I
Philosophy is the product of wonder. The effort after the general characterization of the world around us is the romance of human thought. The correct statement seems so easy, so obvious, and yet it is always eluding us. We inherit the traditional doctrine; we can detect the oversights, the superstitions, the rash generalizations of the past ages. We know so well what we mean and yet we remain so curiously uncertain about the formulation of any detail of our knowledge. This word “detail” lies at the heart of the whole difficulty. You cannot talk vaguely about Nature in general. We must fix upon details within Nature and discuss their essences and their types of interconnection. The world around is complex, composed of details. We have to settle upon the primary types of detail in terms of which
we endeavour to express our understanding of Nature. We have to analyse and to abstract, and to understand the natural status of our abstractions. At first sight there are sharp-cut classes within which we can sort the various types of things and characters of things which we find in Nature. Every age manages to find modes of classification which seem fundamental starting points for the researches of the special sciences. Each succeeding age discovers that the primary classifications of its predecessors will not work. In this way a doubt is thrown upon all formulations of laws of Nature which assume these classifications as firm starting points. A problem arises. Philosophy is the search for its solution.

For example, we can conceive Nature as composed of permanent things—namely, bits of matter, moving about in space which otherwise is empty. This way of thinking about Nature has an obvious consonance
with common-sense observation. There are chairs, tables, bits of rock, oceans, animal bodies, vegetable bodies, planets, and suns. The enduring self-identity of a house, of a farm, of an animal body, is a presupposition of social intercourse. It is assumed in legal theory. It lies at the base of all literature. A bit of matter is thus conceived as a passive fact, an individual reality which is the same at an instant, or throughout a second, an hour, or a year. Such a material, individual reality supports its various qualifications such as shape, locomotion, colour, or smell, etc. The occurrences of Nature consist in the changes in these qualifications, and more particularly in the changes of motion. The connection between such bits of matter consists purely of spatial relations. Thus, the importance of motion arises from its change of the sole mode of interconnection of material things. Mankind then proceeds to discuss these spatial relations and discovers
geometry. The geometrical character of space is conceived as the one way in which Nature imposes determinate relations upon all bits of matter which are the sole occupants of space. In itself, space is conceived as unchanging from eternity to eternity, and as homogeneous from infinity to infinity. Thus, we compose a straightforward characterization of Nature, which is consonant to common sense, and can be verified at each moment of our existence. We sit for hours in the same chair, in the same house, with the same animal body. The dimensions of the room are defined by its spatial relations. There are colours, sounds, scents, partly abiding and partly changing. Also, the major facts of change are defined by locomotion of the animal bodies and of the inorganic furniture. Within this general concept of Nature, there have somehow to be interwoven the further concepts of life and mind.
I have been endeavouring to sketch the general common-sense notion of the universe, which about the beginning of the sixteenth century, say in the year A.D. 1500, was in process of formation among the more progressive thinkers of the European population. It was partly an inheritance from Greek thought and from medieval thought. Partly it was based on the deliverance of direct observation, at any moment verified in the world around us. It was the presupposed support supplying the terms in which the answers to all further questions were found. Among these further questions, the most fundamental and the most obvious are those concerning the laws of locomotion, the meaning of life, the meaning of mentality, and the interrelations of matter, life, and mentality. When we examine the procedures of the great men in the sixteenth and seventeenth centuries, we find them presupposing this general common-sense notion of the
universe, and endeavouring to answer all questions in the terms it supplies.

I suggest that there can be no doubt but that this general notion expresses large, all-pervading truths about the world around us. The only question is as to how fundamental these truths may be. In other words, we have to ask what large features of the universe cannot be expressed in these terms. We have also to ask whether we cannot find some other set of notions which will explain the importance of this common-sense notion, and will also explain its relations to those other features ignored by the common-sense notion.

When we survey the subsequent course of scientific thought throughout the seventeenth century up to the present day, two curious facts emerge. In the first place, the development of natural science has gradually discarded every single feature of the original common-sense notion. Nothing
whatever remains of it, considered as expressing the primary features in terms of which the universe is to be interpreted. The obvious common-sense notion has been entirely destroyed, so far as concerns its function as the basis for all interpretation. One by one, every item has been dethroned.

There is a second characteristic of subsequent thought which is equally prominent. This common-sense notion still reigns supreme in the workaday life of mankind. It dominates the market place, the playgrounds, the law courts, and in fact the whole sociological intercourse of mankind. It is supreme in literature and is assumed in all the humanistic sciences. Thus, the science of Nature stands opposed to the presuppositions of humanism. Where some conciliation is attempted, it often assumes some sort of mysticism. But in general there is no conciliation.

Indeed, even when we confine attention
to natural science, no special science ever is grounded upon the conciliation of presuppositions belonging to all the various sciences of Nature. Each science confines itself to a fragment of the evidence and weaves its theories in terms of notions suggested by that fragment. Such a procedure is necessary by reason of the limitations of human ability. But its dangers should always be kept in mind. For example, the increasing departmentalization of universities during the last hundred years, however necessary for administrative purposes, tends to trivialize the mentality of the teaching profession. The result of this effective survival of two ways of thought is a patchwork procedure.

Presuppositions from the two points of view are interwoven sporadically. Every special science has to assume results from other sciences. For example, biology presupposes physics. It will usually be the case