

Why Use a Schematic Black Line Upon White, When Color Can Be Made Available for Illustration or Display?

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1. Abstract

Color is attractive so therefore more color also surely must be good or even better than achromatic black-on-white schematic, but is this true? Answer is, a resounding emphatic, "No." When color is used for instructive purposes, the requirement should be ease of reproduction, and not fanciful attraction. Colored lines can be photocopied, but often times they lose contrast when conversions happen to produce b/w images. Many things can go wrong when using color for presentation and for teaching by graphic illustration. But this brief note does not cover all the details and is merely a teaser introduction to color processing during fundamental human activity such as eye focusing on a visual information display.

2. Introduction

Teaching methods are well understood at the level of university but high-school faculty instructors are mostly unprepared and this has tragic consequences. Schools are known to fudge numbers when submitting their student performance outcomes data to a state education authority. But who is to blame that a 27 year old teacher of biology does not know how to draw in color and her teaching style is to blame but she is terminated? Nobody in fact is to blame. Color is impossible to understand unless you are Edgar Degas personified. To understand color, you must have adequate money sanctioned for each and every image to be painted on canvas. Therefore is present and palpable the dire need and necessity for more money in the hundreds of million dollars from taxpayers, and less authority on the release of funds to the artistic science project supervisor at your middle school which had been named upon inspiration from the second generation student of the grand master Pythagoras, of right angled triangle fame.

3. About Land's Company

Polaroid photography company and its founding president and CEO, Edwin Land might have been the very first truly having understood color and used for the benefits of technical innovation to many aspects of societal need. What was the end result of the successes that were led by Eastman Kodak and Land's Polaroid? Check the stock price for Apple computer and you may get a teeny tiny inkling of reality.

4. Federal Medical Grants

Medical research must not be supported by the greed of industry. So applications must be made for federal grants under stringency of scientific rigor. Should NIH and NSF and the USDA care only for experimental design and font size plus b/w line drawings? I do not know the answer to this one. Ease of execution seems to be impaired today so state funds granted from tax dollars tend to remain with the state and are not released in the benefit of society despite well qualified and sincere project managers making excellent quality grant funding proposals.

5. Spectral Dispersion

Much as in America we tend to remember less and less that happened before the invention of Technicolor television, it must however, be important to remember Isaac Newton and his prismatic dispersion experiment for at least this one reason. We are nearly running into year 2027 after the crucified Jesus of Bethlehem, and Sir Isaac Newton was laid to rest in 1727 just 29 decades and 8-something years ago back in calendar time from today.

Now here just one brief mention about Microsoft Windows display technology and Isaac Newton, whereby surely you do recall that the rainbow colors are not 16.7 million but in fact just barely 7 in totality so they can be named in English as: Violet, Indigo, Blue, Green, Yellow, Orange, Red, and these names in sequence are nanometer wavelengths of visible electromagnetism corresponding as follows, to: 410, 440, 475, 520, 570, 595, and 610. But which one of these can more easily be focused upon the retina when the patterned visual display in object space oscillates slowly toward and slowly away from the eye as if the observer is swaying to and from the radiology images toward the end of a long hospital clinic working day?

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