

practical demonstrations with crayons and water colors, for a definite training of the color sense, and are an elaboration of the course recently given at the Teachers' College of Columbia University.

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Color demonstrations, with results obtained in public and private schools by the use of measured colors, are to form the basis of six lectures which Albert H. Munsell has been invited to arrange for art teachers and supervisors. These lessons will begin on Saturday, Feb. 19, at 2. P. M. in Room B. of the Copley Hall building. They include practical exercises with crayons and watercolors to definitely train the color sense, and are an elaboration of the lectures recently given at the Teachers' College of Columbia University.

43d.

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Prof. A. H. Munsell has consented to give a course of six illustrated lectures, with demonstrations of his system of measured color, on Saturday afternoons, beginning the middle of February, 1910. Those wishing to attend such a course will communicate with H. A. Putnam, 84 Washington Street, Boston, Mass., before January 15, 1910, for terms and particulars.

43a.

(Results obtained in well known school will be shown. \$4.00 for the course, including materials

12 box of crayons	10
10 " " watercolors	32
8x10 paper block	8
	<hr/>
	50

Room B. Grundmann Studio.  
2:30-4 Sat.

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Feb 19 - Began course of lectures for supervisors - 43.  
Mar 26 in Normal Art Gallery.

(light)  
Feb 19 I The Color sense (color) red, green, violet-blue  
perceptions of color - normal & abnormal

(Hue  
26 II Measures of the Color Sense (Value  
(Chroma  
Photometer - spectroscope - Maxwell's disc

III Balance of Color (visual ease) Unbalance  
usually taught .

The Color Sphere (regular) - Color Tree  
(irregular)

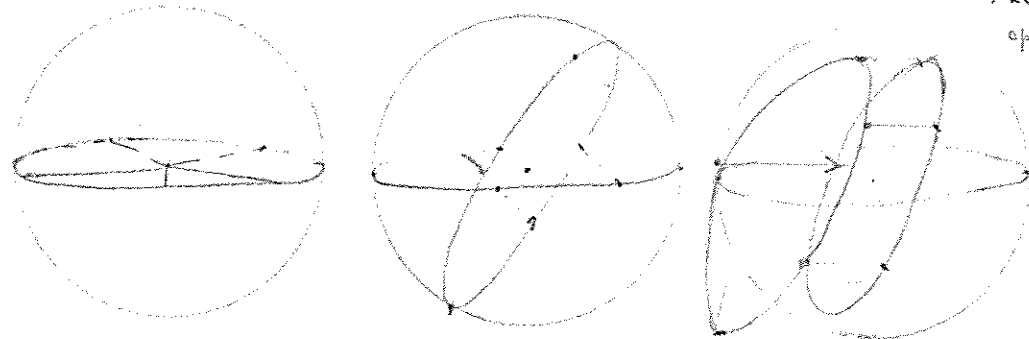
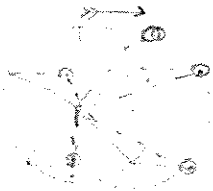
- Mar 12 IV Accent of Color  
 Choice of a dominant - applications to dress and surroundings.
- 19 V Notation of color
- 26 VI School-room methods of color education.

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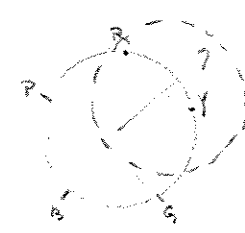
Mar 5 4:30-6:15 Mr. Everett H. Hinkley - chemist - New Bedford and Mr. Gillingham (student) Textile School.  
 Show photometer and charts  
 Discuss measures of colors for dyed materials. Mr. H. wishes curves for auramine O. and magenta to see if their combination will make a formula corresponding to the union of such curves. Discuss winding yarns on alumination of same value - to fit photometer holder. Show experimental holder for "overlight" (law of Sines)  
 Discuss Nernst, arc & lampalum illumination and correction of eye by complementary color.

Mar 11 Mrs. C. C. Abbey of Chicopee comes to find a "fancy picture". -----

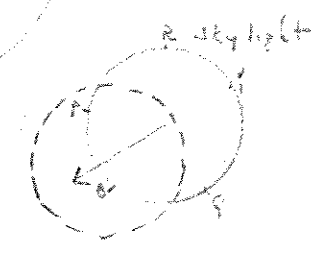
15 At studio 2:15-3:15  
 Mr. Putnam - to talk over exhibition room of Munsell system at the Washington Street store. Says Mr. Sommers of Lavenburg & CO. N.J. (who furnish W. H. ink colors) will put the system on the school list again. I call his attention to the faulty crayons in the 12 box and say each new batch must be O.K. by me to save misunderstandings.



Accent - increase of above hue  
 neighbors move color  
 opposite less like the complement



10m light { Accent -  
 to suit practical conditions  
 - avoid monotony  
 - exercise the color thought



Mar 29 Studio 3-4 Miss Ellery and Miss Woodruff. 45.  
 Former brings her notes of my lectures and also those of Dr. Ross' course.  
 Hears him say that "It is a pity to give children a restricted palette. They crave the most brilliant colors and should have them." So I refer her to my Tech. lecture as to the logicalness of such action. She comments on the four hours a week of study which they are obliged to promise.

30 4-6 Dr. Holt and Paul Perkins at studio.  
 See note-books on Color and Anatomy. Collioure studies - etc. Dr. H. says Pope was disturbed to find Ross used false complement - and asked if the R. Y. E. scale (12 steps) was not equivalent to the tempered scale in music?

Apr 12 Give last of 3 talks on color to Public School Class. M. N. A. S.  
 1. The color sense and its measures.  
 2. Color Balance and Unbalance - Its notation.  
 3. Color education in the School Room.  
 advise omission of all picture making as such - retention of symbolic diagrams (primitive effort)

Divide study of color into general aim and special aim .

General

Special

Mar 15 Judge Perkins comes to see portrait -  
 Also we talk of a new contract with W. H. & Co. for publication and sale of "Color Atlas." Will draw it up as soon as he knows cost and selling price determined upon-

Apr 2 Write Mr. Putnam as to assuming all expenses of lectures? 45a.

4 Send to G. H. Ellis Co. for 5 copies "Color Notation"- Give one to M. N. A. S. Alumni library and one to Franklyn Union library.

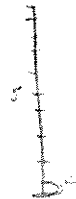
Printing circulars	.90	
250 Envelopes	5.31	
75 "	.60	
Printing Circulars	2.25	
Tickets	1.25	
Paints Paper etc.	15.	
Rent	36.	
	<u>61.31</u>	
Adv. in Sch. Arts	5.	133.75
" " Journal of Ed	5.	71.31
	<u>71.31</u>	<u>62.44</u>

May 3 Mr. Howland sends four copies each of Chart A & B 46.  
for acceptance and copyright.  
Wire N. E. A. Com. regrets that I cannot accept  
their invitation to discuss art & teaching here  
and abroad on July 7 owing to absence from Boston.

5 Go to W & H factory at Malden to test R & Y

9 Moved from room 108 to room 112 - Pope Bldg.  
(Plan appears in book.) Rent 550.  
Sent photometer to New Bedford Textile Sch.  
\$37.50 net

20 New tests of Red, Yellow & Neutrals (factory samples)



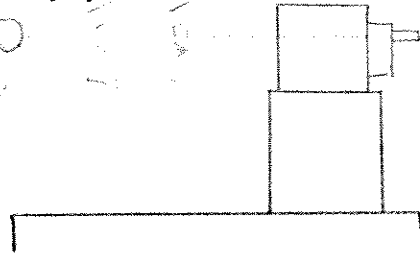
Red. (40-41) shows last year's  
sample has faded  
Yellow (83-84) has faded

Shiny black reflects surrounding surfaces -  
unreliable

May 31 Mr. Wm. L. Woodward of the Phila. firm of  
Taylor & Co. - "standardizers of business" comes  
to the school 12:30-2 and studio 4-6 (after hav-  
ing spent three hours reading the book) and  
sees the system of measured color charts.  
Is working with Mr. Cook - at standardization  
of colors (lithographic) at the Forbes Co.  
Comes at the suggestion of Prof. Wendell,  
Cross & Clifford to learn my methods of measure-  
ment. Wishes to have me meet Mr. Cook - and  
go over the question thoroughly.

Jun 7 4-5:30 At W & H factory - Malden.

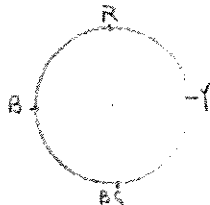
47.



Testing Nernst lamp in  
dark room - for photo-  
metric color values -  
Removed opalescent globe.  
Tried 1-4 of parafine  
tissue.  
Changed distance from  
39-41 in.

Advised two perforated screens to kill reflected  
beams.

Jun 9 1-3 P.M. Dr. Edwin B. Holt lunches with me at  
the B.Y.C. Rowes' Wharf. We discuss color -  
and he asks why Rood's two pairs  
90° distant did not work. Suggests  
that I give a lecture next fall  
before the students and others  
invited to the psychological dept.-  
on measured colors-in Emerson Hall.



Refers to debate in some minds whether purple is not a dual sensation - and grants that green is such a dual sensation to the painter who makes it by a mixture of yellow and blue pigments.

Does not accept Mrs. Franklyn's argument - and regrets Mr. Ross' unwillingness to submit to physical tests of color balance.

I outline my tests of angular distribution of the colors, by use of masks to detect any unbalance - and quote Dr. Henderson's answer to Mrs. F's query as to "degree of freedom!"

June 17 Telephone Mr. Howland - to send 2 charts to Mr. Cooke - c/o Forbes Lithograph Co. (ordered by Mr. Woodward). Still waiting for contract and cost price (asked last fall).

18 Placed color records in safe deposit.

While cruising on board the "Ahmed" at Shelter Island receive two copies of the new Color Atlas from W & H Co. 48.

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Received MSS in German about my system - written by Hedwig Schmidtlein of Fehleendorf - West Goetteste, f. bei Berlin asking me to edit it for publication in an artists' magazine.

Herr Hedwig Schmidtlein  
Fehleendorf, West Goetteste, f.  
bei Berlin.

48a.

My dear Sir:-

Your letter and MSS has followed me on a yachting cruise which must explain the delay in replying.

The brief statement you have written of the three color qualities and their assemblage by means of a spherical ideal, with the resultant nomenclature based on measures of these three qualities, - (hue, value and chroma, -i.e. wave-length, wave-amplitude and wave-complexity) - seems to me clear and teacher-like.

If I were to criticize anything, it would be the use of the word "Tone". (intrinsically musical, not coloristic) as you may have noticed in the Appendix to Chapter I - page 16. Language should be able to supply, or invent if necessary, - distinct color terms involving no association with other sensations, and perhaps you can avoid the musical term tone by devising a new German term for Value.

In your reference to page 89, - all those paragraphs 156-162 sketch color paths with G 6/5 as a starting point.

The opposite RP 4/5 is referred to in p. 161, while the opposite of YR 8/7 would be P 2/7, all these cases assuming the areas to be equal, - there being no change in chroma. But by change of area other chromas and values could be employed.

Again let me compliment you on the clearness of your description, and ask as a favor that you will sometime let me have a copy of it. In the meantime I shall be glad to know what success you have in introducing this new way of describing and memorizing color relations.

I shall convey your kind words to Miss Patrick, who has used this innovation so skilfully.

Yours very sincerely

Aug. 1910

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- Sept 13 Go out to the factory to see Otto and Carl Anderson about the horizontal charts of color. Meet Mr. A. S. Wiester- chemist -(Stamford Tech) of San Francisco. He passes me his "curves based on pigment weights." 48.
- 14 Mr. Howland agrees to a royalty of 25 cents on each chart: - the contract open to revision after two years trial.  
On a basis of 500 copies (plus cost of machine \$600.) He figures the cost a little under 50 cents each. This due to hand work - two printing impressions and new machinery. Says agents want 25% and a special agent, such as Favor Ruhl - 10% off from that. Agrees not to republish "Children's Studies in Measured Color" because the plates are expensive and duplicate those in my book.
- 30 5-6 Mr. Perkins office - Drew up memo of new contract for color charts. He asks if new eye-piece in photometer is not patentable.
- Oct 3 Signed new contract with Mr. Howland for color charts.
- 5 Sent James Hall Notation Diagram of the so-called "Mayo" colors and hues. 49:
- 6 Prof. Yerkes (Harvard) calls me up to ask if the publishers will loan the color charts and color sphere for his course of lectures on the psychological aspect of illuminating engineering - to be given at Johns Hopkins Psychological Laboratory in Baltimore, beginning Oct 15.  
They should be sent care of Prof. J.B. Watson.  
I ask if he has used my photometer, - and he makes

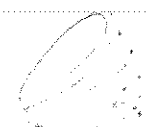
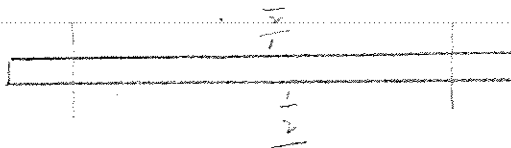
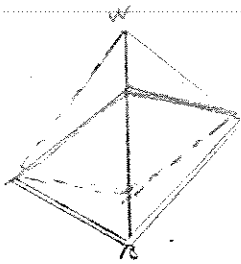
an appointment at the studio - for Monday 10th,  
3 P. M.

Oct 10

3-5 P.M. Prof. Yerkes brings Chevreul and asks about its usefulness. Quotes Prof. Techner's pyramid & I show the color tree. Thinks the terminology of color in great need of change to avoid misunderstanding. Asks what objection I have to "tint" in place of value. I show how "tint & shade" teach false light values. We discuss "intensity", "brightness" and "tone". I ask how Prof. T. obtains the chroma dimension in his pyramid? - "by psychological process". Prof. Y. reads grey and green in my photometer.

52 54 Cats-eye is an "Aubert-diaphragm"  
51 50 I tell of light measurements in  
52 46 Albany building - 76% cut off by  
~~51~~ 50 Elevated. I describe the growth

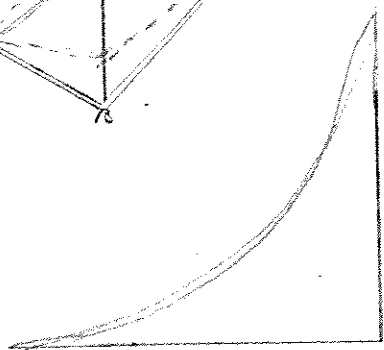
of the color sphere and color tree- and show V & H set of charts - Also color in masterpieces and their probable balance - He intends to bring Prof. Tichener to see the system - Will ask if the laboratories of Johns Hopkins will order sphere and charts.



Chevreul's error.

Popular error in use of "tint & shade"

curve of log. r squares  
psy-ph. law



Prof. Hering's - 4 colors

Oct 17

9:30-11 Dr. Chas. Williams -

50.

To see new eye-piece for photometer.

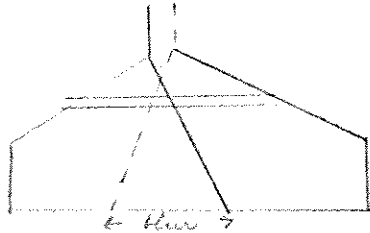
Finds it very sensitive. Thinks it large enough- and asks if shutter might not be reduced from  $3\frac{1}{2}$ " to  $1\frac{1}{2}$ " without loss of discrimination. (See trial by Justice' camera. Nov. '01.)

When I suggested the dial would also be diminished he suggested having it lead to the side by a bevel gear - We discuss the amount of lost motion - so caused. Show him new charts - and he tells of his work with Dr. Bell - also of a built up light

by a photographer - using Cooper se- , Tungsten  
(T) (C.H) and fluorescent - to balance daylight.

Speaks of the flashing in eye as a disturbed state of the retina - perhaps due to blood supply. Advises rest.

Wants both the white ground and the black ground for Chart B - to exhibit effect of contrast on color judgment. Thinks "lumin" may be a good new term to avoid confusion of tint, tone, and value. Tell him how I had to abandon "lumenometer" because it was already copyrighted by the Gen'l Electric Co. Explain why thickness of the



double 10" prism increases blurr at the inter line and so diminishes the contrast effect, which is a great help in visual discrimination. Advises the thinnest possible prism. Giving the present field

Approves 3" focus for lens.

Oct 24 Miss Stretton - English Art mistress at school - stays to hear lecture on color in the Class B room. 51.

27 Mr. Mack Curtis Kinney, comes with a note from Miss Peterson, to ask about color for architects. M.I.T.

Nov 1 Go to Prof. Tichener's 1st lecture on "Structure of Mind" at M.I.T. and after supper with Dr. Holt we go to Prof. Yerkes and meet a lot of Harvard professors invited there to speak with Prof. Tichener. (Osterhout, Palmer, Davis, MacConnell, Langfelt, etc.) - the psychological problem of difference between intensity and quality (vividness) comes up - and some hold that color has four dimensions.

8 3rd lecture - Sensation  
Eye described a "four eyes" - 1 nocturnal -  
3 daylight - placed like saucers  
1. Twilight - almost colorless  
2. Daylight - white and black antagonistic  
3. Yellow-blue "  
4. Red-green "

Black sensation possible only by contrast with white. Blind see as we do "the person behind us" - Closed eye sees only gray.

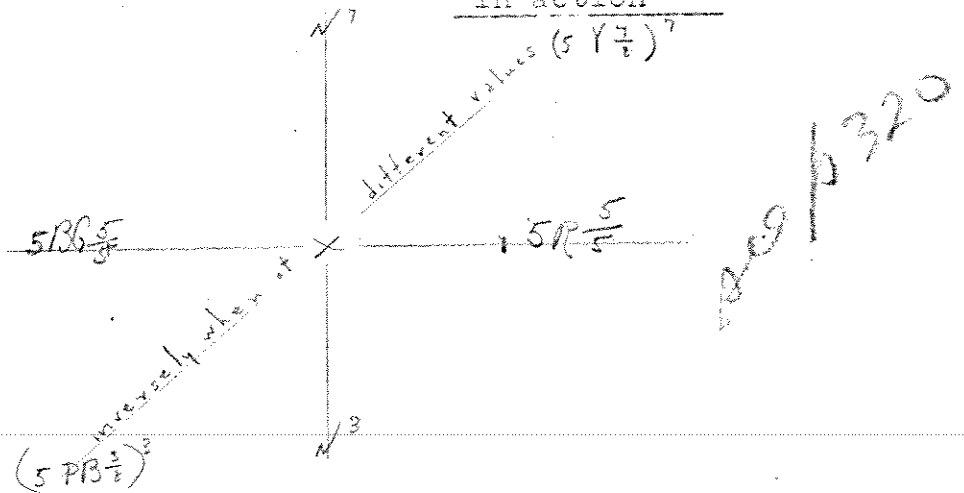
Dine with Dr. "Ned" Holt at Brunswick - and offer title of lecture at Emerson Hall for the 9th Dec. as The Color Sense and its Training.



We discuss Yellow as a real color - not combined of R & G sensations.

Is total stimulus of a color the product of Value x Chroma x Area?

i.e.  
luminosity x strength x retinal surface in action

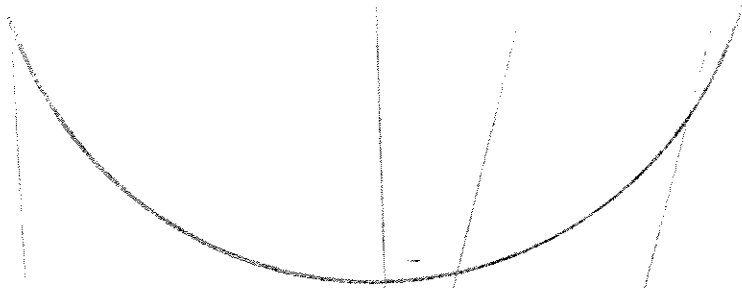


Nov. 14 4-6 At Dr. Williams' office with Dr. Louis Bell  
 We discuss color photometry and its vagaries -  
 Impossible to duplicate readings, which range far up and down the scale - due to contrast effects.  
 Flicker-phot. is pretty good - evens up the contrast effect - because both sides befuddle the eye. He finds white in  $74^\circ$  reflection and black  $5^\circ$ . Lummer-brodheuer & Bunsen types referred to.



Dr. W. shows him my small photometer (very good field) and the charts of the new Atlas. I see their comparison spectra - with wave length scale.

- 17 I get new Nernst lamp - D. C. 1 ampere - 110 v. to light in horizontal position: the first going wrong in a week.
- 18 After 6th lecture on Conscious Attitude - am asked to join with Drs, Holt, Langfeld, Kallem & Baird in a dinner to Prof. Tichener at the Brunswick - 6-8:30 - latter makes appointment to see color at my studio 19th at 11:15



← →  
← *has shutter* 2% →

$\frac{3}{4}$

*same 2" circle  
diaphragm*

$\frac{1}{4}$

40.116.112.110.4

Nov 18

Studio 11-1 Prof. Tichener of Cornell Univ. Ithaca and Dr. Baird of Clark Univ., Worcester.  
Show photometer and value scale -

53.

" Color Tree and method of scale determination  
" " Sphere - 100 steps and 16 steps

They remark the contrast effect of "shells" nested - also the sudden melting of color at one particular rate of rev. Also different accent in clock-wise revolution and its reverse.

Show charts - Horizontal set) and complete chart  
Vertical set ) of 60V

They measure value of a purple yarn.

Baird av.  $14\frac{1}{2}$  ) against white  
Tichener  $16\frac{1}{2}$  ) blotter and by  
self  $15\frac{3}{4}$  ) Nernst lamp.

Show illustration of exception to Weber's law-

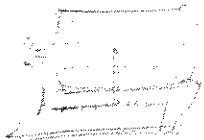
" Notation Diagram & its application to memorizing effects

" double pyramid of 1879

" Pope School results with children.

1-3 Lunch at Brunswick Hotel -

Discuss photometers - Nagel's P. - Hegg's colors  
50 grays - Warren's 500 distinguishable grays -  
by method of least difference? Yerkes, spectral  
red, green on  -  white rectangles -

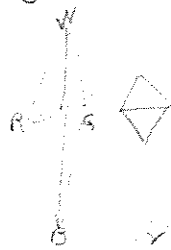


Flicker method -  
rev. drum for value scale  
eye piece on a mic. screw



slit  
over  
discs.

Prof. T. says physicist tries to ignore the eye-  
(physiologic action) - Says his model in psychologic - need not follow pigment measures.



Dr. Baird raises the question whether method -L.D. would make RY=YG - etc?  
Also whether the solid is a spindle (1) & (2). Prof. T. wants a photometer for his laboratory and also asks if I will duplicate a Collioure sketch for him.

When I ask Prof. T. what can reasonably be presented to a popular audience in 50 minutes: he says -

1. pigment colors
2. " their relation to the white-black series.
3. " tri-dimensional solid to typify all relations.

Nov 25

Took phot. eye piece to Mr. Wolff (Pinkham & Smith) 54.  
to be perfected - \$15. for metal case & eye piece ?

Dec 8

Lectured at Emerson Hall - Harvard Univ. on the Color Sense & its Training, under auspices of the Psychological Laboratory, 8-9

Sphere - (neutral and flashing)

Discs - to disprove R Y B fallacy & find true complements.

Photometer to assort colors (in filing cabinet of 10 drawers)

Drawer 5 - arranged by hue (circumference) and chroma (radius).

Color Tree qualitative and quantitative of all colors (Even those imagined)

Spectrum described in 3 dimensions: too complex for child.

Charts of the Color Solid

Horizontal - 20-80 Vertical, 10 hues & inclined - spectral.

Middle Colors sympathetic with best masterpieces of color - Threshold from which to measure inequalities of V & C.

Unreliability of personal estimates.

Neglect of educational wisdom in color teaching.

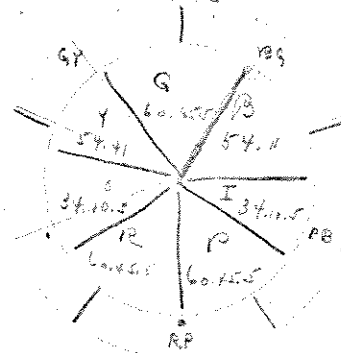
Mr. Kennedy brings me home in his car.

9

Class B (N.A.S.) reads grey & colors in the photometer. (Readings are omitted.)

Could it be thrown on a large screen for training children's estimate of light & Color?

Newton's white sections to give Miss Clark.



64.45 R } 122.15.15 { R 17% 54a.  
 " G } " " 51  
 " B }  
 54.41 Y } 109.22 { Y 15% 30  
 54.41 B } " " 15  
 34.10.5 I } 51.90.10.5 { I 7% 10  
 " " " } 209.52.25 19

Dr. Butler suggest "make more of the building of the Color Tree".

Mr. Kennedy suggests "explain why gray in pigment mixtures is the test of balance."

LECTURES ON TOPICS IN PSYCHOLOGY

The following lectures, under the auspices of the Psychological Laboratory, will be given (with the exception of the first lecture) on Friday evenings, at 8 o'clock, in Emerson D. -----

- Nov. 10 "The Theory of Memory in the Light of Recent Experiments in Abnormal Psychology." Dr. Morton Prince.
- 18 "Prof. Freud's Theory of Dreams." Prof. Edw. B. Holt.
- 25 "The Freudian Theory of Wit." Prof. Edw. B. Holt.
- Dec 2 "Seeing." Prof. Robert M. Yerkes.
- Dec 9 "The Color Sense and its Training." Prof. Albert H. Munsell, of the Normal Art School.
- Dec 13 "Mind in Animals." Prof. Robert M. Yerkes.

-----  
 Should have dwelt longer on pigment action & ended with review of principal points - also reference to the phases not touched upon.  
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Mr. Munsell on Rembrandt

The exhibition at the Museum of Fine Arts of Mr. Frick's famous Rembrandts, "The Polish Rider," the portrait of himself, and "The Young Painter," gives a timely interest to the talk on Rembrandt which is to be given by Albert H. Munsell of the M. N. A. S. in the course of the Sunday docent service at 3:15 tomorrow afternoon. Mr. Munsell spent last summer in Holland, devoting his time to the study of examples of the master, there accessible and to tracing out such memorials of his life as still exist. The talk will be given in the Flemish-Dutch room, where the Museum's Rembrandts are hung. Photographs of other pictures by Rembrandt will be shown, and the speaker will meet visitors later in the First Modern Room where the Frick collection is on exhibition.

- Dec 14 At Dr. Williams' office 9-11 - testing color vision of Mr. Gentry Clark - 55.  
 by yarn test - confusion of red and green  
 lantern - " " " " " in low intensities - also calls light green yellow  
 "had bought what he thought was a blue shirt - really vivid pink."  
 Dr. W. also tries his new instrument for comparing wave-lengths but it does not detect the above defect, as a subject matches equal luminosities quite readily. Red sensation very defective - green less so.

- 1911  
 Jan 5 4:15 At Mr. Perkins' office -  
 Discuss chart in color in Jan. no. of Inland Printer - not covered by patent - altho I made such 10 yrs. ago, or more & it is in fact a plan of the color tree. (First draught by C.F.P. seemed to be faulty for this reason. Would "System" have corrected it?)

Jan 13  
1911

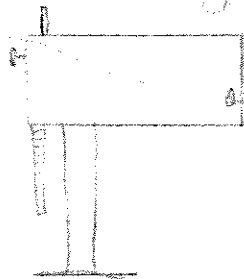
Received five colors for the chart of middle value 50.  
" " intermediates " " " " 50.

See scaled diagram opposite for effect of Nernst lamp compared with skylight -

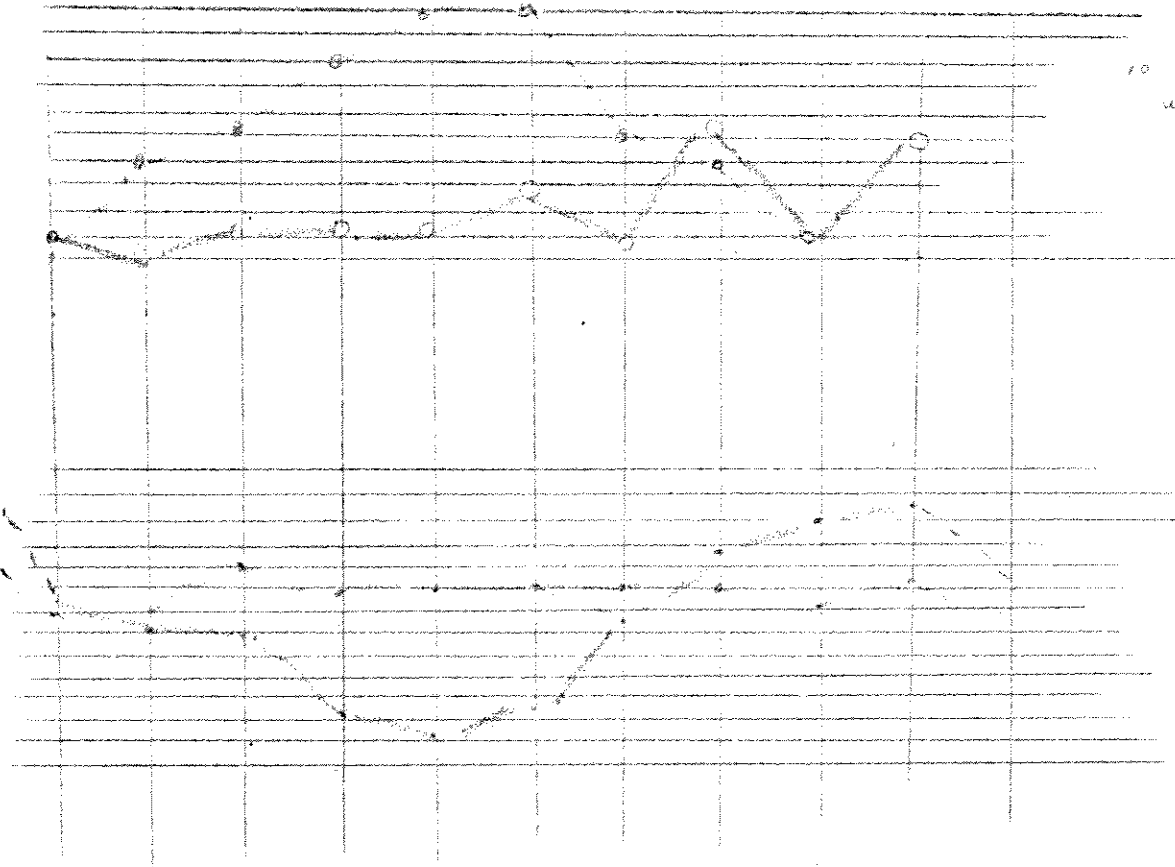
Blue-green field is 9% darker than Nernst lamp.  
Yellow . YellowRed & Purple nearly alike under both illuminations.

Red & Purple are 4% inverted by the two lights.  
(red is lifted 4%)  
(purple is dropped 4%)

19 Mr. Putnam calls - Says Batchelder of Phila. has 4th color dimension.



Two spectra } to match any wave length  
uniford



10 steps  
unequal chrom.

- Jan 20      Showed curve of Nernst lamp (compared with daylight) to Prof. Lawrence and Prof. Smith - at M. I. T. electrical laboratory. He suggests intensified arc (Gen. Elec.) with Alba globe - also interposing a photographic plate (silver ) and dipped in solution of diamond dyes - to neutralize the yellow excess. 56.
- 23      Dr. Henderson 3-4  
Sees Ector's portrait - and new Atlas - charts A & B. I show curves of Nernst lamp and daylight on 10 colors - Says I should present this at the Int. Physiological Congress in Groningen - summer of 1913- and that he will help me prepare it.
- Feb 8      10 - 11:30 At Malden factory  
Advised Arc lamp - as Nernst lamp is too red on their current.
- 15      3-4 Mr. Putnam calls to ask about title & description of new charts 30-70-50. I ask why 8 spheres appears as a deficit?  
Ship photometer (new 8x9x10) to Dept. of Physics - H.T. Condon - Agent at Univ. of Washington, Seattle - by Northern Ex. (Nat. here). Also send bill for 50.
- 21      2:30-3:30 At studio  
Mr. C. Karle representing Franklin P. Shumway Co. Sees charts & tree - Photometer  
Is writing ads to appear in Catholic publications, for teachers and later for the home.
- 24      12:30-3 Mr. Henry P. Kendall - The Plimpton Press - Norwood, Mass. Wants to standardize colors in ink, binding cloths, etc. Sees photometer - charts 10 & 30 (large) & color records - Tells of his 100 watt tungstens spaced 20 x 10 over ceiling & hung on 18" cord - to overcome vibration.  
We lunch at the University Club - Wants the book in the hands of a large publisher - Harper, Hill McGraw or Ginn. Will bring Cook & Orcutt to see the system.

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Boston Journal - Dec 22, 1910.

ATLAS OF THE COLOR-SOLID. By Albert H. Munsell. 56a.  
Boston: Wadsworth, Howland & Co. Charts, 11 inches by 14 inches. Price \$2.25.

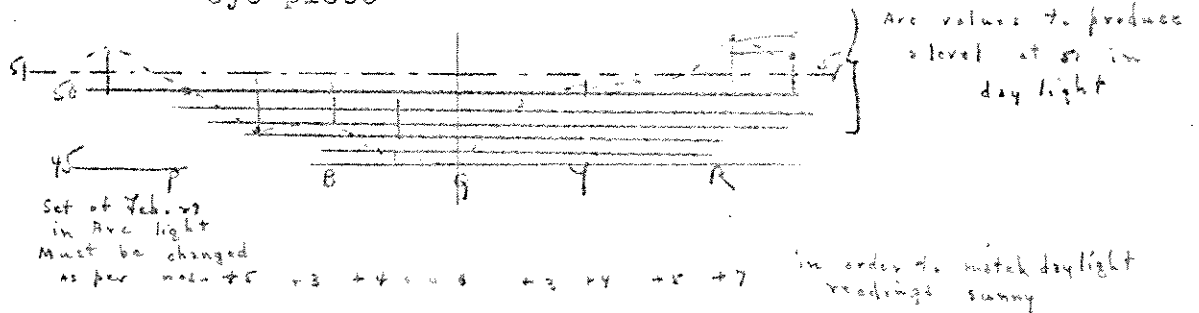
Mr. Munsell is revolutionizing the world's ideas of color effect and use. His work is entirely revolutionary and fully evolutionary. Not to know what Albert H. Munsell has discovered or invented is to advertise one's self as wholly out of the game.

This atlas contains at the present time two charts

of extraordinary value. Chart A gives a neutral scale of nine values between black and white, perforated in such a way that the value of any color may be easily determined by comparison with the neutrals. The personal bias plays no part in this measured scale of value. It is established by a special instrument - known as the Munsell Photometer. Chart B contains the neutral value scale and in addition equal steps in chroma or intensity of five selected colors. This chart is the only one manufactured which shows convincingly a series of progressive changes in the intensity of a color without changes in its hue or value. Both the charts are technical masterpieces. Only one who has experimented persistently in color can realize the enormous amount of work involved in the production of such charts, especially of chart B, showing "Branches of the Color Tree." The charts are all hand painted.

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Feb 27 At Factory - Malden 9:45 - 11:30 57.  
 Tried out new set with arc lamp in dark room  
 Showing that Otto reads from 1/2 to 1 1/3%  
 higher in the Y and R field - Gave him new  
 eye-piece -



Mar 13 Mr. Putnam 8:30-9  
 Asks about a 12 color box. I advise against it.  
 Mr. Schmidt thinks it would confuse beginners.  
 1 P.M. Take reprints to Mr. Gagnebin - 142 Oliver  
 St. - Talk with Wernst lamp representative about  
 colored shade.  
 2 P.M. Meet Dr. Bell at Mr. Wolf's desk - discuss  
 Cooper-Hewitt lamp and its correction.

Note - new red (53) - shifts accent to blue <sup>B</sup>(20)  
 increases purple and red <sup>P</sup>(25) <sup>R</sup>(15)  
 (22) (14)

Only change on chart large enough for decimal  
 scale of chromas is B {67  
 {54



Mar 16 3-6 P.M. Dr. Holt & Dr. Langfeld at studio  
 (after lunch at Brunswick) Discuss photometry-  
 flicker method - Test instrument for Harvard  
 Psychological Laboratory.

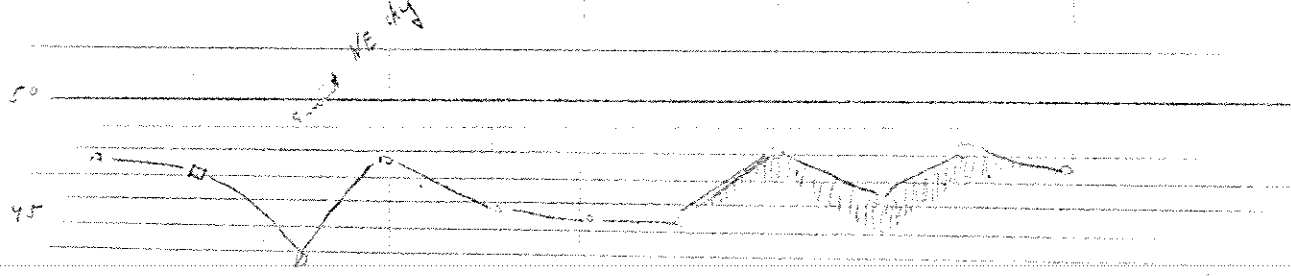
Three readings of neutral gray

	self	Holt	Langfeld
	47.5	50.5	
	46.75	47.5	
	47.33	44.5	
	47.19	47.5	

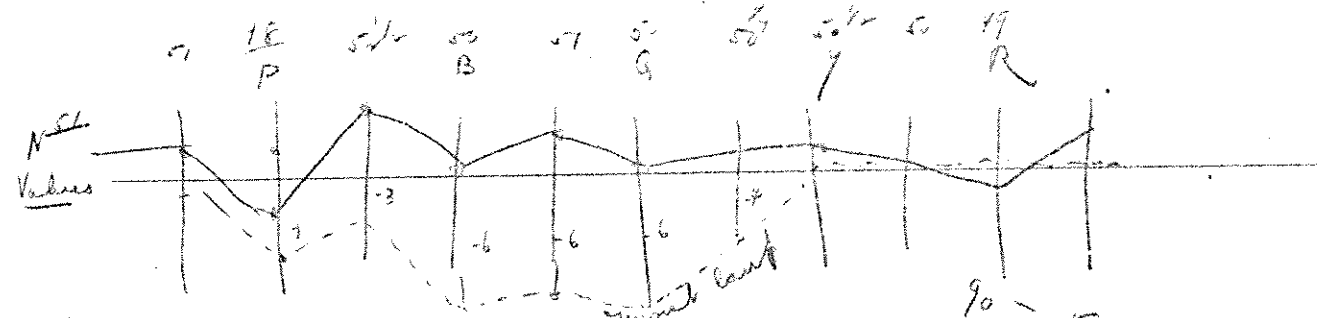
50.5 does older eye  
 require less, or  
 receive more light?

1/2% variation  
 3.3 "

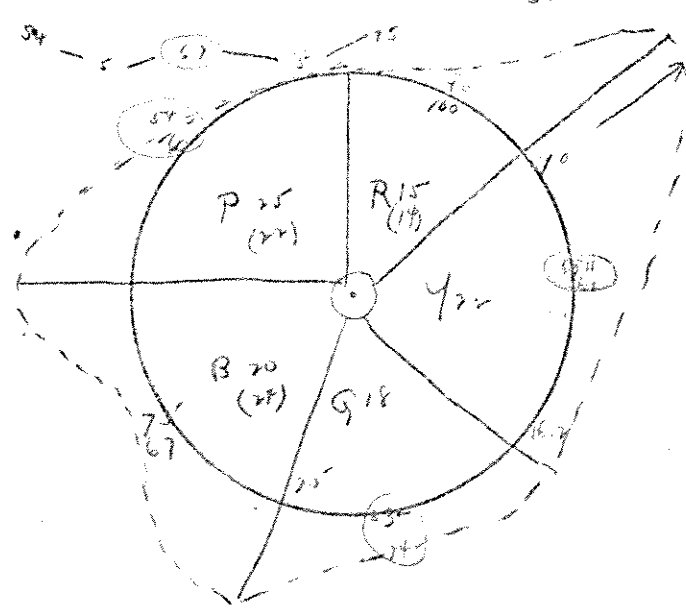
P B G Y R



Add . . . . . Revised equation for  $R - RP - \dots$



Chromes



Mar 17

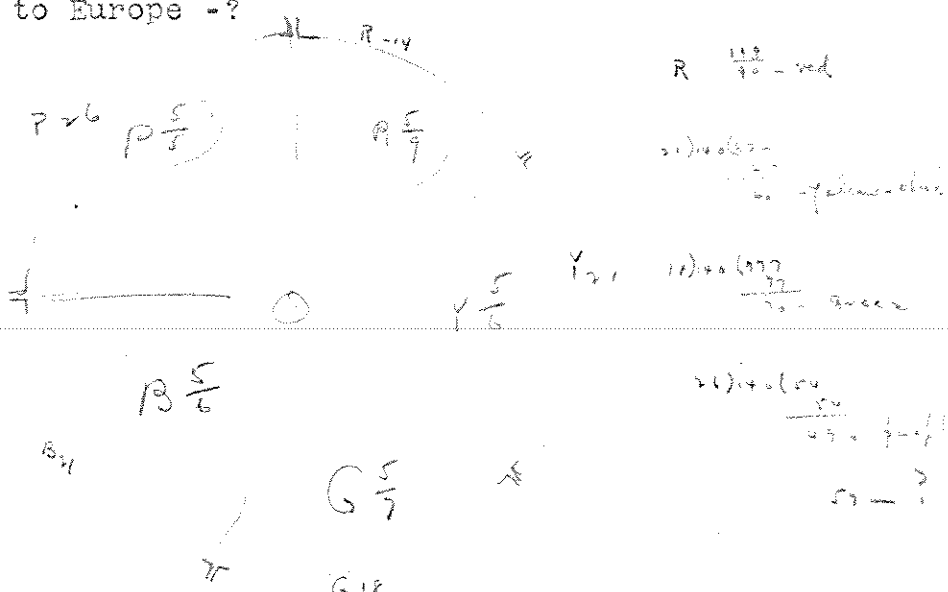
Room 6 - Lowell Bldg. M.I.T. 8-10  
Soc. of Chemical Industry & members of Chemical  
Soc. - Mr. Gagnebin - Mr. Williams -  
Mr. Brannon.  
The qualitative and Quantitative measurement  
of color.

- Photometer
- Tree Standard of light
- Charts curve for various
- Notation artificial sources.

Mr. White speaks of his ground glass field in  
comparing two light solutions, - also Lovibond  
method of a series for comparison -

Mr. Gagnebin would take the photometer with  
him to Europe -?

Mar 27



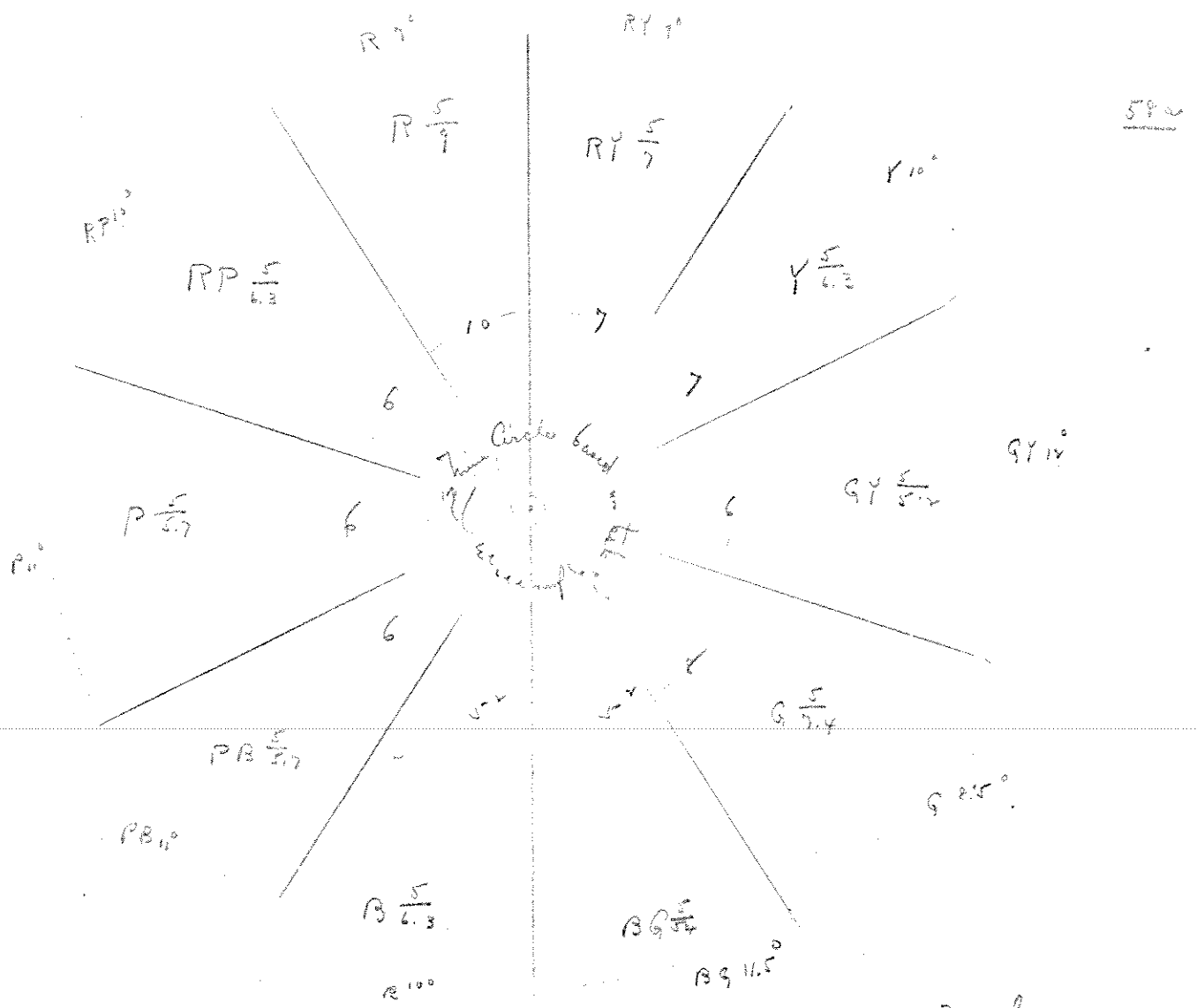
Southwesterly rain storm  
very even gray sky at noon

Ave 6.45	R - 9.0	7
	YR - 7.0	6
	Y - 6.3	5
	SY - 5.2	6 chroma
	G - 7.4	5
	B <sub>9</sub> - 5.4	5
	B - 6.3	5
	PA - 5.5	6
	P - 5.7	6
	RP - 6.3	6

to det machine - omit G<sub>5</sub> + B<sub>2</sub>

Mar 28

5:30-6 Mr. Howland at studio with proof for chart  
50. To save delay on machine, we decide to leave  
off G 5/7 and B 5/6 - altho this extra chroma  
appears in this year's samples.



590

March 27 1911

B  
 10 10 9  
 P 11 9.5 10  
 " 10 10 10  
 B 10 10 9 R.S

9) 200 377  
 22  
 70 - YR

7) 200 377  
 22  
 280 257  
 20 26.4 Y

10) 200 377  
 22  
 280 257  
 20 26.4 Y

10) 200 377  
 22  
 280 257  
 20 26.4 Y

11) 200 377  
 22  
 280 257  
 20 26.4 Y

11) 200 377  
 22  
 280 257  
 20 26.4 Y

11) 200 377  
 22  
 280 257  
 20 26.4 Y

11) 200 377  
 22  
 280 257  
 20 26.4 Y

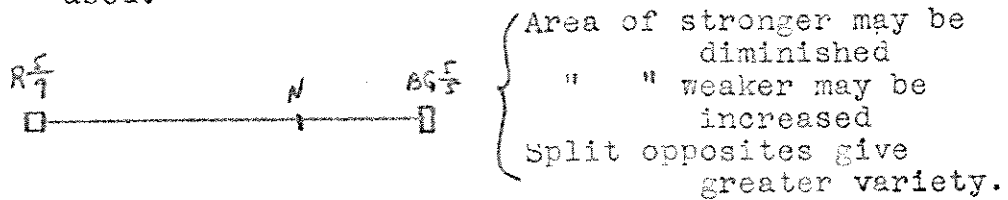
R 70	57	57	63	R-7
70	57	57	63	
Y 63	60	59	63	Y 10
60	60	59	52	
G 20	70	71	74	G 8.5
70	54	57	54	11.5
B 52	61	63		B 10
52		57		11
P 63	54	57	57	P 11
		63	63	10

Mar 29 Took Ector to the Plimpton Press at Norwood. 59.  
 Mr. H. P. Kendall showed us over the plant and took us to lunch. Met Mr. Cooke - (efficiency expert for Taylor of Phila.) Mr. Baxter - Supt. - Mr. Webb - color-mixer.  
 Discusses standard light and standard for colors. Thinks it is a proper investigation for the Carnegie Inst. (Dr. Woodward) and will speak of it. Would it be well to write a new book aimed at Science and Scientific Management? (Qualitative and quantitative.)

(Savannah trip - Apr 1 to 10)

Apr 10 Mr. Hinkley of New Bedford Textile School - to ask about charts. Needs scales of chroma and hue. Finds photometer very reliable - Believes my system the best. Will work out my five middle colors on cotton.

12 Mr. Putnam (W.H. & Co.)  
 To ask if more "Children's Studies" be printed. I say - no, decidedly, as it prevents study of my book. (2000 on hand)  
 Wants to know an answer to "why is orange omitted"? I say it is not "omitted" but confined to its right place and proportion. Asks if yellow can be made by mixing Red & Green? I say yes, but pigment absorption prevents its success - so that all practical color workers add a yellow and a purple to R Y & B - This makes five principal hues: and leads to a balance, which failed by the R Y B theory.  
 Wants to know about the 30 & 70 charts. Will try to have them pushed. I show him how these charts teach balance, both by their geometric construction and notation - giving true complements instead of the traditional falsities, - and exhibiting also the quantities of each to be used.



Apr 20 Mr. Putnam with proof of text for Chart 50.  
 - seven lines of type omitted to fit space arrangement.