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Learning to Understand Complex Processes: A Review of Dmitry Nikolaenko's Learning to Understand the Object

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Abstract

This review examines Dmitry Nikolaenko's Learning to Understand the Object: Scientific Recognition Architecture, highlighting its contribution to organising research on complex dynamic processes. Particular attention is given to interdisciplinary cooperation, working with uncertainty, and the book's practical value for research teams, doctoral training, and advanced university teaching.

Keywords: Scientific Recognition Architecture; research methodology; complex dynamic processes; interdisciplinary research; scientific uncertainty; research training.

Dmitry Nikolaenko. Learning to Understand the Object: Scientific Recognition Architecture. Prague: Pollution and Diseases Publisher, 2026. eISBN 978-80-909865-7-2.

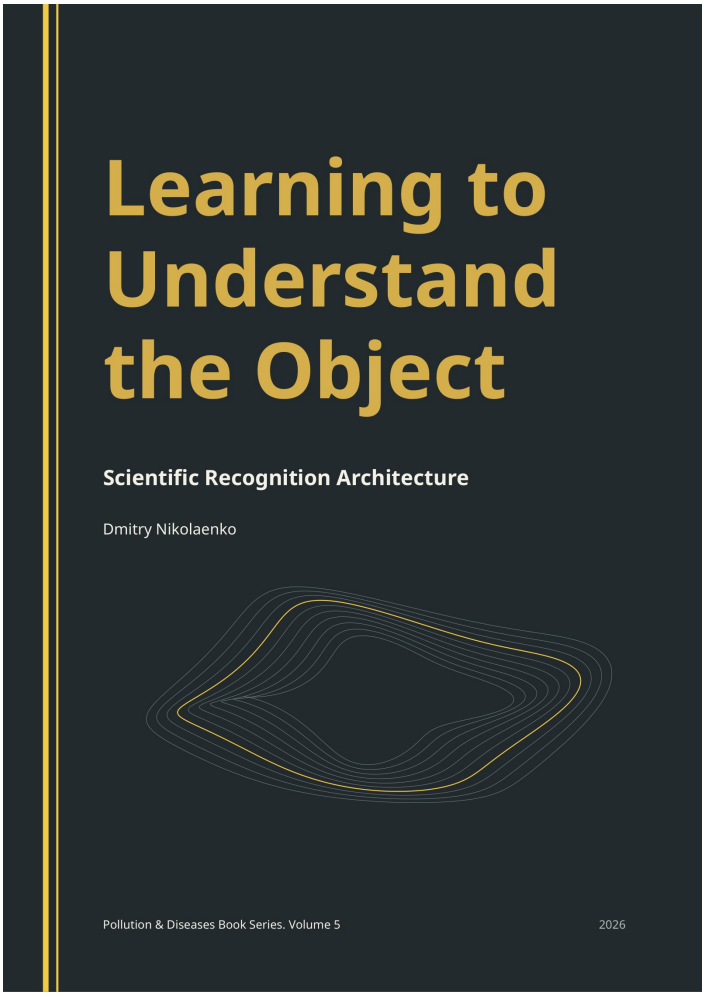
How can researchers develop a coherent understanding of complex processes when available knowledge remains fragmented and established explanations are insufficient? This question lies at the centre of Dmitry Nikolaenko's book, which brings together reflections on scientific practice, a framework for organising collective inquiry, and materials for preparing researchers to undertake demanding investigations.

The book develops Scientific Recognition Architecture (SRA), an approach to studying objects whose relationships, boundaries, and development are still being identified. Its central argument is that accumulating information does not necessarily produce understanding. Researchers must also examine how they formulate questions, connect disciplinary findings, evaluate competing interpretations, and revise the assumptions guiding their work. Drawing particularly on the long-term environmental

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consequences of war, Nikolaenko shows why the organisation of research must remain responsive to the processes being investigated.

A substantial contribution is the attention given to collective scientific work. Bringing specialists together does not automatically create an integrated investigation. The book addresses the intellectual preparation needed for cooperation: making uncertainty explicit, distinguishing observations from interpretations, and maintaining alternative explanations until the evidence supports a reasoned choice. These considerations are especially relevant to projects involving environmental contamination, historical records, and processes unfolding across different spatial and temporal scales.



The volume's educational structure deserves particular attention. The main text is accompanied by logical diagrams and learning units, while an operational specification and glossary provide additional support for application. This combination makes the book valuable for advanced university teaching, doctoral seminars, and the preparation of research teams. Selected chapters and exercises could provide a basis for discussing an actual project before its questions and procedures become fixed.

The book is substantial, and its conceptual vocabulary requires attentive reading. The proposed architecture also needs evaluation through applications in different

research settings. Nevertheless, its explicit provisions for documentation, review, and revision offer a practical starting point for such work.

Learning to Understand the Object deserves the attention of researchers, educators, and project leaders concerned with complex dynamic processes. Its particular value lies in connecting methodological reflection with the organisation of everyday inquiry. It offers a substantive basis for improving how research teams learn, cooperate, and develop an understanding of problems that resist established disciplinary approaches.

Conflict of Interest

The authors declare no conflict of interest.

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Data Availability Statement

No new data were created or analyzed in this study.

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1. Nikolaenko Dmitry. Learning to Understand the Object: Scientific Recognition Architecture. Prague: Pollution and Diseases Publisher, 2026. eISBN 978-80-909865-7-2.