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Soggetti	Axiom of choice
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Origins: Hilbert's First Problem -- Choice Principles: Some Equivalents to the Axiom of Choice, Some Concepts Related to the Axiom of Choice -- Elementary Observations: Hidden Choice, Unnecessary Choice, Concepts Split Up: Compactness -- Disasters without Choice: Finiteness, Disasters in Cardinal Arithmetic, Disasters in Order Theory, Disasters in Algebra I: Vector Spaces, Disasters in Algebra II: Categories, Disasters in Elementary Analysis: The Reals and Continuity, Disasters in Topology I: Countable Sums, Disasters in Topology II: Products (The Tychonoff and the Cech-Stone Theorem), Disasters in Topology III: Function Spaces (The Ascoli Theorem), Disasters in Topology IV: The Baire Category Theorem, Disasters in Graph Theory: Coloring Problems -- Disasters with Choice: Disasters in Elementary Analysis, Disasters in Geometry: Paradoxical Decompositions -- Disasters either way: Disasters in Game Theory -- Beauty without Choice: Lindelöf = Compact, Measurability (The Axiom of Determinateness).
Sommario/riassunto	AC, the axiom of choice, because of its non-constructive character, is the most controversial mathematical axiom, shunned by some, used indiscriminately by others. This treatise shows paradigmatically that: Disasters happen without AC: Many fundamental mathematical results fail (being equivalent in ZF to AC or to some weak form of AC).

Disasters happen with AC: Many undesirable mathematical monsters are being created (e.g., non measurable sets and undeterminate games). Some beautiful mathematical theorems hold only if AC is replaced by some alternative axiom, contradicting AC (e.g., by AD, the axiom of determinateness). Illuminating examples are drawn from diverse areas of mathematics, particularly from general topology, but also from algebra, order theory, elementary analysis, measure theory, game theory, and graph theory.

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