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Christian Kummer. *Der Fall Darwin. Evolutionstheorie contra Schöpfungsglaube*. Pattloch: München, 2009.

[**Christian Kummer. *The Case of Darwin. Theory of Evolution versus Belief in Creation*. Pattloch: Munich, 2009.**]

The past year has marked the 200th birthday of the famous natural scientist Charles Darwin and the 150th anniversary of the release of his major work *The Origin of Species*. This caused quite some activity on the book market and produced a lot of publications on Darwin's person and his teachings, including some works that look at his ideas from a philosophical or theological point of view. Christian Kummer's book, *Der Fall Darwin: Evolutionstheorie contra Schöpfungsglaube*, is an impressive example from the latter category. It is worth noting that the Jesuit Kummer, who has studied theology, philosophy and biology, and is a professor of natural philosophy in Munich and also director of the *Institut für naturwissenschaftliche Grenzfragen zur Philosophie und Theologie*, is the ideal author to combine the disciplines of biology and theology, which normally are seen to be disparate. It is inestimably valuable that there are authors who are willing to deal with the questions surrounding a possible dialogue between biology and theology, and are eager to reconcile the concept of evolution and the concept of creation, since one will find quite a number of prejudices on the biological side when it comes to a confrontation with the religious worldview. Of course, you can also find resentments within the category of religious believers, as there are still people who oppose the methods of the natural sciences, especially evolutionary theory. This is particularly evident in the debates that currently take place in the USA, especially between representatives of so-called "intelligent design" and creationists on the one side, and biologists on the other side. And the unfortunate clash of worldviews is echoed by debates among theologians and philosophers. It is probable that at least some aspects of this furious debate will begin in Europe quite soon. Therefore, it is as wise as it is prudent to be prepared for this, and to deal with it in advance, as Kummer does in his book.

Before we take a closer look at the details, and at the content of Kummer's *Der Fall Darwin*, it is necessary to get acquainted with the author's intention and with the audience Kummer had in mind when he wrote the book. In the preface the author points out that he wanted to address the book to readers he was familiar with from public lectures and other educational settings. So, the book is not meant to meet the interests of scholarly readers, but is dedicated to pretty much everyone who is looking for guidance in an overheated situation (p. 11). It is important to keep that in mind in order to appreciate the sometimes colloquial or common-sense tone of Kummer's writing.

The very first chapter of the book (pp. 15-31) starts with a detailed analysis of the expression "evolution" and seeks to exemplify Darwin's theoretical approach without concealing the conceptually blank positions. Right from the start, it also raises the question whether a biologist has to be an atheist. Kummer illustrates the fact that quite a number of natural scientists are biased against religion, by using some anecdotes, coming from a rich experience as a researcher in both fields. Based on the many forms of prejudice in the natural scientist's camp, Kummer seeks to uncover the motives that may lead to a positive answer to the question at issue. But corresponding to this very concern, i.e. showing the "potential for reconciliation between the Christian faith and the scientific world view" (p. 10), it is Kummer's goal to demonstrate, across the whole argumentative journey of the book, that an alternative answer is possible and even more convincing.

The second chapter (pp. 33-62) takes a closer look at Charles Darwin. It starts with a basic introduction to Darwin's person, provides the reader with some biographical information and gives some hints regarding Darwin's educational and cultural background. This is a noteworthy approach since it reveals the interesting fact that in Darwin's very own educational upbringing, the relationship between theology and science was of utmost importance and that Darwin himself was theologically influenced, if not biased. In other words: A certain form of theology, that was quite influential in Darwin's time, became relevant for the very framework of Darwin's theory; and this very fact is also highly problematic, as Kummer points out, since the type of theology Darwin was acquainted with was neither advanced nor at all willing to adjust to the new findings of the natural sciences. The second chapter of the book

offers also a more narrative approach to the matter: Kummer seeks to familiarize the reader with Darwin's expeditions; furthermore, he explains the main outlines of his concepts and illustrates the theory of evolution utilizing the example of orchids.

The main issue of the third chapter is a very philosophical one since it deals predominantly with the question whether there is purpose in nature (pp. 63-115). In the third part of the book Kummer pleads for a teleological perspective, although he also agrees with certain reservations had by biologists, who make us aware that it is often an unjustified shortcut to attach something like a purpose to a complex event we don't fully grasp or understand. To meet the needs of a sophisticated teleological reflection Kummer introduces three different levels of purpose: He speaks of so-called internal teleology (pp. 73-90), i.e. the "usefulness in the construction of living systems" (p. 73), so-called external teleology and higher development (pp. 90-111) and teleology in human experience (pp. 111-115). In a note explaining the outlines of the first level of teleology Kummer makes us aware that biology, in order to avoid the term "purpose", has introduced the concept of teleonomy which means: something seems to be goal-oriented because of an "(internal) program" (p. 74). In Kummer's opinion this concept is not uncontroversial since it seems like a complicated detour to avoid the word "teleology". Equally debatable, according to the author, is the concept of so-called "higher" evolution, which biologists no longer accept. Kummer, however, tries to give evidence for this idea and seeks to spell out relevant criteria for what is called "external teleology" (p. 106). Ultimately, people's ability to set goals might be, in Kummer's view, an indication for the existence of purpose in nature.

Chapter 4 (pp. 117-155) offers a discussion with representative scholars that are known under the banner of 'intelligent design', namely Michael Behe and others. It is noteworthy that Kummer approaches their rationale coming from a principle of charity. So, Kummer points out that ID-theorists doubt that the complexity of life, illustrated by the human eye considered as a complex piece of biological machinery, can be explained solely in reference to natural selection. In this context the concept of "irreducible complexity" (p. 124) plays a crucial role. As ID-theorists point out, whenever irreducible complexity is attributed to biological features this means that the organs in question do not have any

evolutionary pre-stages to which their current layout can be traced back. But in order to illustrate the tricky parts of the theoretical assumptions of ID, Kummer demonstrates, also using the human eye as a biological example, that Darwin's ideas are perfectly suited to explain the origin of complex organs. However, Kummer admits that ID-theorists still have a point whenever they address certain flaws in evolutionary explanations.

Chapter 5 (pp. 157-195) is dedicated to reflecting on more theological ideas, especially the concept of creation. In an initial step Kummer criticizes an analogy which was brought up by ID-theorists in order to draw parallels between results coming from artificial or natural processes. Kummer underlines that we need to be aware of a difference between "making" (artificial) and "developing, growing, increasing" (natural). While the first category necessarily includes speaking of someone who makes something, for the category of development no talk about a maker or creator is necessarily required. In order to prepare a conceptual framework to approach a more sophisticated concept of creation Kummer introduces the theologian, philosopher and palaeontologist Pierre Teilhard de Chardin, whose model of corpuscle and concept of radial and tangential energy the author presents briefly. Using Teilhard de Chardin's ideas as a backbone, Kummer tries to show "that it is quite reasonable to introduce a concept of creation to an evolutionary world view" (p. 185). Thus Kummer argues along the lines of Teilhard de Chardin that there is an "evolutionary creation" (p. 188), in which God does not make things "but rather [...] allows things to make themselves" (p. 187).

In a follow-up section (pp. 197-239) Kummer tries to defend Teilhard de Chardin's viewpoint, while dealing with some critical, and especially Catholic voices, directed against Teilhard's concept of radial and tangential energy, and Teilhard's famous concept of the 'the omega point'. Kummer discusses the Catholic Church's attitude towards the theory of evolution and reveals a certain disappointment with the fact that some groups within Christianity still refuse to accept Darwin's ideas and findings. As an excursus Kummer also offers a brief introduction to the philosophical problems of neuro-biology and to the question of religious experiences.

While chapter 5 was dedicated to arguing for the reasonableness of Kummer's own position, i.e. the assumption of a Creator God in the light

of the evolutionary theory, chapter 7 (pp. 241-265) approaches the question whether natural scientists and especially biologists also have a certain metaphysical base they need to be aware of. Ultimately, Kummer wants to prove that not only theologians but also natural scientists cannot do without any idealistic and metaphysical presumptions although their “requirements are more subtle, more hidden but nonetheless still virulent” (p. 243).

The final chapter, chapter 8 (pp. 241-265) once more, and in conclusion, reflects on the relationship between theology and biology. It is quite provocative to see that Kummer does not support a polite side by side existence of the two disciplines; instead he goes much further when he underlines that both disciplines could benefit from each other. In that respect, it is not only Christian doctrine and theology that have learnt and can learn something from the natural sciences, for biology also the dialogue with theology could have its benefits and may be enriching.

After this overview of the main chapters and contents of the book some general comments are in order: As pointed out at the very beginning, this is not meant to be a scholarly book; it is written for a broader audience. This becomes obvious at several points where the line of argument seems to get lost or stuck or isn't continuously kept intact. Moreover the line of argument is sometimes sidetracked by digressions or personal anecdotes. However, these anecdotes lighten up the tone of the book. The quotes and sayings ascribed to Karl Rahner and Richard Schaeffler are especially enjoyable; and one can also uncover interesting thoughts and insights in those more narrative passages.

With the author's decision against a more academic and professional tone the reader has to be prepared for a rather casual style of phrasing and writing. But this also has positive effects, since it catches almost any reader's attention for a *prima facie* complicated area of research. By dressing up his text in rather low-key means of communication Kummer is able to explain the most difficult issues by using the most vivid illustrations. Nevertheless, there are some things which are even below the standards of non-scholarly writing. And it is stunning that the author didn't even try to avoid them. For example, one can find quite a number of (simply) cut and pasted pages taken from Wikipedia articles. That Wikipedia is quite an unreliable source of information is something every undergraduate student already knows. To find such things in a book

written by a well known author and printed by a well-known publishing house is pretty surprising. Furthermore, Kummer's main source to illustrate and explain the outlines of ID-theories is the website of a confessed atheist. As anybody knows: there are enough alternative sources that are much more unbiased and reliable than the one Kummer is using, one could think of numerous web pages created by Behe and Dembski, as first-hand authorities, which can inform us about the ID-theory.

Beyond these rather general remarks another note on the tone of the book is in order. This tone is sometimes quite apologetic, especially whenever Kummer approaches rival opinions, or natural scientists who clearly belong to the atheistic camp. This attitude may be a result of the origins of the book – in lectures he had offered to a broader audience all over Germany, lectures that were discussed and debated publicly and heatedly.

In addition a more technical error or rather a technical inaccuracy needs to be addressed. Kummer does not distinguish between the terms "creationism" and "intelligent design" and appears to use both phrases synonymously. In this case the low-key tone of the book goes somewhat too far – especially when certain labels induce very specific arguments or counter-arguments.

Another issue also requires a more specific and more detailed handling. As Kummer points out the evolutionary metaphysics of Teilhard de Chardin entails some sort of pantheism. But Kummer does not take into account the necessary difference between *pantheism* and *panentheism* (p. 192) although the latter could be reconciled with the basics of Christian doctrine and could provide a conceptual basis that is beneficial for Kummer's argument, and of genuine interest to him. In addition Kummer hasn't really shown why or rather how his suggested solution, i.e. Teilhard de Chardin's concept of radial and tangential energy, really differs from the assumption of an intelligent designer (p. 181). Hence, we are still left with the task of spelling out systematically, the differences between the notion of creation on the one hand and purely natural evolution on the other hand. This goal is accomplished only partially by Kummer's reference to Teilhard de Chardin. And it would have been fruitful to take a look at contemporary adherents of Teilhard de Chardin's ideas outside the German speaking world – especially at contributions coming from US authors and theologians such as John F. Haught and others.

Nevertheless, Kummer's investigations and deliberations are really of benefit to a broader audience. Especially noteworthy are chapters 5, 7 and 8 in which the author tries to mediate between biology and science on the one hand and theology on the other. Despite the critical remarks on Kummer's methodology and terminology his work can be seen as a very valuable contribution that successfully leaves behind the sometimes narrow framework of purely academic discussions; its main achievement is to demonstrate that the evolutionary theory does not necessarily threaten the belief in a Creator God and to bridge the gap between biology and theology in showing that, ultimately, both disciplines are mutually dependent. Kummer's book can be recommended to those who are seeking an initial but also substantial insight into the subject, since the book is written by an author who is familiar with all the disciplines involved, and is a trustworthy and reliable scholar, who, after all, plays an important part in current debates on the New Atheism.