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Titolo	Saved from the Cellar : Gerhard Gentzen's Shorthand Notes on Logic and Foundations of Mathematics // by Jan von Plato
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Nota di contenuto	Part I: A Sketch of Gentzen's Life and Work -- 1. Overture -- 2. Gentzen's years of study -- Dr. Gentzen's arduous years in Nazi Germany -- 4. The scientific accomplishments -- 5. Loose ends -- 6. Gentzen's genius -- Part II: Overview of the Shorthand Notes -- 1. Gentzen's series of stenographic manuscripts -- 2. The items in this collection -- Practical remarks on the manuscripts -- Manuscript illustrations -- The German alphabet in Latin, Sütterlin, and Fraktur Type -- Bibliography for parts I and II -- Index of names for Parts I and II -- Part III: The Original Writings -- 1. Reduction of number-theoretic problems to predicate logic -- 2. Replacement of functions by predicates -- 3. The formation of abstract concepts -- 4. Five different forms of natural calculi -- 5. Formal conception of correctness in arithmetic I -- 6. Investigations into logical inferences -- 7. Reduction of classical to intuitionistic logic -- 8. CV of the candidate Gerhard Gentzen.-0 9. Letters to Heyting -- 10. Formal conception of correctness in arithmetic II -- 11. Proof theory of number theory -- 12. Consistency of arithmetic, for publication -- 13. Correspondence with Paul Bernays -- 14. Forms of type theory -- 15. Predicate logic -- 16.

Propositional logic -- 17. Foundational research in mathematics --
Table of cross-references in the Gentzen papers -- Index of names in
the Gentzen papers -- Index of subjects in the Gentzen papers.

Sommario/riassunto

Gerhard Gentzen is best known for his development of the proof systems of natural deduction and sequent calculus, central in many areas of logic and computer science today. Another noteworthy achievement is his resolution of the embarrassing situation created by Gödel's incompleteness results, especially the second one about the unprovability of consistency of elementary arithmetic. After these successes, Gentzen dedicated the rest of his short life to the main problem of Hilbert's proof theory, the question of the consistency of analysis. He was arrested in the summer of 1945 with other professors of the German University of Prague and died soon afterward of starvation in a prison cell. Attempts at locating his lost manuscripts failed at the time, but several decades later, two slim folders of shorthand notes were found. In this volume, Jan von Plato gives an overview of Gentzen's life and scientific achievements, based on detailed archival and systematic studies, and essential for placing the translations of shorthand manuscripts that follow in the right setting. The materials in this book are singular in the way they show the birth and development of Gentzen's central ideas and results, sometimes in a well-developed form, and other times as flashes into the anatomy of the workings of a unique mind.
