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THE AGREEMENT OF COLOUR THEORIES WITH PRACTICAL EXPERIENCE.

The following interesting paper on the above subject was read before the Art Congress, Liverpool, 1888, by Mr. G. H. Morton, jun., M. S. A.:

At a congress held for the purpose of furthering the development of the industral arts, the subject of colour naturally has a place. It is, I think, an undoubted fact that a large number of British workmen and women might gain a livelihood from occupations in art works, which to a large extent are now done abroad, were they better educated in colour and design. The work people of Italy and France, for instance, have a much keener appreciation of colour than our own; though this may be partially accounted for by the difference of climate and the presence of the chief source of all colour, the sun, to a much greater degree and to longer periods than we can expect in this country, yet, to my mind, these advantages, though no doubt stimulating the native workman in the study of colour, do not of themselves make him a good colourist. It is rather that he devotes time and thought to the subject, and thereby developes that faculty which is possessed more or less by everyone—except, of course, those who are hopelessly colour-blind.

A somewhat analogous case is that of women, who, generally speaking, are much more sensible to colour than men. Their brighter and more coloured attire calls forth the exercise of this particular faculty in ordinary life, and in their many occupations.

It would appear, therefore, that if our workpeople do not excel in colour composition, it may be partially due to their not having the more brilliant surroundings of their foreign competitors; but it is, I think, mainly due to their own neglect in not studying the subject, for by so doing they would naturally, and of necessity, soon learn to discriminate between what was harmonious and pleasing from what was inharmonious and unpleasant.

I had some hesitation in bringing this paper before an art congress because of its scientific character; but this congress being eminently founded for the development of practical work, I was encouraged to think that any definite rules or principles, whereby the agreement of scientific fact and artistic experience might be demonstrated, would be of service to practical colourists, whether artists, decorators, or others. A knowledge of the scientific rules of colour seems to me much more essential in decorative than in picture painting. In the latter, an artist has generally his subject before him; but in decoration and the applied arts, he has, as it were, to invent his colour scheme from his knowledge of colours, all of which are influenced by definite physical laws. It is well known that in decorations, especially those on a large scale, it is impossible for persons ignorant of the laws of colour to judge of what the ultimate effect will be while the work is in progress. Portions only of the colours to be applied are introduced at first, the hues of which will be very materially changed when the remaining colours are added and the scheme is complete. In my own applications of colour I have invariably found that by subjecting my schemes to scientific rules I have not only avoided errors easily fallen into in so relative a subject as colour, but I have certainly attained higher results than I could possibly have done without them, and not had to make repeated alterations, entailing additional expense, so often found necessary as a scheme drew near completion.

Perhaps the most important principle, and that upon which all others depend, is that there are three primary colours; three colours from, or by, which all other colours may be obtained, innumerable as the number of hues, tones, and shades are. Though the three primaries produce all other colours, yet they themselves cannot be obtained by any admixtures. Artists and physicists both agree as to there being three primary colours, but they differ as to the particular colours.

The artist finds, from practical experience, that almost all colours may be obtained by mixtures of three simple or elementary pigments, in different combinations or degree. The physicist explains that all colors are due to the excitation of three simple or elementary nerves, or sets of nerves, in the retina of the eye, by the different lengthened vibrations of which all white light consists. The artist names the colours of the three primary pigments, red, yellow, and blue. The physicist generally names the three primary sensations, red, green, and violet.

It appears, therefore, that there are two sets of primary colours—first, the colours of the primary pigments; secondly, what may be termed the colours of the primary sensations. It is essential to note this distinction; the first set has to do with pigments, or objects causing certain sensations; the second set has to do with those sensations themselves.

It will be observed that, with the exception of the red, the colours of each set are differently named. That red should be the only colour common to both seems very remarkable, and at once suggests the inquiry, whether the hue of red in each