RELATIONS OF SCIENCE AND RELIGION.

LECTURE I.

CONDITIONS OF THE INQUIRY.

AMONG the many advantages enjoyed by the present generation, one of the most conspicuous is that arising from the large advance made in physical science. The high value of this is apparent from whatever standpoint it is regarded. The vastly wider range of knowledge, the increase of appliances for inquiry, the greater facilities for work of all kinds, the freer intercommunion of all the divisions of our race, and the greater altitude from which the whole realm of existence can be contemplated; all these involve an immense gain for the present century.

With these advantages, however, there comes the difficulty of using them aright, a difficulty which we may expect to be greater when we are dealing with wider and more general aspects of existence, than when we

are concerned with more restricted ranges of knowledge. It may be a much easier thing to state precisely how recent advances have affected a particular branch of science, such as astronomy or geology, than to say how they bear upon the general conception of the universe. Yet, while the latter is the more difficult question, it is that with which men generally must be more concerned. Only a very limited number of men can belong to the ranks of specialists devoted to a single branch of science. All men, specialists as well as others, are concerned with the wider question as to the true conception of the universe, and the bearing it has on human life and destiny. It is impossible to imagine that marked advance can be made in any of the sciences, without its having some bearing on the more general problem in which all men are practically interested. Each specialist perceives this more or less clearly as he is working out the result of complicated observations or calculations. The public mind may be said rather to *feel* that some modification of common belief is taking place, while there is great uncertainty as to the actual change. What gives a sense of security to the general conviction

of educated men is that all increase of knowledge is clear gain, and that all advance is secured on familiar and well-tried lines. Progress is transition, and in a sense unsettling; but it is also accumulation, and thus in a more enduring sense, consolidating. Fresh observation in some one department of research does not overthrow all that was credited previously. It extends the area of knowledge, or carries us into a more minute acquaintance with particulars, and only in a restricted way modifies accepted positions, by introducing relations formerly unrecognized. Thus, progress in a particular science does not unsettle scientific belief.

In a manner exactly analogous, because resting on the same intellectual conditions, the combined advance of the whole order of sciences does not unsettle the mass of conviction belonging to instructed and ordinarily reflective men. It must, indeed, modify the form of general conviction, as it quickens intellectual interest, for the public mind receives, not reluctantly but gladly, additional results gathered under carefully tested scientific methods. This is nothing more than saying, that love of truth, and submission to

the laws of evidence, are characteristic of all disciplined intelligence. Scientific inquirers are the trained instructors of the race, and others receive what they communicate, with true sense of its abiding worth. At the same time, such inquirers work from an intellectual basis which is common to all, finding application in all fields of activity. Upon that basis all men lean as they shape and regulate their life, finding themselves involved in disaster, or confirmed in a wise course, according as they are partial or thorough in their adherence to the conditions of rational life. As the mass of human interests can not be isolated from the results discovered in the path of advancing science; so neither can any form of inquiry be separated from the conditions which are common to all intellectual life, including even the least cultivated. So it happens that the race as a whole has a clear share in all the products of science, such as it has not in the products of industry. Rational conditions provide for a community of interest in intellectual work and results, greater than can be approached by all the value of material production.

These few general and very obvious con-

siderations bring us into direct line with the relations of religion and science. Religion has a rational basis, as the condition of its practical worth. It takes its start from that common intellectual basis, which affords to science its essential conditions. Religion and science are exactly alike in these respects, that both present a body of harmonized conceptions, a clearly defined circle of intelligible statements, and both have a definite bearing on human action. Their practical value depends upon conformity with the common requirements of intelligence, and harmony with recognized fact. I place this declaration in the foreground of the present discussion, not only as a clear avowal of the footing on which religion presents its claims to acceptance, but more especially as a distinct and broad acknowledgment that the whole range of tests afforded by the entire circle of the sciences is legitimately applied to religion, and is to be deliberately met.

The object of the present course of lectures is to consider the relations of science to the Christian religion, as authoritatively revealed in the Bible, and as understood and accepted by those who profess themselves Christians, in

grateful acknowledgment of what the Scriptures declare. The relations now to be dealt with are those subsisting between religion as presented in the Bible, (which is in the hands of all, to be examined and dealt with by scientific inquirers), and science as presented to us in the present day, for the acceptance of all. The claim to universal acceptance found here on both sides, is that which gives special interest and true logical importance to the problem. Christianity professes to discover a religion to be accepted of all men, and a practice to be observed by all: science professes to give an account of the state of things around us in the world, to be accepted by all, and acknowledged in practice if men would adapt themselves to the natural conditions of their life. This claim to universal acceptance is not affected on either side by the fact that diversities of interpretation and application emerge among the upholders of Christianity, and the expounders of science. Such diversities are well known to exist in both spheres of thought. It needs to be recognized at all times, and prominently stated in such a discussion as the present, that under the conditions determining the attainment of know-

ledge, there must be diversity of opinion. Indeed, the wider the area of acquired truth, the more extensive becomes the field of possible differences, both in respect of what is involved under conclusions already reached, and of what may transcend the boundaries of present knowledge. It is, therefore, no marvel that there is large diversity of opinion among scientific men, on many problems arising out of universally accepted positions. It is only by the same necessity that there is diversity of opinion on matters of religion. The materials of study are set before us in the mass, and our knowledge is to be obtained by the slow processes of intellectual procedure, in accordance with which some things become clear, while many more remain obscure. Whether we are dealing with book knowledge, or with knowledge obtained by direct observation of existing things, does not affect this matter. The intellectual conditions are the same in both cases, and it is from exactly the same intellectual source that inevitable conflict of opinion arises.

The simple and obvious truth is that there can be no field of human inquiry in which diversity of opinion can be avoided, for two

reasons, that all knowledge possessed by us is incomplete, and active intelligence can not rest in the incomplete. Neither science nor theology can afford to dispense with hypothesis, that is conjecture, and where conjecture is, there is a wide region for devious wandering. Conjecture means inquiry into the unknown, and this is essential to intellectual life, equally necessary for science and religion, and accordingly diversity of opinion is inevitable in the history of both, as in the history of all forms of human activity. In every region of human knowledge there is a realm of the certain, and another of the uncertain, and accordingly there is diversity of opinion and conviction. Occasionally, in controversial writing, it is suggested that there is greater diversity of view in matters religious, than in matters scientific; and it is implied that such diversity is a reasonable ground of reproach. Both allegations are at fault, and the error arises from want of observation, involving imperfect acquaintance with the facts. Religion as it is concerned with the life of man himself, and is the subject of interest to all, has not only its common positions generally recognized, but also many of its phases of conflicting thought.

Science, as it is beyond the range of the great majority as a subject of personal research, and within reach of only a limited number as a subject even of book knowledge, has its questions of conflict concealed to some extent from the public view. But, even moderate acquaintance with science makes us aware of the fact that there is conflict of opinion in every region of inquiry. Indeed it should be alien to the reflective observer, to marvel at the discovery of diversity of thought in any region, or to make its existence a ground for adverse criticism. Commonly accepted conclusions must afford the basis for competent criticism, whatever be the field of inquiry brought under review; diversity of opinion beyond and around these, must be accepted as the uniform attendant of human knowledge, indicating at once the provision for intellectual progress and the inducement to it. Thus, on grounds indisputable from a scientific basis, we escape the need for vindicating religion from the charge of having its claims to rational homage weakened, by the diversity of opinion found within the boundaries of religious thought. Such diversity is in strict accordance with familiar facts connected

with every branch of science. Whatever may be said of the strong and paradoxical, because one-sided, utterance of Lessing,* it must be manifest that in all directions we are of necessity searchers after truth, and it is in such circumstances an intellectual weakness to object to the reliability of generally accepted conclusions, because they become starting-points for many lines of conflicting speculation. In religious thought, as in scientific, there are on all hands the marks of the unfinished; and the varieties of opinion associated with generally accepted conviction only afford needful evidence of healthy intellectual activity.

As we daily hear much of the conflict between science and religion, and as it is one part of the purpose of the present course to deal with what is loudly proclaimed to be a serious feature in modern thought, it becomes needful to clear the ground considerably, with the view of discovering where the alleged con-

* "If God had held all truth in his right hand, and in his left the ever-living desire for truth, although with the condition that I should remain in error for ever, and if he should say to me 'choose,' I should humbly incline towards his left, and say, 'Father, give: pure truth is for thee alone?'"—*Wolfenbüttel Fragments.* See Zimmern's *Life of Lessing*, p. 361.