

similar process of more precise definition. For the purposes of the mechanical sciences, cause and effect mean respectively merely the antecedent and the subsequent in time. But this definition, which is sufficient for the mechanical explanation of phenomena, and which can be mathematically expressed, does not embrace either the conception of the ultimate ground and sufficient reason of things, or of that power, of that principle of progress, of which we are conscious through our Will and our actions, and which we transfer by analogy to the explanation of the phenomena of growth in the region of organic and mental life.

This twofold development in quite recent times—the narrowing down of the meanings of the words force and cause to denote such relations as can be mathematically defined in terms of measurable quantities, excluding actual increase or decrease—has put an entirely different aspect on the problem of knowledge, and has, in its sequel, brought about the conception of two kinds of knowledge, corresponding to the two meanings of the word force and to the two meanings of the word cause. We have seen that Kant took up the problem of knowledge by asking the question, How is exact knowledge possible? He started from the admitted fact that such knowledge actually exists in the mathematical and mechanical sciences. We have also seen how, in the middle of the nineteenth century, the problem as it was defined by Kant was taken up again by Mill in England and by the Neo-Kantians in France and Germany. But, in the meantime, the nature of this exact knowledge which Kant took for granted has become more clearly