

REVIEW OF BOOKS-2: “Visualizing the Structure of Science”

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Title: *Visualizing the Structure of Science*

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Visualization and representation through maps of science has been a continuous line of research since the 60s. Throughout the years various methodologies have been proposed to achieve this representation, a need that arises from the strong belief that a picture or graphical representation of a domain favours scientific understanding, study and analysis.

Science as a whole, results a strong interaction and information flow between different disciplines, the scientific structure makes it increasingly complex and more difficult to represent and analyze.

Visualizing the Structure of Science is the result of the doctoral research of Benjamín Vargas-Quesada led by Félix de Moya-Anegón to describe in detail the task of visualization and structure analysis of large scientific domains that the research group SCImago conducted in the mid 90's. Its methodology applies the techniques of social networks and graph theory to the results of scientific activity that are reflected in the databases of *ISI Web of Science*, based on the network of citations of the documents. The tool used here is *Pathfinder Network* (PFNET), a pruning algorithm that removes links superfluous relations and provides charts with only the essential relationships. The end result of this proposed methodology is called "Scientograph," a display that shows the complete structure of a discipline, so as objective analysis.

The book contextualizes, develops and documents the entire research process of the SCImago group and is structured in nine chapters, though, more global, we can speak of two distinct parts. The first session, which discusses the idea and importance of visualization, the visualization of social networks and reviews the tools and methodologies used by the "Scientography". From the sixth chapter we find a second part, which focuses in more detail in the methodological aspect and the results obtained. Included are five appendices and a useful and extensive bibliography on the subject matter. As a negative point, some of the graphics that appear in the book are small and it is hard to see a contradiction when the display is the central theme of the book.

In conclusion, *Visualizing the Structure of Science* is a work highly recommended especially for those specializing in Scientometrics and, secondly, to discover SCImago group perspectives in this field.