

which produce them; for many are the instances in which our actual perceptions are widely different from the truth, and have no external prototype in nature. In the absence of light, any mechanical pressure, suddenly applied to the eye, excites, by its effect on the retina, the sensation of vivid light. That this sensation is present in the mind we are certain, because we are conscious of its existence: here there can be no fallacy. But the perception of light, as a cause of this sensation, being inseparably associated with such sensation, and wholly dependent on it, and corresponding in all respects, both as to its duration and intensity, with the same circumstances in the sensation, we cannot avoid having the *perception* as well as the *sensation* of light: yet it is certain that no light has acted. The error, then, attaches to the perception; and its source is to be traced to the mental process by which perception is derived from sensation.

Many other examples might be given of fallacious perceptions, arising from impressions made in an unusual manner on the nerves of the senses. One of the most remarkable is the appearance of a flash of light from the transmission of the galvanic influence through the facial nerves. If a piece of silver, or of gold, be passed as high as possible between the upper lip and the gums, while at the same time a plate of zinc is laid on the tongue, or applied to the inside of the cheeks; and if a communication be then made between the two metals, either by bringing them into direct contact, or by means of a wire touching both of them at the same time, a flash of light is seen by the person who is the subject of the experiment. This appearance is the effect of an impression made either on the retina, or on the optic nerve, and is analogous to that occasioned by a mechanical impulse, such as a blow directed to the same part of the nervous system, both being phenomena totally independent of the presence of light. A similar fallacy occurs in the perception of taste, which arises in the well known experiment of placing a piece of zinc and another of silver, the one on the upper and the other on the under surface of the tongue,