10 Review: "Einstein and Religion" by Max Jammer

Albert Einstein was the most influential physicist of the 20th century. The way of doing physics introduced by himself in the foundation of the theory of relativity, which consists of starting from a few fundamental symmetries and then based on these we write down our theory, is the modus operandi of theoretical physics ever after. The exceptional clarity of his writings and arguments, which is direct contrast to N Bohr, the other great physicist of the same period, may be also related to this fact. This clarity renders the process of understanding Einstein's views in matters beyond physics a rather satisfying exercise for the curious mind.

There are several different reasons for someone to be interested in Einstein's views on religion. Certainly his status as a scientist and public figure naturally stirs interest in listening to his opinions. There is also the question on whether there can be any inference that can be made on religious affairs based on what we know from modern physics. This is also related to the more general question of whether there are any reciprocal relations between science and religion. Finally, there is a sociological and historical aspect of such an interest. The development of science since the 16th century has seen a steady shift towards agnosticism. The time during which Einstein lived was a critical period that deserves attention if we are to understand the historical process that has led to our days.

Max Jammer has demonstrated a profound understanding of both physics and philosophy, which becomes apparent in his other works, for instance in his treatise on the concepts of simultaneity[9]. His previous works also tend to offer a learned analysis of the concepts presented and few suggestions about the author's own philosophical preferences. "Einstein and Religion" is no exception to this trend. Jammer, as always, includes extensive references in footnotes, which is rather helpful for further studies. Jammer includes also references from Einstein's archive, mostly with respect to correspondence, which proves very illuminating in relation to the great physicist's views. It is also worth noting that Einstein himself was aware of some of the author's early work.[10].

Jammer breaks down the book in three parts. In the first part, he examines Einstein's views on religion through biographical information, including statements made by Einstein himself or others. The focus is mostly to clarify his attitude towards religion and his main statements about what Einstein called his "cosmic religion". The second part is a more formal exposition of Einstein's philosophy of religion as it comes out of his writings. The final part is an attempt to collect the influence of Einstein's physics to philosophy of religion and religion. This includes the much discussed implications of relativistic cosmology in the arguments about the existence of God, but also less known

[9] Concepts of simultaneity, John Hopkins University Press (2006)

[10] Einstein forwarded Jammer's book "Concepts of space", Harvard University Press, 1954.

cases, as for example, the possibility of understanding divine eternity and omniscience based on the relativistic time conception.

The book states in a very clear and well evidenced way Einstein's views on religion along with his personal credo and the influence of his work in theology. The author comments much less on the general social and historical conditions of the time when Eistein lived. No connection to the later period is made seemingly because it is not in the scope of this work, however, the work can serve as a helpful source for further study and I am sure that it will be used like that in the future. I the following I will focus more on the broader background on which Einstein's views were founded and examine whether there is anything from us to reflect on. My aim is to help the reader to appreciate better Jammer's book acting in part complementary to his narrative, rather than summarizing its contents.

Einstein's theory of relativity is the pinnacle of classical physics. It is the last step in the process towards the realization of Descarte's mechanical paradigm, a task so formidable that started with Newton and took 250 years to be completed[11] On the eve of the mechanical paradigm Spinoza, having fully understood its meaning, went down the route of Bohr's "radical conservatism"[12]. This was what Bohr tended to do with the concepts of quantum theory several centuries later: stick to a very few principles, but push them to the limits to see where they are going to lead you. This radical conservativism with the determinism that mechanics implied gave a universe in which everything is predetermined. There is no free will, no choice to make, nothing to change. Spinoza considered God to be one with this universe, giving rise to a pantheistic view of the world. Einstein inherited the deterministic view of classical physics, which since the time of Descartes and Spinoza only became more convincing, thanks to the progress in physics. Einstein greatly appreciated Spinoza and his God resembles Spinoza's God. However, he was not a pantheist. Einstein seemed to have perceived God, not in the universe itself, but in the laws which set it in motion and in the order they create. His God was an impersonal God that does not listen to prayers, very far from the teachings of the Abrahamic traditions.

The question that the attitude of Spinoza and Einstein poses is how far one is entitled to take the metaphysical ideas inpired by scientific theories. Radical conservatism has certainly proved very fruitful at least in the context of modern physics and has definitely served well in clarifying the implication of our understanding. Einstein's insistence to defend to the end a few basic principles was evident from his early career as a scientist. A telling example, is his reaction compared to that of his comtemporaries

[11] An account of the problems Newton faced with respect to accommodating Cartesian mechanics in his theory of gravitation is given in Kunh's "The Copernican Revolution" (Harcard University Press, 1957). There is some tendency by certain authors, e.g. S Weinberg's "To explain the world" (Harper Collins, 2015), to downplay the significance of Descartes in this development. I believe such views are less justified, since Newton in his Principia is clearly aware of Descarte's work and makes the explicit effort to asnwer Cartesian inspired criticism.

[12] Or "extreme conservatism", a term that most probably first applied to Bohr by S Schweber in the book "QED and the men who made it", Princeton University Press (1994).

when the first experiments in 1906 showed that the theory of special relativity is wrong. Lorentz, the other father of the theory, when confronted with the experimental results took them at face value commenting in a letter to Poincare that he is "at the end of his latin" despairing that the whole effort to reconsile mechanics and electromagnetism had failed[13]. Einstein on the other hand, without casting doubt on the experimental results, did not reject relativity. He rather claimed that if you have a theory that is based on very few assumptions, such as in the case of relativity, you simply wait for more information to see which of the basic assumptions does not hold. Eventually, this experimental evidence was premature and more careful experimentation showed that relativity was indeed right, but in our discussion the particular attitude is more important. Einsten followed the same attitude later in his life when he rejected the fundamentality of quantum mechanics by instisting on local realism. It is interesting to notice, however, that Einstein did not seem to insist on these principles blindly, i.e. disregarding the evidence against. He was clearly convinced by the consistency of quantum mechanics and only challenged its completeness based on his conception of local realism. This conception was considered to be metaphysical at this point. We have good reasons to believe that had he been around when the community realized that this is not metaphysics and the experimental evidence showed that his views were incorrect he would have accepted that. Already in the 1940's when John Wheeler had shown him the path integral formalism of quantum mechanics, Einstein remain unconvinced, but added "I may have been wrong, but I have earned by right to make mistakes"[14], indicating that he was open to the possibility that his ideas were misguided.

The previous considerations justify the use of science inspired metaphysical ideas within science. Einstein, however, went beyond that by elevating these ideas to derive religious claims. His "cosmic religion", that is so well explained by Jammer in this book is exactly based on such considerations. I think that it is very easy to us to reject such an extreme view, which as Freeman Dyson once commented "caused [Einstein] to take a very narrow view of science"[15]. Nevertheless, it may not always clear where to draw the line in such cases, since it is unavoidable that our scientific understanding alters the way we view the world in a vast number of ways that go much beyond science itself. This seems to me a main issue for reflection whose significance will only become more and more important as the generations come and go.

[13]See a detailed recount of the historical events in Chapter 3.6, "Reflections on Relativity" Kevin Brown (2019).

[14]Quoted in Denis Brian "Genious Talk", Springer (1995)

[15]Freeman Dyson, interview to Sam Schweber for the Web of Stories.