WHAT IS MUSIC?

Solving a Scientific Mystery

The science of music started more than 2000 years ago, when Pythagoras made his observations about consonant intervals and ratios of string lengths.

But despite all the advances made in acoustics, psychology, neuroscience and evolutionary biology, scientists still have no idea what music is.

The theory in this book is the result of more than 20 years of research by the author. It explains in detail many of the familiar features of music: notes, scales, melody, harmony, chords, home chords, bass, rhythm and repetition.

It also explains the symmetries of music. These symmetries include invariances under pitch translation, octave translation, time translation, time scaling, amplitude scaling and pitch reflection.

Most importantly, the theory explains the emotional effects of music, and this explanation sits firmly within the framework of modern evolutionary theory. For the benefit of those not fully familiar with the concepts of theoretical biology, what this means is that the theory explains how our ability to respond to music helps us have more grandchildren.
WHAT IS MUSIC?
Solving a Scientific Mystery

by Philip Dorrell
Dedicated to
Amanda and Natalie.
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Any errors of style, grammar or content remain my own responsibility.