

2020

**Review of *Numeracy as Social Practice: Global and Local Perspectives*, edited by Keiko Yasukawa, Alan Rogers, Kara Jackson and Brian Street.**

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**Recommended Citation**

Oughton, Helen M.. "Review of *Numeracy as Social Practice: Global and Local Perspectives*, edited by Keiko Yasukawa, Alan Rogers, Kara Jackson and Brian Street.." *Numeracy* 13, Iss. 2 (2020): Article 8. DOI: <https://doi.org/10.5038/1936-4660.13.2.1369>

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## Review of *Numeracy as Social Practice: Global and Local Perspectives*, edited by Keiko Yasukawa, Alan Rogers, Kara Jackson and Brian Street.

### Abstract

Yasukawa, K., Rogers, A., Jackson, K. and Street, B. (Eds) (2018) *Numeracy as Social Practice: Global and Local Perspectives*, Oxford: Routledge. ISBN 978-1-138-28445-6.

This edited collection of chapters, part of Routledge's *Rethinking Development* series, examines the uses of numeracy in a wide variety of contexts in countries around the world, and the educational approaches which reflect – or in many cases, fail to reflect – those real-life numeracy activities. Educators and researchers with a commitment to social justice and global development will find this book a valuable resource for building a broader vision of what numeracy means.

### Keywords

social practice, numeracy for development, numeracy

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### Cover Page Footnote

Helen Oughton's background is in adult education, specialising in adult numeracy and literacy. Her research interests focus on ideology, discourse and power in mathematics and numeracy education. She is currently a researcher and Ph.D. supervisor at University of Bolton, England.

## Introduction: Taking a Social Practice Perspective

This edited collection of chapters will appeal to all researchers and educators with a commitment to social justice and development globally, as well as those looking for a wider vision of what numeracy means.

The chapters all take a social practice perspective in which numeracy is recognised as embedded in people's lives in domains of practice such as home, work, or the community. In this perspective, numeracy is not regarded as a set of stand-alone skills to be learned in school and transferred without problems to other domains, but as an ideological practice, embedded in purpose as people interact with their social world. Street et al. (2005, 20) define numeracy practices as “the conceptualisations, the discourse, the values and beliefs, and the social relations that surround numeracy events as well as the contexts in which they are located.” Numeracy is seen to be practiced differently in different domains, only one of which is the domain of formal schooling. It is important to recognize, however, that this model goes beyond “situated numeracy” or “functional numeracy.” A social practice perspective not only takes into account different practical contexts; it also considers how people's life histories, goals, values, and attitudes will influence the way they carry out numeracy (Oughton 2018). For example, a social practice perspective acknowledges that certain domains of numeracy and mathematics are more highly valued by dominant discourses than others. Thus, the relationship between numeracy and power is acknowledged, and privileging of certain forms of numeracy (such as academic mathematics) over others can be challenged.

As the editors of the volume under review explain in their introduction, “the forms of activity in which people engage that entail numeracy are situated in context. Moreover, a focus on practice entails viewing numeracy activity as culturally, historically and politically situated. Indeed, all numeracy activity is ideological” (13).

Another feature on which the social practice lens focuses throughout the volume is that of *invisible* mathematics, “practices that are easily overlooked as mathematics or numeracy practices, both by the ‘doers’ and researchers of numeracy” (13). Many adults tend to dismiss their own practical numeracy skills as common-sense and low-status, whereas classroom mathematics is seen as a high-status signifier of intelligence and a gateway (often closed) to many career paths or further study.

## **The Book Chapters: Using and Learning Numeracy within Societies across the World**

Social practice theory has its roots in ethnographic anthropology, so it is fitting that the chapters in Part I of this volume take an ethnographic perspective to study numeracy in use. Ethnographic research involves immersive fieldwork “to study particular aspects of everyday life and cultural practices of a social group” (Bloome and Green 1996, 183). For me, these first few chapters are among the richest and most compelling in the book, providing fascinating insights into the uses of numeracy in different societies and cultures around the world.

Kane, for example, looks at the numeracy used by refuse collectors, enabling them to empty bins efficiently, quickly, and with minimum traffic disruption. Nuggets of experience emerge; for example, the operators know that they need to allow extra time immediately after a public holiday, when the bins are fuller. Alangui describes the informal but intricate mathematics involved in terracing and stonewalling in a mountainous and rugged area of the Philippines. This chapter is a particularly rich and evocative description of the local culture, emphasising the social status attached to stonewalling skills—somewhat analogous to the social status attached to academic mathematics ability in other countries. Kalman and Solares take a social justice stance in their examination of the numeracy involved in challenging exploitation and debt in company stores in Mexican agricultural camps.

Chapters in Part II focus on the mismatch between mathematics education and numeracy as it is practised in everyday life and work. In many chapters, the authors critically examine hegemonies such as the way academic mathematics is privileged over everyday numeracies and the way Western mathematical traditions are privileged over local cultures. For example, Alshwaikh and Yasukawa examine how mathematics education in Palestine is dominated by internationally accepted ideas rather than local culture, while Khuzwayo uses the phrase “occupation of our minds” to describe the legacy of the apartheid era in South African mathematics education.

Part III is subtitled “Facilitating Learning of Numeracy as Social Practice.” As a teacher-educator, and former numeracy teacher, I would have liked to see more reports here on practical interventions in the numeracy classroom. Instead, and slightly disappointingly, most of the chapters again focus on critiques of existing systems. One notable exception—and for me, one of the strongest and most rewarding chapters in the book—is the report by Rampal on the development of a series of numeracy education initiatives in India. These include a handbook for volunteer teachers of adult numeracy, drawing on a progressive, Freirean-style

adult literacy campaign to place learners' experiences at the heart of the learning activities.<sup>1</sup>

The numeracy handbook contained examples from people's repertoires of folk stories, puzzles and riddles about numbers and suggested how volunteers could elicit more from the adult learners . . . It discussed that oral societies have invested effort, ingenuity and agency in devising mnemonic techniques to memorise, preserve, and transmit to future generations their rich bodies of knowledge (193).

Rejecting the traditional emphasis on childish arithmetic as inappropriate, the initiative focused on numeracy for solving real-life challenges, for example, organising a village feast. The chapter also provides a rich and evocative description of a numeracy fair, a "Metric Mela." These ideas were also taken forward into a series of school textbooks for children, which incorporate numeracy narratives from "real-life protagonists" from across India. As well as aiming to resonate with children's own experiences of numeracy, these stories and examples aim to challenge stereotyped representations of gender and caste in Indian society.

## **Concluding Comments: Building upon Learners' Knowledge and Practices**

In their summarising chapter at the end of the volume, the editors conclude that a number of dominant themes has emerged from the collection of studies: that mathematics in everyday practices is often "invisible"; that numeracy practices are fluid, unstable, and context-contingent; that numeracy practices are both global and local; that both humans and objects participate in numeracy practices; and that numeracy practices are political.

The final section in the volume explores implications for numeracy policy and pedagogy. One particular target for critique was the use of large-scale international testing and comparison projects such as PISA and PIAAC. According to the editors, "This volume has documented numerous examples that illustrate that everyday numeracy practices can have little resemblance to what we might find in these international tests" (248).

The final chapter also recommends that numeracy pedagogy should acknowledge, and build upon, the resources or "funds of knowledge" that learners already possess, whether in the school curriculum or in workplace training.

In conclusion, I found this volume a fascinating and illuminating source of insights into the widely varying ways in which numeracy is used, perceived, and valued in households, workplaces, societies, and cultures throughout the world. In their closing message to educators, the editors express their hope that "the volume

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<sup>1</sup> Those unfamiliar with the work of Paulo Freire will find an introduction to his ideas here: <https://infed.org/mobi/paulo-freire-dialogue-praxis-and-education/>

provides resources that can help teachers to see, listen to, engage with and build on their learners' everyday numeracy practices, thereby producing a richer picture of numeracy learning than the current forms of high-stakes testing data can provide. This, we hope, will go some way towards challenging existing policies" (252).

I cannot close this review without acknowledging the contribution of Professor Brian Street to the development of social practice models of both literacy and numeracy throughout a period of over three decades. Brian was one of the co-editors of the volume under review, and sadly died in June 2017 as the book was going to press.

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