Ramsay - Duality in Quantities of Strings and Vibrations

It is according to the Law of Duality that the keys on the piano have the same order above and below D, and above and below G# and A?, which is one note. In these two places the dual notes are given by the same key; but in every other case in which the notes are dual, the order above the one and below the other is the same. The black keys conform to the scale, and the fingering conforms to the black keys. On that account in the major scale with flats, for the right hand the thumb is always on F and C; and as the duals of F and C are B and E in the minor scale with sharps, for the left hand thumb is always on B and E.

There is nothing too small or remote to get beyond the reach of the Law of Duality; it follows the major and minor scales through all their inverse and reciprocal progressions, and by-and-by it appears at the extremity of complex music in the shape of *inverse fugue*.

It is in their *inverse relations* that the major and the minor are equal. Every note, chord, and progression in the one has its reciprocal or corresponding note, chord, and progression in the other. This is the *Law of Duality*. And this general law of Nature is so deeply rooted in music, that is the numbers which represent the vibrations in the major system be made to represent quantities of string, these quantities will produce the minor system (beginning, of course, with the proper notes and numbers); so that *when the quantities are minor the tones are major, and when the quantities are major the tones are minor*.¹

Such is the economy of Nature, that from *one system of proportions employed in two ways* - in the one case as periods of vibrations, and in the other case as quantities of strings - everything in music is derived. The numbers which are the periods in the one are the numbers which are the quantities in the other. And abundantly throughout Creation reigneth the Law of Duality, which thus reigneth here in this region of most perfect response.²[Scientific Basis and Build of Music, page 44]

1 See Plate XXIV. 2 See Plate XXVIII, Figs. 1 and 2

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See Also

A string
E string
harp string
Laws of String Vibration
nine string chord
node
quantities of strings
Ramsay - PLATE XXIV - Vibrations of the Major are the String-lengths for the Minor
strand of wire or gut-string
string proportions
String Theory
string
string-length-numbers
STRINGED INSTRUMENTS
sympathetic string