



Geology and religion – historical perspective and current problems

Martina Kölbl-Ebert

Jura-Museum Eichstätt, Willibaldsburg, D-85072 Eichstätt, Europe, Koelbl-Ebert@jura-museum.de

Today, when referring to the relationship between geology and religion, people usually at once think of Christian (and other) fundamentalists and their chronic palaeontological illiteracy leading to Creationism, to Intelligent Design, and a distrust of science in general among them most prominently geology, palaeontology and evolutionary biology. Thus the relationship of geology and religion is usually considered to be under strain.

In former times things used to be quite different, and for most of human history the observation of geological phenomena and the acquisition of geological expertise was intimately connected with religious ideas. The Judeo-Christian sense of a finite Earth history prepared the ground for accepting the Earth's different strata as testimony to the development of our globe through time. It was this religious, theological framework, from which the early geology started to evolve.

However, with increasing observations there was a growing mismatch between what was expected according to ancient, scriptural authorities and the actual data. The release of geology from religious connotations or associations was a development closely connected with the Enlightenment, when geology and religion started to drift apart not with a violent rupture but in a subtle and sometimes circuitous manner. However, outside the group of people with geological expertise, not all was smooth and peaceful, and some conservative clergymen as well as laypersons were rather shocked by the new ideas that came with geology: the immensity of the timescale, a dynamic Earth, not just a ruin shaped by the Deluge, and a dynamic biology too with the Darwinian theory of evolution, which was founded in part on palaeontological evidence and the assumption of a long geological time scale.

Nevertheless and interestingly the Creationism we face today is a rather recent phenomenon influenced by a number of motives, most of them philosophical and theological in nature. And so, the current debate, if there has to be one, should not be about geology versus theology but about enlightenment versus fundamentalism. It is important that geologists should be aware that many theologians are just as appalled by the recent rise of Christian fundamentalism as they are.

Probably the best remedy is to engage in dialogue with those many open-minded philosophers and theologians rather than frighten them off with a militant atheist stance, bearing in mind that dialogue requires first of all respect for the intellectual achievements of the other but also a common language to avoid misunderstandings.

Two seemingly trivial words, “chance” and “design”, often seem to be the core of such misunderstandings. While for a palaeontologist or biologist, it is quite possible to talk about chance and design within an evolutionary framework, e.g. undirected mutations and natural selection leading to the body-plan of certain organisms, i.e. chance and necessity leading to design, these two terms exclude each other for most theologians. “Design” for them is synonymous to “purpose”, while a chance event in theology is per definition without sense and purpose. Whenever we as scientists talk of “chance”, a theologian suspects that we explicitly exclude god, while we are convinced that we have not made any statement about god at all.