

COLOR BLINDNESS

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For over forty years, color blindness has been a very interesting study of mine. My first book on the subject was J. Ellis Jennings, M.D., published by the F. A. Davis Co., Philadelphia, Pa., copyrighted in 1895 and published in 1897, from which I quote very freely, by permission, for my historical background on this very important subject.

In his preface, Jennings says: "For a long time the theoretical problem of color blindness has engaged the attention of the scientific world. The practical side lay dormant for many years until it was proved that this curious defect was the cause of disastrous accidents by rail and sea. Public attention became aroused, new and simpler methods of investigation were invented, and as a result of much agitation, many railroads and steamship companies now require their employees to submit to an examination as to their color sense. Wilson in England, Helmholtz and Seebeck in Germany, Favre in France, Holmgren in Sweden, and Jeffries and Thompson in American have done much to stimulate this most necessary reform."

I am quoting the above by Jennings, to show that these scientists had studied color blindness, its cause and attempted cure, and yet had not found any relief for this defect.

I quote further from Jennings: "Although color blindness must have existed for centuries, the first case noted in literature, according to Professor Wartman, occurred in the practice of Dr. Tuberville in 1684."

"In 1777 Mr. Huddart, in a letter to Dr. Priestly, describes the case of a Cumberland shoemaker named Harris." "Mr. Harvey of Plymouth mentions a tailor who could see in the rainbow but two tints, namely yellow and bright blue. Black appeared to him as green, sometimes crimson; light blue appeared as dark blue, crimson, or black; green was confounded with black and brown; carmine, red, lake and crimson, with blue."

"Dalton, the celebrated English chemist, was red blind, and to him we own the first accurate description of color-blindness. In 1744, he published an account of his own case and his interest in the subject led to the discovery of twenty persons possessed of the same peculiarity of vision as himself." From the fact that Dalton was the first observer to call attention to color-blindness the continental scientists gave it the name modified, of "Daltonism". The term color-blindness in general use at the present day was first suggested by Brewster. Up to the year 1837, color blindness was looked upon as a very rare affliction; and no practical method of investigation had been devised as the cases seen were accidentally discovered." "In 1850, Helmholtz of Germany brought to public attention the almost forgotten theory of the three primary colors or fundamental perceptions devised by Tomas Young at the beginning of this century. Slightly modified, it seemed to offer a satisfactory explanation of color blindness, and under the name of the Young-Helmholtz theory excited wide interest." "Fifteen years

later, Hering announced the doctrine of four cardinal colors, which found much favor, and continues to rival the Young-Helmholtz theory in the number of its adherents.”

“In 1854, George Wilson, professor of technology at the University of Edinburgh, undertook the investigation of color blindness from a practical standpoint. He was led to this study by the mistakes students of his laboratory in judging the colors of chemical precipitates. Wilson made a systematic search for color-blind individuals and established regular statistics on the subject. He examined soldiers, students, policemen, etc., and discovered 65 color blind out of 1154 persons.” “Wilson’s work was of great importance, as his constant aim was to direct attention to the color-blindness in its connection with practical life. He shows that the color blind are totally unfit to become painters, dyers, weavers, tailors, chemists, botanists, geologists, physicians, seamen, or railroad employees. He especially mentions the peculiar liability of the color-blind to mistake the red danger and green safety signals in common use.” “About the same time that Wilson was calling public attention to this subject in England, Dr. Favre of Lyons, France was engaged in investigating the color sense among employees of the Paris-Lyons-Mediterranean Company. His method consists in presenting to the candidate yellow, green, blue, indigo, and violet, and asking the name of each color. In this manner he found 98 color-blind out of 1050 men examined. His methods and results are not reliable, as he undoubtedly confounded color-blindness with a much more common condition of COLOR IGNORANCE.

“In 1875, a serious railway accident occurred in Sweden, which intensely excited public attention. At the investigation which followed, it was found that color blindness was one of the principal causes of the disaster. From this fact Professor Holmgren became convinced that the color sense of the employees should be under official control.” “After much study, Professor Holmgren perfected his method, which is based on the Young-Helmholtz theory and has the merit of being at once simple, rapid and accurate.” “Through the kindness of the superintendent in chief of the Upsala-Gerle Line, Holmgren was enabled to examine the entire personnel of the road and discovered 13 color blind men out of 266 individuals or 4.8 percent.”

So much for the history of color blindness and of the men who made the investigations. I will not go into the theory of color blindness, its cause, etc., but will now refer to the authorities who refer to it in their books and writings.

Firstly, I will go back to one of my old standby books on Ophthalmology by Norris and Oliver of 1893 which I purchased in 1897. On page 193 they start on color sense, reviewing much of what I have written above describing the various methods of that time for testing for color perception, or color blindness, for railroads, army, and marine, etc. They write entirely of color blindness as sub-normal color perception and do not mention any opinion as to its cure or correction.”

Jennings on page 54 says, “It is now definitely decided that congenital color blindness is incurable. The widespread belief in its curability originated from the investigations of Dr. Favre of Lyons, France which seems to show that the defect was cured by exercising the chromatic sense. He distributed among the school teachers packages of colored worsted, each containing three shades of red, orange, yellow, green, blue, indigo and violet. The children were examined one by one and required to

name the colors. Those who made mistakes were subjected to daily drill until they were able to name the colors correctly. In this manner 1002 boys between the ages of 4 and 15 were examined, of which 218 were reported as having defective color-sense and nearly all were cured by the daily exercise with colors.”

“The deductions made from this investigation are valueless, because the method employed confused color-ignorance with color-blindness. The mere fact that a large number of the boys were unable to give the color names correctly was no proof of defective color sense, for we know that school boys as a rule know little or nothing about color names. It, therefore, becomes necessary to prove existence of color blindness before it can be claimed it has been cured by treatment.”

In *Disease of the Eye*, by Gould and Pyle, 1899, they say: “Treatment for congenital color blindness is useless. Treatment for acquired, is directed to the cause.”

In *Disease of the Eye* by Dr. Charles H. May, M.D. 1917, he gives the usual tests for color blindness, but does not offer any remedy for curing or correcting same.

Disease of the Eye by Edward Nettleship, F.R.C.S. he says: “Color blindness although mainly congenital and incurable, is sometimes caused by disease or injury.”

The most complete and comprehensive article on Color Vision and Color Blindness is found in *Physiologic Optics*, by Dr. M. Tscherning, and published in 1900 by the Keystone Publishing Co., Philadelphia, Pa. The bibliography contains a very large list of reference articles, so that anyone who is vitally interested in color blindness can read to their heart’s content.

As can be seen since 1684, at which time the first case of color blindness was recorded, reams of paper has been used in writing about it, but no one had found the solution of CORRECTING this defect, or how to “CURE IT”. You will note I said CORRECT it. I do not claim to CURE color blindness, but with the procedure as advocated by me in the various professional magazines, we DO CORRECT THIS DEFECT SO THEY PASS THE GOVERNMENT OFFICAL COLOR VISION TESTS 100%.

I have been a student of Light Therapy in all its various forms and names for years and I have naturally had considerable experience with it in my practice as an Optometrist. So, when Joe A., of Kensett, Iowa came to me in the fall of 1938 and wanted me to correct his color blindness so he could enlist in the Navy, he had been rejected as color blind, I thought here is my change to try and see what could be done. I had been so successful in correcting Amblyopia cases with my Syntonizer, by using Alpha Theta for the first session and Mu Theta for the second session, taking cases with a visual acuity as low as 5/200th and with twelve treatments give them a visual acuity of 20/20th, and this acute V.A. has held up for years. We are taught that Alpha is a stimulus to the sensory nervous system, and since I had such excellent results in Amblyopia, I thought if I can stimulate the retina, and visual tract to SEE BLACK LETTERS, WHY NOT DO THE SAME THING SO THEY CAN SEE RED AND GREEN. I confess that with the meager knowledge I had of color blindness, I tried all sorts of combinations at first and I finally found that Alpha Theta as a neutralizer eased up any evidence of too much Alpha. After all the experimenting I have done I cannot improve on these combinations for correcting Red Green Color

Blind. I learned that some Optometrists are using mainly "RED". One Optometrist using Alpha That for ten to fifteen minutes and then Alpha Delta for fifteen minutes, and if MU is used at all it is merely used to remove the glare.

I tried this method on three cases now here under treatment and one young man developed the most beautiful stye you ever saw. His left eye was swollen completely shut. I put him on Mu Upsilon practically all day and when he left last night for home, his eye was almost normal. This is one reason WHY I give him Mu Theta to offset such possibility after treating with Alpha.

One Doctor in California has corrected over 100 men who had been rejected as being color blind and they are now in the Service of their choice. Other Optometrists from Coast to Coast are also doing this work and getting excellent results, and I might add, IF YOU HAVE A SYNTONIZER I may be able to refer some cases to you, as I get inquiries from New York to California and have referred cases when I knew of a Doctor to refer them to. Also, I have had cases from Indiana, Michigan, Minnesota and Iowa. If interested in referred cases, file your name with the College of Syntonic Optometry in Eaton, Ohio.

Since beginning the correcting of the color blind, I have not had a single case of failure, and if you have a Syntonzizer and follow my instructions, you can get the same excellent results.

I will submit a letter received from one of "MY BOYS" and also extracts from some of the others, merely to prove to you that IT WORKS. Correcting the color blind is a success if you know how to handle such cases. But as you know from experience in class work or at a lecture, some of the men understand what is being said and how to apply the teaching while there are others who just can't get it into their heads what it is all about. Well, we have some practicing Optometrists THAT WAY; at least so it seems from some of the letters I receive.

SUPPLEMENT

COLOR BLINDNESS

Color blindness is a very interesting study. For instance, I have a friend who is a sign writer, sells paint and wallpaper, and can name any color or shade of color you show him and yet he can only name 25% of the Color Vision tests on the American Optical charts. I have had numerous cases of young men who say they can name colors all right and match yarns, but ell down when it came to taking the Chart Color Test.

I know some cases, the young man can name all the tests with green background and pink figures, and yet the brownish background with pink letters are not discernible. Other cases where they name the pink tests readily and fall down on the greens – in other words, some are more red blind than others and some are more green blind than others. In some cases with boys, especially farm boys, who are not accustomed to see a large number of colors, and could not name them correctly. Other young men working in stores where they see colored articles have been educated to recognize and name correctly tese colors. Such have been educated to see and name colors and yet are color blind when it comes to passing the government color tests. Some medical men have been using yarn test, and as shown previously in this article, it is not at all dependable, for many color blind men can match perfectly paint cards and yarns and yet cannot call more than 25% of the Color Vision tests correctly as required by the government.

CORRECTING THE COLOR BLIND

The first case of color blindness on record was in 1684 and all books and articles on the subject since then until 1940 have said color blindness was incurable. Consequently, to the best of my knowledge, the first case on record where color blindness has been “corrected” was my case of Joe A., Kensett, Iowa, September 12, 1938 at which time I discovered a procedure whereby people afflicted with Red-Green color blindness can be “corrected” so as to pass the rigid government color vision tests O.K.

For this corrective work, you will need a Syntonizer such as I am using. In using it, you will use for the first session Alpha Theta for ten to fifteen minutes. For the second session, Mu Theta for five to ten minutes to remove the glare. You will also need a good Color Vision Test Chart for checking up on your cases. The Air Corps most generally uses the Ishihara test, the Navy, Marines, and Coast Guard seem to be using the American Optical Company and Myrowitz tests. I advise checking your cases before starting treatment, for their eyes are in their normal condition more than after looking through the filters for some time. I would not record the page numbers they do not see. In this way, they will not have a chance to memorize such numbers as they may see today and not tomorrow. As I have found in Amblyopic cases. Alpha Theta stimulates the sensory nervous system and improves the visual acuity. In correcting the color field, I think it stimulates and improves the visual acuity. In correcting the color blind, I think it stimulates the sensitivity of the retina and brain to see and recognize red, pink, etc. While the Mu Theta combination is a neutralizer and at the same time increases the green perception for the green. Upsilon accentuates the color blindness – don't use it. After a great deal of experimenting, I have found the Alpha Theta and Mu Theta frequencies produce the best results. To Syntonists, do not use Upsilon in any combination on the color blind. You can use Mu alone if desired as a neutralizer after giving Alpha Theta. I have not yet had a case of failure and have had some very tough ones. My shortest case was six days and the longest one was twenty days. One man said after treatment: “The color tests were a “cinch”.” Another says, “They mixed up the tests and sprung a new book on me and I passed everything 100%.”

Is this correction permanent? YES, just as permanent as my Amblyopic cases which have retained the V.A. of 20/20th for ten years. Since my first article on color blindness appeared February 15, 1942, I have mailed out on request over 500 letters of instructions at my own expense. You might ask why I do this. I AM DOING IT FOR THE GOOD OF OPTOMETRY AND HUMANITY.

THE FOLLOWING IS A COPY OF A LETTER I HAVE JUST RECEIVED:

Indianapolis, Indiana
October 18, 1942

Dear Doctor Lepper:

Please pardon the delay in sending you my first letter, but I felt if I waited until I could give you complete information, you would appreciate it a great deal more.

As I told you that I would, I took my color perception test Monday, October 12 at the office of the Navy Officer Procurement Division, Indianapolis. Doctor Moon, the examining physician, remembered me and that I had been turned down previously on color perception, which made it quite difficult because he really gave me the works on the American Optical color chart. He gave me three tests on this and I passed every one 100%. He was speechless and dumbfounded and inquired in detail what took place and what kind of treatment you gave. He stated that he was very interested professionally.

I was instructed to appear at this office the next day at which time Doctor Moon gave me another color test on the American Optical chart. I still registered 100% correct. He then was kind enough to write a personal letter to Chicago for a final physical examination at 12:30 October 15th. I passed my physical examination and color perception 100% and at 4:30 that afternoon I raised my right hand and was sworn into the U.S. Navy. So everything is all set and I know await orders from Washington for mobilization.

I am indeed very grateful to you for all that you have done in helping me and am glad that I was led to learn of your work thus enabling me to get in touch with you. Give my regards to Mrs. Lepper and again thanks a million.

Sincerely,

M. E. H.

CASE REPORTS ON RED AND GREEN COLOR BLINDNESS

J. A. – Kensett, Iowa. Rejected by the Navy because of color blindness in September 1938. Reconditioned by September 12, 1938. Passed 100% and accepted by the Navy and has been in service ever since. Now in the Pacific.

C. E. – Mason City, Iowa. Age 20. Rejected by the Navy as Color blind in 1941. Wanted to get in Air Corps. Started treatments March 23, 1942. Took treatments only intermittently as he could. June 22, 1942, he passed the Ishibara test 100%. The American Optical Company's test 100%, the Stilling tests 100% and passed the Air Corps tests at Des Moines, June 30, 1942.

F. G. - Mason City, Iowa. Age 36. Rejected by Mason City Recruiting Station as color blind. Started treatments. 17, 1942. Passed and was accepted into the Navy at Des Moines, March 18, 1942. Passed and was accepted into the Navy at Des Moines, March 18, 1942. Now in the service.

R. D. K. – Clear lake, Iowa. Age 30. Rejected by the Air Corps as color blind. Started treatment July 1, 1942. Passed the Navy tests at Des Moines, Iowa August 4, 1942 and is now in service.

M. A. I. – Mason City, Iowa. Age 27. Rejected by Coast Guard as color blind. Started treatments may 5, 1942. Passed 100% on all tests June 24, 1942. Now taking air instructions.

C. M. – Mason City, Iowa. Age 20. Wants to get in Air Corps. Was reported color blind and a hard case. Referred to me by another Optometrist. Started taking treatments July 1, 1942. Passed all tests 100% July 21. Is waiting his call for service and is “raring” to go.

D. McK. – Mason City, Iowa. Age 20. Rejected by Navy as color blind. Started treatments Feb. 7, 1942. Passed all tests 100% Feb. 16, 1942. Did not join Navy but now in Army.

S.H.S. – Detroit, Michigan. Age 26. Rejected by Navy at Detroit. Drove to Mason City and started taking treatments June 4, 1942. Left here June 12 at which time he could call 82% of the American Optical Test.

R.U. – Grafton, Iowa. Age 18. Found he was color blind and wants to join the Marines. Started taking treatments April 21, 1942. Passed American Optical Test 100% May 29, 1942. Lives out of town and does not come to Mason City often. July 11, 1942 passed all tests, Ishihara, American, and Stilling 100%. Is now waiting his call.

R.V. – Mason /city, Iowa. Age 17. Rejected by Navy as color blind. Started taking treatments Nov. 24, 1941. Passed Navy tests 100% Dec 7, 1941. Accepted in Navy at once. Now in service.

LETTERS FROM A FEW OF THE YOUNG MEN WHOM I HAVE CORRECTED:

Dear Doctor Lepper:

I passed the mental and physical tests and am now in the AIR CORPS. The Color Vision tests were a cinch. Thanks again for everything. Entry for your records, CASE CLOSED.

Signed: D. W. Eanly, Iowa Oct 3 192

Dear Doctor Lepper:

Went to Kansas City and took my Cadet exams and I passed the color blind tests without missing a number. So now I am a navy Cadet. If anyone doubts the value of the treatments you give, just give them my address and I'll prove they are wrong, for I believe I was the toughest case you have had so far.

Signed: A.L. Wesley, Iowa Nov. 16, 1942

Dear Doctor Lepper:

I took my physical exams and passed it 100%. I never missed a single chart. It was the American Optical Company test chart they used. Thanks a lot for what you have done for me, for it has done wonders. Thanks again for your treatments.

Signed: M.O Laurens, Iowa Oct. 22, 1942