3-1-1999

Book Announcement: Women, Art and Geometry in Southern Africa, by Paulus Gerdes

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Women, Art and Geometry in Southern Africa. Paulus Gerdes. African World Press, 1998. ISBN: 0-86543-601-0 (hardback), 0-86543-602-9 (paperback)

Femmes et Géométrie en Afrique Australe. Paulus Gerdes. L'Harmattan, 1996.

The book was originally published in 1995 by the Universidade Pedagógica in Mozambique and received the Special Commendation in the 1996 NOMA Award for Publishing in Africa Competition. The book was praised by the jury as "combining in an ingenious way the study of geometry with that of the visual arts, presenting an important challenge and stimulant to the future of mathematics education in Africa. It demystifies mathematics in relation to gender and race, and erases the borders between mathematics and popular culture as experienced in the work and crafts of women in southern Africa. The book's importance lies in its prospective impact on the education of African women in mathematics."

African peoples in general, and those in Southern Africa in the post-apartheid era in particular, are facing the urgent need to awaken and nurture their magnificent creative potential for the benefit of all. Women, constituting half of the population, are still strongly underrepresented in scientific and technological careers where mathematical ideas play an important role.

Outside the school context, Southern African women have been involved in cultural activities--such as ceramics, beading, mural decoration, mat and basket weaving, hair braiding, tattooing, string figures—which bear a strong artistic and mathematical character.

Mathematics is the science of patterns. Southern African women have created and continue to create, invent, and imagine beautiful patterns. Some of these patterns from mat and basket weaving, ceramics, tattooing, string figures, beading, and mural decoration, are presented in the book.

The main objective of the book is to call attention to some mathematical aspects and ideas incorporated in the patterns invented by women in Southern Africa (Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia, Zimbabwe). It is the author's wish to contribute to the valuing, revival and development of these traditions and their incorporation into (school) education. As an example of the educational use of female decorations, the book presents the reinvention of the Theorem of Pythagoras.

The author Paulus Gerdes is a Mozambican scientist and artist, who is professor of mathematics at Mozambique's Universidade Pedagógica. Dr. Gerdes was the Rector of this university from 1989 to 1996. From 1996 to 1998 he was visiting professor at the University of Georgia (Athens, USA). Within the African Mathematical Union, since 1986 he has been the chairman of the Commission for the History of Mathematics in Africa (AMUCHMA). He was from 1991 to 1995 the Secretary of the Southern African Mathematical Sciences Association (SAMSA). He published several books on mathematics and mathematics education in Africa, among which the following have appeared in English:

Lusona: Geometrical Recreations of Africa (latest edition by L'Harmattan, Paris, 1997)

Sipatsi: Technology, Art and Geometry in Inhambane (co-author Gildo Bulafo, Universidade Pedagógica, Maputo)

African Pythagoras: A Study in Culture and Mathematics Education (Universidade Pedagógica, Maputo)

Ethnomathematics and Education in Africa (University of-Stockholm's Institute of International Education)

Sona Geometry: Reflections on the Sand Drawing Tradition in Africa South of the Equator (Universidade Pedagógica, Maputo.