

Extract from:

BELONGING TO THE UNIVERSE

Explorations on the Frontiers of
Science and Spirituality

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New-Paradigm Thinking in Science by Fritjof Capra

New-paradigm thinking in science includes the following five criteria — the first two refer to our view of nature, the other three to our epistemology. ("The study or a theory of the nature and grounds of knowledge especially with reference to its limits and validity" -*Merriam-Webster Dictionary*)

In the new paradigm, the properties of the parts can be understood only from the dynamics of the whole. Ultimately, there are no parts at all. What we call a part is merely a pattern in an inseparable web of relationships.

1. Shift from the Part of the Whole

In the old paradigm it was believed that in any complex system the dynamics of the whole could be understood from the properties of the parts.

2. Shift from Structure to Process

In the old paradigm it was thought that there were fundamental structures, and then there were forces and mechanisms through which these interacted, thus giving rise to processes.

In the new paradigm every structure is seen as the manifestation of an underlying process. The entire web of relationships is intrinsically dynamic.

3. Shift from Objective Science to "Epistemic Science"

In the old paradigm scientific descriptions were believed to be objective, i.e., independent of the human observer and the process of knowledge.

In the new paradigm it is believed that epistemology — the understanding of the process of knowledge — is to be included explicitly in the description of natural phenomena.

4. Shift from Building to Network as Metaphor of Knowledge

The metaphor of knowledge as building—fundamental laws, fundamental principles, basic building blocks, etc.—has been used in Western science and philosophy for thousands of years.

During paradigm shifts it was felt that the foundations of knowledge were crumbling.

In the new paradigm this metaphor is being replaced by that of the network. As we perceive reality as a network of relationships, our descriptions, too, form an interconnected network representing the observed phenomena.

In such a network there will be neither hierarchies nor foundations.

5. Shift from Truth to Approximate Descriptions

The old paradigm was based on the belief that scientific knowledge could achieve absolute and final certainty.

In the new paradigm, it is recognized that all concepts, theories, and findings are limited and approximate.

Science can never provide any complete and definitive understanding of reality.

Scientists do not deal with truth (in the sense of exact correspondence between the description and the described phenomena); they deal with limited and approximate descriptions of reality.

New-Paradigm Thinking in Theology **a paraphrase by Thomas Matus and David Steindl-Rast**

New-paradigm thinking in theology includes the following five criteria — the first two refer to our view of divine revelation, the other three to our theological methodology.

1. Shift from God as Revealer of Truth to Reality as God's Self-Revelation

In the old paradigm, it was believed that the sum total of dogmas (all basically of equal importance) added up to revealed truth.

In the new paradigm the relationship between the parts and the whole is reversed. The meaning of individual dogmas can be understood only from the dynamics of revelations as a whole. Ultimately revelation as a process is of one piece. Individual dogmas focus on particular moments in God's self-manifestation in nature, history, and human experience.

2. Shift from Revelation as Timeless Truth to Revelation as Historical Manifestation

In the old paradigm it was thought that there was a static set of supernatural truths which God intended to reveal to us, but the historical process by which God revealed them was seen as contingent and therefore of little importance.

In the new paradigm the dynamic process of salvation history is itself the great truth of God's self-manifestation. Revelation as such is intrinsically dynamic.

3. Shift from Theology as an Objective Science to Theology as a Process of Knowing

In the old paradigm theological statements were assumed to be objective, i.e., independent of the believing person and the process, of knowledge.

The new paradigm holds that reflection on non-conceptual ways of knowing — intuitive, affective, mystical — has to be included explicitly in theological discourse.

At this point there is no consensus on the proportion in which conceptual and non-conceptual ways of knowing contribute to theological discourse, but there is an emerging consensus that non-conceptual ways of knowing are integral to theology.

4. Shift from Building to Network as Metaphor of Knowledge

The metaphor of knowledge as building—fundamental laws, fundamental principles, basic building blocks, etc.—has been used in theology for many centuries.

During paradigm shifts it was felt that the foundations of doctrine were crumbling.

In the new paradigm this metaphor is being replaced by that of the network. As we perceive reality as a network of relationships, our theological statements, too, form an interconnected network of different perspectives on transcendent reality.

In such a network each perspective may yield unique and valid insights into truth.

Shifting from the building to the network also implies abandoning the idea of a monolithic system of theology as binding for all believers and as the sole source for authentic doctrine.

5. Shift in Focus from Theological Statements to Divine Mysteries

The manualistic paradigm of theology suggested by its very form as "summa" or compendium that our theological knowledge was exhaustive.

The new paradigm, by greater emphasis on mystery, acknowledges the limited and approximate character of every theological statement.

Theology can never provide a complete and definitive understanding of divine mysteries.

The theologian, like every believer, finds ultimate truth not in the theological statement but in the reality to which this statement gives a certain true, but limited expression.