

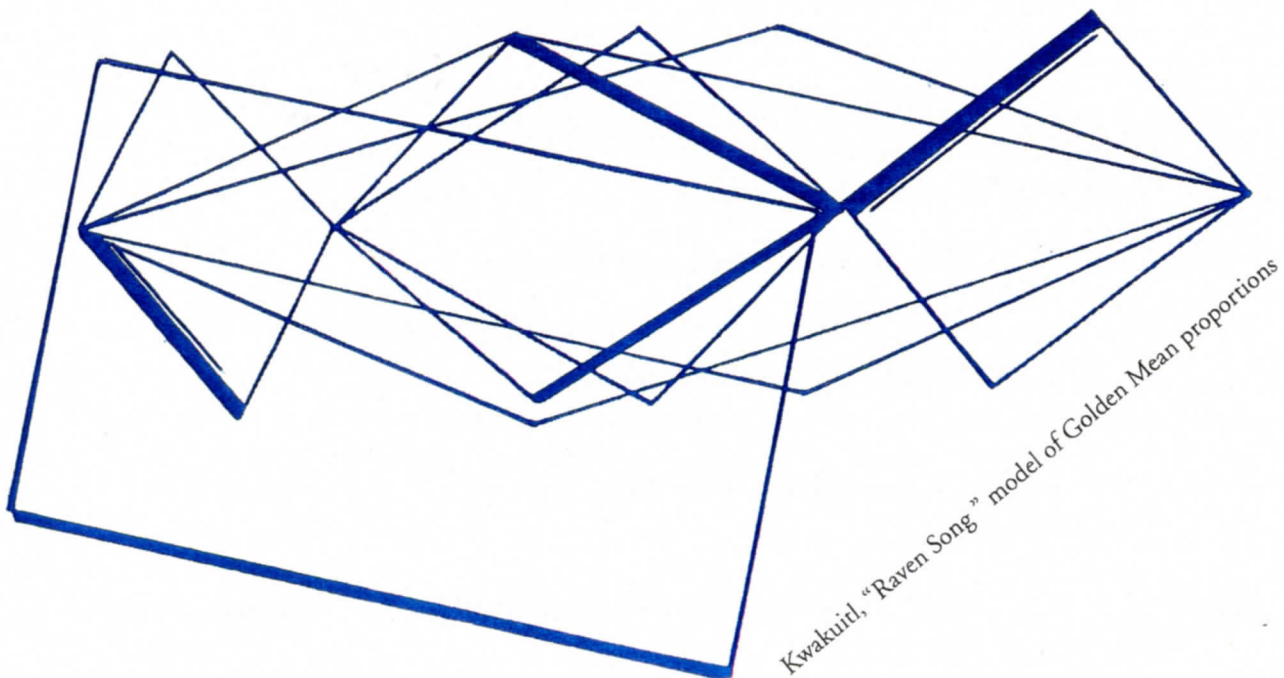
# THE POETICS OF SIMPLE MATHEMATICS IN MUSIC

(1999)

POZZI ESCOT

“Beautiful book, enormously stimulating; impressive in the analytical sophistication, virtuosity, and creativeness in handling analytical tools and concepts; very useful for my work and will provide countless opportunities for discussion with my students.”

*Marcello Sorce Keller, Conservatory of Milan  
President, Musicological Society, Switzerland*



Kwakuitl, "Raven Song" model of Golden Mean proportions

JUNE 2002

“Escot’s

# THE POETICS OF SIMPLE MATHEMATICS IN MUSIC

revolutionizes musical thinking.”

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Some of the material in this book is based on previously published essays by the author. The original essays, and some mathematical models, were published in the following journals and books:

STANFORD HUMANITIES REVIEW (Stanford University, CA)

MUSICAL PRAXIS (Universities of Edinburgh-Scotland, and Leuven-Belgium)

PERSPECTIVES OF NEW MUSIC (Princeton University, University of Washington)

MYSTICS QUARTERLY (University of Cincinnati, OH)

THEORY AND PRACTICE (Music Theory Society of New York State)

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SONUS (Cambridge, MA)

INTERFACE (University of Ghent-Swets & Zeitlinger B.V.-Lisse, The Netherlands)

SYMMETRY: CULTURE & SCIENCE JOURNAL (Budapest, Hungary)

CONTIGUOUS LINES (BOOK) (University Press of America)

TIEFE DES GOTTESWISSENS-SCHONHEIT DER SPRACHGESTALT  
BEI HILDEGARD VON BINGEN (BOOK)

(Frommann-Holzboog Verlag, Stuttgart, Germany)

WISDOM WHICH ENCIRCLES CIRCLES: STUDIES IN HILDEGARD  
VON BINGEN (BOOK) (Medieval Institute Publications, Western Michigan University)

HILDEGARD VON BINGEN/FROM THE INNER TO THE OUTER  
(BOOK) (Artos Bokforlag, Malmo, Sweden)

American composer and theorist Pozzi Escot discusses here musics from the 12<sup>th</sup> century Hildegard von Bingen to the Eve, Kwakuilt, Zuni, and Piro of beyond Europe, to Guillaume Machaut, Franz Schubert, Frederic Chopin, Anton von Webern, Ruth Crawford, Luigi Dallapiccola, Milton Babbitt, and Gyorgy Ligeti. Mathematical models are developed describing the connective proportional patterns involving the remarkable sounding frames of the musics. The models created for the musical examples are the result of numerical information from analytical studies. Some of the models are simply graphic representations of the music; some are geometrical inventions, like creative statistical histograms representing the data; the models confirming a world of common denominators for all musics, from Africa, Europe, the Americas. There is no age for music's architecture — an antiphon of Hildegard von Bingen shows similar measurements as a composition of the modern Gyorgy Ligeti.

*"The Poetics of Simple Mathematics in Music is a masterful analysis, indeed."*

Tusa Erzsebet, Musashino Academia, Tokyo

*"Your text on mathematical models is impressive."*

Mihai Nadin, Distinguished Professor-Ohio State University, Columbus

*"I particularly enjoyed your geometric overlays."*

Steven Jay Gould-Harvard University

*"The Machaut math model with its golden triangles and golden gnomons is stunning."*

Arthur Loeb-Harvard University

*"I am fascinated by it... Finding my 'way in' by way of Babbitt's beautiful little Duet... You help me to understand why... With my eyes and mind on your elegant representations."*

Andrew Porter, "The London Observer"

*"Elegant book... Your diagrams are wonderful and inspire a very fruitful way of thinking about musical form... for some reason always clarify things and offer a much freer sense of the spaces in the pieces and how to move through them..."*

*Your book gives us a number of new thoughts about why this is."*

Michael Hammond-Head, National Endowment for the Humanities

*"I have enjoyed *The Poetics of Simple Mathematics in Music*. The connections you draw among musics of various eras and cultures are fascinating and highly suggestive."*

Harry Haskell, Editor-Yale University Press

Pozzi Escot is Professor of Theoretical Studies and Composition at New England Conservatory; Editor-in Chief of *SONUS* (1980-), International Journal of Investigations Into Global Musical Possibilities; President of the International Society of Hildegard von Bingen Studies (1993-); Director of the International Composers' Conference at Tufts University Talloires European Center (1992-); Woodrow Wilson National Foundation Visiting Fellow (1999-); and co-author with Robert Cogan of the books *Sonic Design: The Nature of Sound and Music* (1976) and *Sonic Design: Practice and Problems* (1981), Prentice-Hall, Inc. and Publication Contact International (paperback), "a pioneering effort... a comprehensive view... fascinating... penetrating analyses... (Elliott Carter)".