July, to be here for several months to do some lecturing for the Anthroposophical Society. His lectures will include some on color in which he will elaborate and bring up to date the ideas of Goethe's Farbenlehre, this being an aspect of color which has much interest for the members of the Anthroposophical Society. Several of us had the pleasure of meeting Mr. Wilson in Heidleberg in 1955 and shall be glad to meet him again while he is here. His interest in color (as evidenced by a paper in the April, 1955 Journal of the Optical Society of America, "Complementary Hues of After-Images") was reviewed by Eugene Allen in News Letter Number 120, September, 1955; first in an item reviewing the JOSA report; and second in an item on "The Goethean Science Foundation." Mr. Wilson expects to cross the country while he is here, so if you are a member of a local group that would like to meet him while he is here, you might write to him (Goethean Science Foundation, Clent, Stourbridge, Worcs., England) to ask whether his itinerary will permit this.

D.N.

SCHOOL LECTURES ON LIGHT AND COLOR

Readers of the I.S.C.C. News Letter, will be interested to know that the Birmingham England Centre of the I.E.S. have appointed a School Lecture Panel to lecture to schools on the subject of light and color. The work is carried mainly to Technical Colleges and Science Sections of Grammar Schools. Up to the time of writing the Panel has lectured to almost three thousand pupils, involving thirty six schools altogether. As our work progresses we are paying more and more attention to color, and one of the natural developments of this expansion has been to invite Mrs. Kay Hudson a well known feature writer of the Birmingham Mail, and an outstanding advocate of the feminine approach to the importance of light and color in the home, to give our Centre a paper on this subject. We expect this innovation as far as this country is concerned to expand just as it has done in America.

J. Beresford-Horniblow

LIST OF ARTICLES ON COLOR RECEIVED BY NEWS LETTER

From time to time readers send us reprints or references to articles on color. We have decided to publish a list in each News Letter, and are hopeful that this list will grow. It will if all readers will keep the News Letter in mind when they publish papers of their own, or come across articles of particular color interest.

An Evaluation of the AO H-R-R Pseudoisochromatic Plates (A Test for Detecting, Classifying, and Estimating the Degree of Defective Color Vision), Gertrude Rand and M. Catherine Rittler, A.M.A. Archives of Ophthalmology, November 1956, Vol. 56, pp. 736-742

Comparison of Successive with Simultaneous Color Matching, S. M. Newhall, R. W. Burnham, and Joyce R. Clark, Journal of the Optical Society of America, January 1957, Vol. 47, No. 1, pp. 43-56

Glass Color Standards for Extracted Honey, B. A. Brice, A. Turner, Jr. and J. W. White, Jr., Journal of the Association of Official Agricultural Chemists, November 1956

On Projective Transformations of the CIE-Chromaticity Diagram, Günter Wyszecki, Journal of the Optical Society of America, November 1956, Vol. 46, No. 11, pp. 982-986

Prediction of Color Appearance with Different Adaptation Illuminations, R. W. Burnham, R. M. Evans, and S. M. Newhall, Journal of the Optical Society of America, January 1957, Vol. 47, No. 1, pp. 35-42

Specifications and Calibration of the 1953 Edition of the Inter-Society Color Aptitude Test, Forrest L. Dimmick, Journal of the Optical Society of America, June 1956, Vol. 46, No. 6, pp. 389-393

Theoretical Investigation of Colored Lenses for Snow Goggles, Günter Wyszecki, Journal of the Optical Society of America, December 1956, Vol. 46, No. 12, pp. 1071-1074

Überführung der Farbmasszahlen Nach dem Farbsystem DIN 6164 in Munsell-Masszahlen und umgekehrt, Wolfgang Budde, Heinz E. Kundt und Günter Wyszecki, Die Farbe Vol. 4, No. 2/3 (1955), pp. 83-88

Über die Metrick des visuell homogenen Farbenraumes, Günter Wyszecki, Die Farbe Vol. 4, No. 4/6 (1955), pp. 265-272

Über eine Transformation des Normvalenzsystems in ein empfindungsgemäss gleichabständiges System auf der Grundlage des Munsell-Systems, D. Nickerson D. B. Judd und G. Wyszecki, Die Farbe, Vol. 4, No. 4/6 (1955), pp. 285-288

Zusammenhang zwischen Munsell- und DIN-System, H. E. Kundt und G. Wyszecki, Die Farbe, Vol. 4, No. 4/6 (1955), pp. 289-293

Copies of these articles either on 35mm microfilm or same-size facsimiles may be purchased from the Information Service, Graphic Arts Research Department, Rochester Institute of Technology, 65 Plymouth Avenue South, Rochester 8, New York