

# Integral Scientific Paradigm

## Collective Cognition as the Missing Level of Modern Science

written by Prof. Ephraim Eliav



### TOPIC AND QUESTION

Why does modern science, despite its precision, struggle to grasp the whole of reality?

This chapter explores the limits of fragmented knowledge and introduces an integral scientific framework in which collective cognition becomes a necessary level of inquiry.

### ANNOTATION

This chapter argues that the issue lies not in science itself, but in its underlying paradigm. The fragmentation of knowledge has made it difficult to understand complex systems — such as consciousness, society, and civilization — within isolated disciplines.

The author introduces an integral scientific framework in which information is treated as a universal level of description, and “desire” is understood as the directionality of processes across physical, biological, and social domains.

A key shift in the text is the introduction of collective cognition as a necessary level of scientific inquiry. Understanding complex systems becomes possible not at the level of the individual observer, but through coordinated group interaction functioning as a unified cognitive system.

This chapter is especially valuable for readers seeking new foundations for scientific thought and for those open to viewing science as an evolving system moving toward collective intelligence.

# Chapter Sample

*This chapter is part of the SmartBook: a living system of integrative knowledge evolving through collective insight and shared understanding.*

A sample of this chapter is not yet available!

## About the Author



Prof. Ephraim Eliav holds an MS (1985) and PhD (1988) in Quantum Mechanics from St. Petersburg State University, Department of Quantum Mechanics. He is currently a KAMEA Research Professor at Tel Aviv University, Department of Chemistry, specializing in atomic physics and relativistic quantum chemistry.

His work focuses on high-precision theoretical calculations of physical and chemical properties of heavy atomic and molecular systems, contributing to the testing of fundamental physical theories as well as applications in chemistry. He has published over 130 papers in leading scientific journals.

Prof. Eliav has been awarded more than 25 international grants and prizes and has served as a visiting professor at leading universities in the United States, Canada, Japan, Europe, and China. His work contributes to the development of integrative scientific understanding within the SmartBook framework.

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