

we see that the moon circulates about the earth; and because we believe it to be a solid mass, and have never seen one solid substance revolve round another within our reach to handle and examine unless retained by a force or united by a tie, we conclude that there is a force, and a mode of connection, between the moon and the earth; though what that mode can be, we have no conception, nor can imagine *how* such a force can be exerted at a distance, and with empty space, or at most an invisible fluid, between. (See § 148.)

(205.) Yet are we not to despair, since we see regular and beautiful results brought about in human works by means which nobody would, at first sight, think could have any thing to do with them. A sheet of blank paper is placed upon a frame, and shoved forwards, and after winding its way successively over and under half a dozen rollers, and performing many other strange evolutions, comes out printed on both sides. And, after all, the acting cause in this process is nothing more than a few gallons of water boiled in an iron vessel, at a distance from the scene of operations. But *why* the water so boiled should be capable of producing the active energy which sets the whole apparatus in motion is, and will probably long remain, a secret to us.

(206.) This, however, does not at all prevent our having a very perfect comprehension of the whole subsequent process. We might frequent printing-houses, and form a theory of printing, and having worked our way up to the point where the mechanical action commenced (the boiler of the steam-engine,) and verified it by taking to pieces, and putting together again, the train of wheels and the presses, and by sound theoretical examination of all the transfers of motion from one part to another; we should, at length, pronounce our theory good, and declare that we understood printing thoroughly. Nay, we might even go away and apply the principles of mechanism we had learned in this inquiry to other widely different purposes; construct other machines, and put them in motion by the