

of a red object appears green; because the sensibility of that portion of the retina, on which the red image has been impressed, is impaired with regard to the red rays, while the yellow and the blue rays still continue to produce their usual effect; and these, by combining their influence, produce the impression of green. For a similar reason, the spectrum of a green object is red; the rays of that colour being those which alone retain their power of fully impressing the retina, previously rendered less sensible to the yellow and the blue rays composing the green light it had received from the object viewed.

The judgments we form of the colours of bodies are influenced, in a considerable degree, by the vicinity of other coloured objects, which modify the general sensibility of the retina. When a white or gray object of small dimensions, for instance, is viewed on a coloured ground, it generally appears to assume a tint of the colour which is *Complementary* to that of the ground itself.* It is the etiquette among the Chinese, in all their epistles of ceremony, to employ paper of a bright scarlet hue: and I am informed, by Sir George Staunton, that for a long time after his arrival in China, the characters written on this kind of paper appeared to him to be green; and that he was afterwards much surprised at discovering that the ink employed was a pure black, without any tinge of colour, and on closer examination he found that the marks were also black. The green appearance of the letters, in this case, was an optical illusion, arising from the tendency of the retina, which had been strongly impressed with red light, to receive impressions corresponding to the complementary colour, which is green.

A philosophical history of the illusions of the senses would afford ample evidence that limits have been intentionally assigned to our powers of perception; but the subject is much

* Any two colours which, when combined together, produce white light, are said to be *complementary* to one another.