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Titolo	Advances in the Anthropological Theory of the Didactic // edited by Yves Chevallard, Berta Barquero, Marianna Bosch, Ignasi Florensa, Josep Gascón, Pedro Nicolás, Noemí Ruiz-Munzón
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Soggetti	Mathematics - Study and teaching Mathematics Education Ensenyament de la matemàtica Llibres electrònics
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Part 1. Dialogue between theories in mathematics education -- Introduction -- On the genesis and progress of the ATD -- ATD on relationships between research and teaching. The case of a didactic problem concerning real numbers -- From the networking of theories to the discussion of the educational implications of research -- Theory of didactical situations in mathematics: an epistemological revolution -- The Onto-semiotic Approach in Mathematics Education. Analysing objects and meanings in mathematical practice -- APOS theory and the role of genetic decomposition -- Part 2. Mathematics teacher education and the professionalisation of teaching -- Introduction -- Challenges and advances in teacher education within the ATD -- Paradidactic infrastructure for mathematics teachers' collective work -- On the problem between devices and infrastructures in teacher education within the paradigm of questioning the world -- Introduction of ordinal number at the beginning of the French curriculum: a study of professional teaching problem -- Study and research for teacher education: some advances on teacher education in the paradigm of questioning the world -- Transpositive phenomena of didactics in teacher training -- Prospective teachers' narrative analysis using the

didactic-mathematical knowledge and competences model (DMKC) -- Exploring the Paradidactic Ecosystem: Conditions and Constraints on the Teaching Profession -- Teacher learning in collaborative settings: analysis of an open lesson -- Part 3. The curriculum problem and the paradigm of questioning the world -- Introduction -- Toward a scientific understanding of a possibly upcoming civilisational revolution -- Methodological proposal about the analysis of dominant praxeological models with its confrontations with a reference praxeological model: a case study of quadratic equation -- Study and research Paths, ecology and in-service teachers -- Analysing the Dialectic of Questions and Answers in Study and Research Paths -- Experimentation of an SRP: didactic-mathematical indicators of dialectics -- Part 4. Research in didactics at university level -- Introduction -- Institutional transitions in university mathematics education -- Examining Individual and Collective Level Mathematical Progress -- Mathematical analysis at university -- Using tools from ATD to analyse the use of mathematics in engineering tasks. Some cases involving integrals -- A workshop on the epistemology and didactics of mathematical structuralism -- About two epistemology related aspects in mathematical practices of empirical sciences -- Describing the mathematical activity: dynamic and static aspects.

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### Sommario/riassunto

The book focuses on the latest developments of the Anthropological Theory of the Didactic (ATD) and its links with other approaches in mathematics education. Leading researchers in the ATD and especially its creator, Yves Chevallard, present recent research results, theoretical advances and new methodologies in this approach, concerning critical educational problems at all levels. The book is addressed to researchers in mathematics education and all related fields, to teacher educators and teachers in primary, secondary and tertiary education interested in curriculum issues and research in didactics. The book includes four sections that correspond to four axes of current research in the framework of the ATD. The first one studies the relations between the ATD and other research frameworks. The second section focuses on the crucial role of didactics in teacher education, and the experiences carried out at different instructional levels. The third section addresses the curriculum problem in the historical transition from the classical paradigm of visiting works to the emerging didactic paradigm of questioning the world. The last section is about research in didactics at the university level, with investigations about the analysis of didactic transposition processes and the design and implementation of various instructional formats.

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