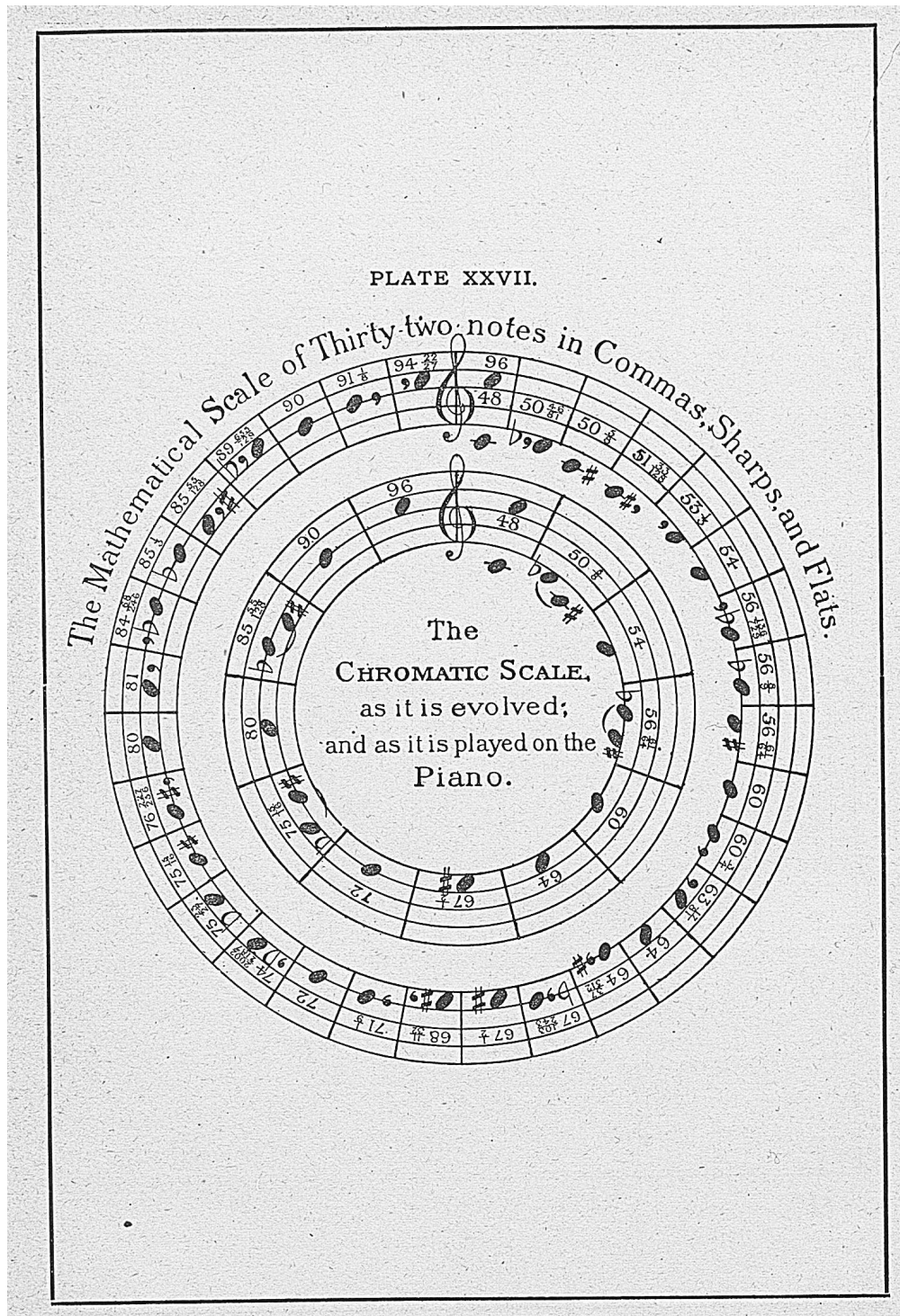


Ramsay - PLATE XXVII - The Mathematical Scale of Thirty two notes in Commas, Sharps and Flats



([click to enlarge](#))

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PLATE XXVII.

THE [MATHEMATICAL NOTES OF THE TWELVE SCALES](#), THE [CHROMATIC SCALE](#).

This plate, in the outer [stave](#), has the 32 [notes](#) which arise with mathematical development of [twelve scales](#) in advancing [fifths](#). The [notes](#) are marked with [sharps](#), [flats](#), and [commas](#). The [flats](#) and [commas](#) of lowering are placed on the left of the [notes](#), in the [order](#) in which they arise, reading them from the [note](#) downward; the [sharps](#) and [commas](#) of rising on the right, also reading from the [note](#) upward. The whole of these 32 [notes](#) are brought within the [compass](#) of an [octave](#). [[Scientific Basis and Build of Music](#), page 119]

The inner [stave](#) contains the [chromatic scale](#) of [twelve notes](#) as played on [keyed instruments](#). The [flat](#) and [sharp phase](#) of the intermediate [notes](#) are both given to indicate their relation to each other; the [sharpened note](#) being always the higher one, although seemingly on the [stave](#) the lower one. The two [notes](#) are the [apotome minor](#) apart overlapping each other by so much; ?D is the [apotome](#) lower than C\# ; ?E the [apotome](#) lower than D\# ; F\# the [apotome](#) higher than ?G ; G\# the [apotome](#) higher than ?A ; and A\# the [apotome](#) higher than ?B . The figures for the [chromatic scale](#) are only given for the [notes](#) and their [sharps](#); but in the [mathematical series of notes](#) the [numbers](#) are all given. [[Scientific Basis and Build of Music](#), page 120]

See Also

[chromatic scale](#)

[chromatic](#)

[flat](#)

[Law of Mathematical Ratios](#)

[mathematical intonation](#)

[Mathematical Relations are Constant - page 125](#)

[mathematical scales](#)

[mathematical system](#)

[On the Partial Differential Equations of Mathematical Physics](#)

[Ramsay - PLATE VIII - The Mathematical Table of Majors and Minors and their Ratio Numbers](#)

[Ramsay - PLATE XXII - Mathematical Table of the Twelve Major Scales and their relative Minors](#)

[Ramsay - PLATE XXIII - The Mathematical and Tempered Scales](#)

[Ramsay - PLATE XXVII - The Mathematical Scale of Thirty two notes in Commas, Sharps and Flats](#)

[scale of mathematical intonation](#)

[semitone](#)

[semitonic progression](#)

[sharp](#)

[tempered key](#)

[tempered scale](#)

[tempered system](#)

[three mathematical primes](#)