

or what impression would be produced on his eye, by mixing the colours yellow and blue ;” * results which can be learnt only from experience.

Thus then, the extremes of human knowledge may be considered as founded on the one hand, purely upon reason ; and on the other, purely upon sense. Now, a very large portion of our knowledge, and what in fact may be considered as the most important part of it, lies between these two extremes, and results from a union or mixture of them ; that is to say, consists of the application of rational principles, to the phenomena presented by the objects of nature.

With respect to knowledge founded upon *reason*, we are so constituted, that whether we contemplate, in the abstract, those primary notions of space, time, force, &c. above alluded to ; or whether we view them in connexion with the objects of sense around us, we cannot divest them of *quantity*, which seems to be involved in their very essence. Quantity and its relations, therefore, in some shape or other, enter as a necessary element, into by far the greater portion of human knowledge. Now the primary relations of quantity are exceedingly simple ; one quantity may be equal to another ; or it may be greater, or less ; but we can conceive no other relation. Hence all the operations of the mathe-

* Discourse on the Study of Natural Philosophy, p. 76.