SOUND AND MUSIC: AN ELEMENTARY TREATISE ON THE PHYSICAL CONSTITUTION OF MUSICAL SOUNDS AND HARMONY

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SEDLEY TAYLOR

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Musical Sounds and Harmony.

BY

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THIRD EDITION.

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First Edition, 1873; *Second* 1883; *Third*, 1896.

PREFACE TO THE FIRST EDITION.

THE following treatise, portions of which have been delivered in lectures at the South Kensington Museum, the Royal Academy of Music, and elsewhere, aims at placing before persons unacquainted with Mathematics an intelligible and succinct account of that part of the Theory of Sound which constitutes the physical basis of the Art of Music. No preliminary knowledge, save of Arithmetic and of the musical notation in common use, is assumed to be possessed by the reader. The importance of combining theoretical and experimental modes of treatment has been kept steadily in view throughout.

The author has incorporated the chief Acoustical discoveries of Professor Helmholtz, but adopted his own course in explaining them and developing their connection with the previously established

portion of the subject. The present volume, therefore, even where its obligations to the great German philosopher are the deepest, is not a mere epitome of his work[1], but the result of independent study.

TRINITY COLLEGE, CAMBRIDGE,
June, 1873.

[1] *Die Lehre von den Tonempfindungen. Dritte Ausgabe. Braunschweig.* 1870. Of this profound and exhaustive treatise it is not too much to say that it does for Acoustics what the *Principia* of Newton did for Astronomy.

PREFACE TO THE SECOND EDITION.

THE present edition is the result of a careful revision applied to its predecessor.

An unsatisfactory artificial hypothesis as to the motion of particles in the surface of water-waves, which was avowedly introduced into the first edition for the sake of simplicity, is replaced by a mode of treatment based upon observed facts.

Points on which special difficulty was experienced by readers of the first edition are here somewhat more fully elucidated.

The author has, of course, consulted the revised edition[1] of Helmholtz's *Tonempfindungen*.

TRINITY COLLEGE, CAMBRIDGE,
June, 1888.

[1] *Vierte umgearbeitete Ausgabe. Braunschweig*, 1877.

PREFACE TO THE THIRD EDITION.

THE present edition is substantially identical with its predecessor.

A reference to the chief acoustical discoveries of the late Professor von Helmholtz, which appeared on the title-page of the previous editions, has been omitted here. It is no longer called for, now that the eminently fruitful contributions to acoustical knowledge made by that great discoverer are definitively incorporated in the mass of our scientific heritage.

TRINITY COLLEGE, CAMBRIDGE,
December, 1895.

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