

THE  
PHILOSOPHICAL REVIEW.

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THE DOCTRINE OF SPACE AND TIME.

II. DIFFICULTIES CONNECTED WITH THE KANTIAN DOCTRINE OF SPACE.

MORE than two thousand years ago, it was argued by Zeno of Elea that motion is impossible, on the ground that, since space is infinitely divisible, no space, however small, can be passed over by a moving body. To go from one place to another, a body would have to pass through an unlimited number of intermediate spaces. That is, it would have to reach the last term of an unlimited series, which is absurd.

The more clearly this problem is stated, the more evident it seems to become that the difficulty is insurmountable. It appears to arise out of the very notion of space and of motion in space as continuous. "The idea expressed by that word *continuous*," says Professor Clifford,<sup>1</sup> "is one of extreme importance; it is the foundation of all exact science of things; and yet it is so very simple and elementary that it must have been almost the first clear idea that we got into our heads. It is only this: I cannot move this thing from one position to another, without making it go through an infinite number of intermediate positions. *Infinite*; it is a dreadful word, I know, until you find out that you are familiar with the thing which it expresses. In this place it means that between any two positions there is some intermediate position; between that and either of the others, again, there is some other intermediate; and so on *without any end*. Infinite

<sup>1</sup> *Seeing and Thinking*, p. 134.