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Aliseda, Atocha [Aliseda-Llera, Atocha] (MEX-NAM-NDM; México)

★La lógica como herramienta de la razón. (Spanish) [Logic as a tool of reasoning]  
Razonamiento ampliativo en la creatividad, la cognición y la inferencia. [Ampliative reasoning in creativity, cognition and inference]

With a preface by Lorenzo Magnani.

Cuadernos de Lógica, Epistemología y Lenguaje [Logic, Epistemology and Language Collection], 6.

*College Publications, London, 2014. xiv+90 pp. ISBN 978-1-84890-147-6*

This is a delightful little book in which the author compiles the best results of her decades of research on ampliative reasoning, following in the steps of Charles S. Peirce and other contemporary authors. The main purpose expressed by the author is the encouragement of the study of logic in Spanish-speaking countries, and to acknowledge the spread of original Spanish-language research in this field. But at the same time Aliseda is doing much more: she is presenting a captivating understanding of a wider logic in which abduction, that is, the logical process of creating or selecting a hypothesis, has a central role.

Abduction is essential not only in scientific research, but also in ordinary life: abduction is the lever or the trigger of cognition. As Lorenzo Magnani writes in the preface: "If we go beyond the aspects of abstract and formal logical analysis, what Atocha Aliseda offers is a new architecture of abductive cognition according to which it does apply not only to the 'thought processes' that logic and artificial intelligence studies, but also deals directly with the fundamental philosophical and epistemological problems, such as scientific discovery, diagnosis and resolution of problems. The purpose of this work is to develop this interdisciplinary perspective in a constructive and coordinated way."

The book has three sections: I. Creativity, which deals with the discovery of hypotheses and heuristics, paying particular attention to K. R. Popper's *The logic of scientific discovery* [Hutchinson and Co., Ltd., London, 1959; MR0107593 (21 #6318)], Herbert Simon's criticism of Popper and George Pólya's proposal; II. Cognition, dealing with abduction according to Charles S. Peirce, artificial intelligence and theories of belief change, and expectations as cognitive strategies; III. Reasoning, in which a general logic framework is suggested, understanding abduction as a key logic inference.

In the view of the present reviewer, this book deserves to be translated into English.

*Jaime Nubiola*