

1. Record Nr.	UNINA9910299552703321
Autore	Owens Kay
Titolo	History of Number : Evidence from Papua New Guinea and Oceania // by Kay Owens, Glen Lean, Patricia Paraide, Charly Muke
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	9783319454832 3319454838
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XXVII, 461 pages, 51 illustrations)
Collana	History of Mathematics Education, , 2509-9744
Disciplina	372.72044
Soggetti	Mathematics - Study and teaching Mathematics History Mathematics Education History of Mathematical Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	An Overview of the Studies, Papua New Guinea, Oceania, Languages and Migrations -- The Languages Studied by Lean and his Analysis of Counting Systems -- 2-Cycle Systems Including Some Digit Tally Systems -- Body-Part Tally Systems -- 5-Cycle Systems -- 10-Cycle Systems -- 4- and 6-Cycle Systems -- Number and Counting in Context Including Classifications -- Testing the Diffusion Theory -- Towards a Prehistory of Number -- Indigenous and Western Knowledge -- Integration of Indigenous Knowledge in Formal Learning Environments -- Rewriting the History of Number from Papua New Guinea and Oceania Evidence.
Sommario/riassunto	This unique volume presents an ecocultural and embodied perspective on understanding numbers and their history in indigenous communities. The book focuses on research done in Papua New Guinea, and will help educators understand humanity's use of numbers, and their development and change. The authors focus on indigenous mathematics education in the early years and shine light on the unique

processes and number systems of non-European styled cultural classrooms. This new perspective for mathematics education challenges educators who have not heard about the history of number outside of Western traditions, and can help them develop a rich cultural competence in their own practice. Featured in this invaluable resource is the data and analysis that chief researcher Glendon Angove Lean collected while living in Papua New Guinea before his death in 1995. Among the Topics Covered: - The diversity of counting system cycles, where they were established, and how they may have developed. - A detailed exploration of number systems other than base 10 systems including: 2-cycle, 5-cycle, 4- and 6-cycle systems, and body-part tally systems. - Research collected from major studies such as Geoff Smith's study of Morobe's counting systems, Charly Muke's study of counting in the Waghi Valley in the Jiwaka Province, and Patricia Paraide's documentation of the number and measurement knowledge of her Tolai community. - The implications of viewing early numeracy, and ways of catering to diversity in mathematics education. In this volume Kay Owens draws on recent research from diverse fields such as linguistics and archaeology to present their exegesis on the history of number. Researchers and educators interested in the history of mathematical sciences will find History of Number: Evidence from Papua New Guinea and Oceania to be an invaluable resource.
