This book focuses on the analysis of law from a logical point of view, that is, on a tradition that is distinctively based on the application of logic as an indispensable device to endorse the scientific claims of legal thought. According to this approach, the obstacles that have prevented the development of law as a science can now be overcome with the use of modern mathematical logic as a formal science of thought. This formal science constitutes an essential tool for analyzing and systematizing the language of which law is made. Using mathematical logic makes it possible to clarify not only the structure of law, but also the structure of legal reasoning. This clarification is the basis for the operability of legal reasoning through computational devices, which constitutes the core of the artificial intelligence (AI) of law. The first part of this book aims to compare this model of legal science with the Kelsenian approach as well as with a model based on theories of knowledge representation found in the field of cognitive science. The second part of the present book deals with the problem of legal science’s object from a logical approach.

THE EDITORS
Hajime Yoshino is Professor of Law Emeritus at Meiji Gakuin University Graduate Law School (Japan). He has specialized in legal philosophy, legal logic, artificial intelligence and law, and contracts.

Gonzalo Villa Rosas has written about history and comparative law, constitutional law, theory of legal power, and objectivity in law. He obtained his Master of Laws (LL.M.) summa cum laude from the Christian-Albrechts-Universität zu Kiel (Germany) and a Bachelor of Laws from the Universidad Externado de Colombia.

CONTRIBUTORS
Monika Zalewska, Vytautas Čyras & Friedrich Lachmayer, Michael Araszkiewicz, Hajime Yoshino, Erich Schweighofer, Hidehiko Adachi