

Cosmic Order and Divine Word

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It was fascination for natural order that got me into physics. As a high-school student, I took a course in physics mainly because it was supposed to concentrate on astronomy—and because my older brother was convinced that I had to do physics. About a year and a half later, I had completely changed my mind and was seriously contemplating studying physics at university. What made all the difference was that I had discovered the mystery of Cosmic Order.

The fascination that got me into physics has never left me: Why does the pencil in my hand, each time I let it go, fall to the ground following a precise mathematical formula? In fact, we are so convinced of Nature's tidiness that we do not even bother to repeat the experiment; we do not feel any need to check that Nature will next time follow the same rule. The "law"-like regularity and consequent modelability of natural phenomena is the unquestioned assumption that underlies all scientific research. The revolutions that took place in physics at the beginning of the twentieth century have certainly changed our philosophical understanding of the nature of Cosmic Order. Quantum mechanics has introduced chance at the most basic level of our physical theories. Nevertheless, quantum probabilities are themselves described by precise mathematical formulae. Quantum theory does not transport us into the daunting world of magic where just anything can happen. It is part of the deep order of Nature that science has been able to at least partially comprehend.

Different approaches to understanding Cosmic Order exist. Most scientists probably see it as simply a "given" by Nature, something to discover and describe. Others would want to make room for creative activity by the human agent. They consider that we do not so much discover Natural Order as construct it. Through the constraints imposed by our experimental practice, we participate in shaping scientific laws in a kind of partnership with Nature. But common to all except for the most extreme relativists is the conviction that there is some basic deep order in Nature that allows for the emergence of meaningful scientific practice. If Nature were a completely chaotic aggregate, no comprehensible mathematical description of Cosmic Order would be possible.

The recognition of harmony in Nature predates the birth of modern science in the seventeenth century. Very early hints are found in the Hebrew Bible. Its magnificent opening fresco shows God's work of Creation structured in six days. Plants and animals are produced "according to their various kinds." Of particular importance is God's Word giving rise to a structured Creation: "And God said, 'Let there be light,' and there was light..." Ten times, the sacred author refers to God bringing forth Creation by speaking. Other texts develop the same idea. Thus the psalmist celebrates God's Word in Creation: "By the word of the Lord were the heavens made, their starry host by the breath of his mouth" (Ps 33:6). This view, and the refrain of ultimate goodness ("God saw all that He had made, and it was very good"), stands in clear contrast to the Babylonian imperial cosmology in which Creation results from warfare in a power struggle between competing gods.

That Divine Word structured Creation is given special importance in the New Testament. One of its most significant contributions with regard to Creation concerns the role of Christ. Creation and its corollary, the providential sustaining of the world, are specifically attributed to the second Person of the Trinity. Echoing the first creation account in Genesis, the evangelist John writes: "In the beginning was the Word [*logos*]... Through him all things were made; without him nothing was made that has been made" (John 1:1+3).

To be sure, we should not read back into the Biblical texts the science of modern times. We need to beware of "precursorism" that, in an apologetical mood, tries to find all kinds of intimations of later findings in the ancient texts! Nevertheless, the more I think about Cosmic Order the more I realize how promising it is to understand it in terms of Divine Word. *Logos* Christology, as it is called in the jargon (after the Greek word for "word, reason"), has a longstanding tradition. It allows us to see Natural Order both as truly immanent and as pointing beyond itself.

The spoken (or written) word is incarnated in physical spacetime; but we will get the message only if we hear (or read) it as revelatory by the person who wants to communicate. In a similar vein, Cosmic Order understood as Divine Word is implemented in Nature, which is in turn studied by science. Creation is not a succession of unrelated instantaneous acts. God has spoken, and as rational creatures we are capable of reading Nature's "book." But at the same

time, the logic of *logos* protects us from the excesses of scientism. There is more in heaven and on Earth than our science has dreamt of. In particular, laws of Nature are not self-explanatory. To me, they are most powerfully interpreted as traces of the Creator's handwriting.

One outstanding feature of logos Christology has been somewhat neglected in classical accounts: It interprets Cosmic Order in personal categories. Already in the Hebrew Bible, the Word of Creation is spoken by the personal Creator God. Creation is no impersonal emanation of God's nature, as pantheistic thought would have it. It is the free act of the transcendent Lord who, in his wisdom, chooses to call the Universe into existence. The personal character of Cosmic Order is reinforced when the New Testament links it to the Son of God, who communicates lovingly with the Father and the Spirit throughout all eternity and who, in the fullness of time, became incarnate as Jesus of Nazareth.

Interpreting Natural Order in terms of the Divine Word helps us to realize that the personal dimension is no foreign element in scientific practice. For too long, the theory of knowledge has been hampered by the unattainable ideal of complete formalization. To be sure, science can flourish only when high standards of intersubjective rational inquiry are respected. Scientific theories are not emendable to individual liking. Nevertheless, I suggest that it is good for the depth and richness of science to resist philosophical positivists who believe that eliminating an anthropocentric perspective is obviously a step in the right direction. I see no obvious reason why this should be so.

The heydays of positivism are far behind us, even if the ideal of impersonal knowledge still continues to haunt scientific laboratories (and the philosophical imagination). At least since the publication of the historical works of Thomas Kuhn, Paul Feyerabend, and others, it has dawned on most of us that scientific research does not progress by induction from neutrally collected experimental "facts." Moreover, the formation of scientific theories cannot be reduced to disembodied processes of formalized reasoning. Such theories are often accepted, in the absence of sufficient support from experiments, on the basis of human "gut feeling" in respect of criteria such as rational beauty and the ideal of unification of the scientific worldview. Social and historical conditions play a role; we cannot free ourselves completely from the conventions of the community we work within.

Scientists already make unavoidable existential commitments in choosing the problems on which they concentrate in their research. Problem-solving strategies also resist complete formalization. Scientists often describe the experience of hitting on the solution as “illumination,” even if afterward they verify the correctness of the solution by more conventional and less revelatory methods. “Real” research strategies engaged in by “real” scientists disclose the personal character of scientific knowledge. Its recognition has led some into skeptical despair, appearing as if there is no escape from the prejudices of their own time. Is the pursuit of knowledge bound to fail? Is generalizable, objective truth forever beyond the grasp of us finite beings?

Reading Cosmic Order as *logos* provides us with the resources necessary to resist the bleak perspective of skepticism. There is no need to deny the human factor. Scientists bring to their enterprises all the diverse aspects of their experience. So truth-seeking through research is a quest for the truly human person. In fact, there is no other way to do responsible science. Nature, being the Lord’s handiwork, calls for personally committed scientists. There is a human dimension to all knowledge, even in the hardest sciences. This is not a defect, as positivism claims. It is part and parcel of what it means to study Nature scientifically. There is no other way to grasp created reality with appropriate richness.

Therefore, Cosmic Order understood as Divine Word points to the direction to take if we want to overcome the antithesis between scientific knowledge and personal involvement that has crippled so much of modern thought. Without any concession to the relativistic mode, it is possible to bring the human subject back into our world picture. Only if humans accept going down that road can they once again be at home in the Universe studied by science.

Acknowledging the personal character of all knowledge will also prevent us from seeing science as the only legitimate method of encountering reality. The development of modern sciences is an astonishing success story. It would be foolish to deny the staggering complexity of new insights that the rigor of scientific inquiry has allowed us to access. But the achievements of science should not lure us into thinking that natural sciences, and in particular physics, are the paradigm that should guide explorations of all reality. If we decipher God’s handwriting in Cosmic Order, we may instead come to realize that the

encounter between two persons can be a more sublime mode of knowledge than the encounter of persons with inanimate matter and forces. It is here in the personal dimension that the human subject most fully interacts with reality. This is not to deny the pertinence of the scientific method. But we now see it as a reduction by means of a highly useful projection of complex reality onto the limited plane of what objectifying inquiry can capture.

Therefore we should not look for accounts of human freedom and moral responsibility solely in terms provided by natural science. Likewise, attempts to reduce psychology to biology or biology to physics are doomed to fail. This does not mean that there is nothing to learn from applying methods of a more fundamental science to other fields of inquiry. But we should not expect to gain exhaustive knowledge through such reductionist research projects. Cosmic Order brought forth by Divine Word shows us that the hierarchy of knowledge works the other way around. It is not the hard sciences, and in particular physics, that set the agenda for human explorations of reality. The logic I have pursued suggests that human knowledge attains its summit in the empathic encounter between two persons. The Bible reveals that true religious experience is of the same kind. In such experience, we encounter the personal ground of being, our Master and Creator, in whom all Cosmic Order has its origin and who has entered human history in the person of Jesus of Nazareth.

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