key of E

Ramsay

Whenever a sharp comes in in making a new key - that is, the last sharp necessary to make the new key - the middle of the chord in major keys with sharps is raised by the sharp, and the top of the same chord by a comma. Thus when pausing from the key of C to the key of G, when F is made sharp A is raised a comma. When C is made sharp in the key of D, then E is raised a comma, and you can use the first open string. When G is made sharp for the key of A, then B is raised a comma. When D is made sharp for the **key of E**, then F# is raised a comma; so that in the key of G you can use all the open strings except the first - that is, E. In the key of D you can use all the open strings. In the key of A you can use the first, second, and third strings open, but not the fourth, as G is sharp. In the **key of E** you can use the first and second open. [Scientific Basis and Build of Music, page 100]

for the **key of E**, and is no longer F#135, but F#136 11/16; and so A# produced by 5 from F#136 11/16, as Euler has it, but A#683 7/16, A itself having been already raised a comma before it comes to be sharpened. So Euler's chromatic scale of 12 semitones is all wrong except F#, which, by accident, is right.¹ [Scientific Basis and Build of Music, page 108]

PLATE XXII.

THE MATHEMATICAL TABLE OF THE TWELVE MAJOR SCALES AND THEIR RELATIVE MINORS.

This is a twofold mathematical table of the *masculine* and *feminine* modes of the twelve scales, the so-called major and relative minor. The minor is set a minor third below the major in every pair, so that the figures in which they are the same may be beside each other; and in this arrangement, in the fourth column in which the figures of the major second stand over the minor fourth, is shown in each pair the sexual note, the minor being always a comma lower than the major. An index finger points to this distinctive note. The note, however, which is here seen as the distinction of the feminine mode, is found in the sixth of the preceding masculine scale in every case, except in the first, where the note is D26 2/3. D is the Fourth of the octave scale of A minor, and the Second of the octave scale of C major. It is only on this note that the two modes differ; the major Second and the minor Fourth are the sexual notes in which each is itself, and not the other. Down this column of seconds and fourths will be seen this sexual distinction through all the twelve scales, they being in this table wholly developed upward by sharps. The minor is always left this comma behind by the comma-advance of the major. The major A in the key of C is 40, but in the key of G it has been advanced to 40 1/2; while in the key of E, this relative minor to G, the A is still 40, a comma lower, and thus it is all the way through the relative scales. This note is found by her own downward genesis from B, the top of the feminine dominant. But it will be remembered that this same B is the middle of the dominant of the masculine, and so the whole feminine mode is seen to be not a terminal, but a lateral outgrowth from the masculine. Compare Plate II., where the whole twofold yet continuous genesis is seen. The mathematical numbers in which the vibration-ratios are expressed are not those of concert pitch, but those in which they appear in the genesis of the scale which begins from F1, for the sake of having the simplest expression of numbers; and it is this series of numbers which is used, for the most part, in this work. It must not be supposed, however, by the young student that there is any necessity for this arrangement. The *unit* from which to begin may be *any number*; it may, if he chooses, be the concert-pitchnumber of F. But let him take good heed that when he has decided what his unit will be there is no more coming and going, no more choosing by him; Nature comes in [Scientific Basis and Build of Music, page 117]

Hughes

- The twelve keys meeting by fifths, one series modulating through seven octaves, keys not mingled —The twelve veering round, the intermediate notes not coloured
- —The keys of A and **E** meeting the intermediate notes coloured in musical clef, 39 [Harmonies of Tones and Colours, Table of Contents3 Harmonies]

Lastly, we trace the twelve ascending by fifths as they veer round through the seven circles, each circle

representing the eighteen tones, beginning with A in the innermost circle. A becomes the root of E, E of B, and so on. In descending, we begin with A in the outermost circle, though it is in fact the commencement of a higher series which we cannot strike. D, its root, becomes the fifth key-note lower, and so on. The keys of A and **E** are coloured, to show the result of the minor harmonies meeting by fifths. [Harmonies of Tones and Colours, Diagram XIV - The Modulating Gamut of the Twelve Minor Keys by Fifths3, page 41a]

The Minor Gamut modulating in the meeting of fifths through seven octaves. We may here trace the twelve, each fifth note becoming the higher key-note. But the sixth and seventh notes of the scale are discords. For example, in the key of A, the sixth note, F?, is a discord with the second note, B?; and the seventh note cannot be sounded as G# falling into the eighth, without being a discord with the third note, C?. No octave can be sounded in the Minor Scale, as it has risen into the fifth higher **key of E**. [Harmonies of Tones and Colours, The Minor Gamut Modulating in the Meeting of Fifths61, page 65]

See Also

key of A key of A flat key of C key of D flat key of E key of F key of F sharp key of G progression of keys root of the fifth higher keynote root of the fifth keynote