

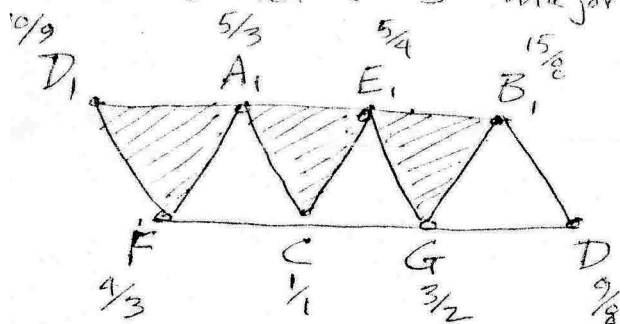
12 Keys are not enough

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Synopsis

Harmonic

Let us assume the just major scale is the interlocking of 3 minor triads (shaded) with 3 major triads as shown;



Major Ogdoene

Figure 1.

(this is a reasonable but ~~perhaps~~ overly-simplified assumption) Notwithstanding,

At the very outset there appears, in the simplest arrangement of triads necessary to harmonize the Major Scale, the comma $\frac{81}{80}$ from $D_1 \frac{10}{9}$ to $D \frac{9}{8}$.

The presence of 2 inflections of D excludes the possibility on the entrenched piano keyboard of adding a chromatic passing-tone between C and D.

In the simplest possible derivation of chromatic semitones let us say that the Major Scale may duplicate its geometry where any one of its pitches is held as a common-tone. Thus; Fig 2

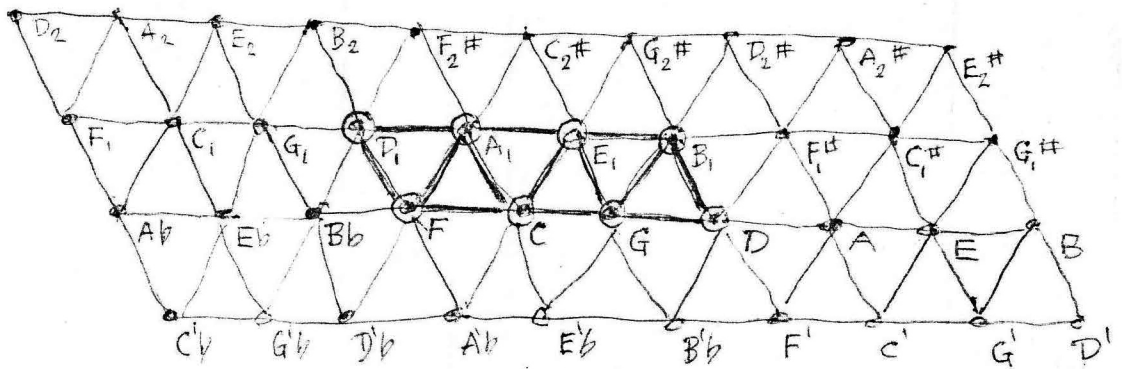
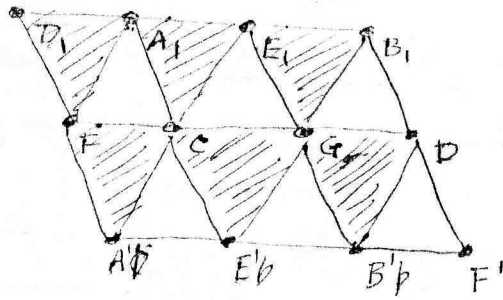


Figure 2

simplest set of
 The triads necessary to harmonize the major/minor tonal system are thus;



Major/Minor Dodecene

Figure 3

If one aspires to any degree of Polytonal freedom in this idiom, a full set of common-tone relationships are required (at least), as shown; Fig 4

Fig 4 also shows the linear scheme of the Bosanquet generalized Keyboard. Fig 5 shows the linear scheme of the Hanson generalized Keyboard. These 2 Keyboards complement each other in a most remarkable way.

The Keyboard composer/performer may well choose to become fluent on both Keyboards.

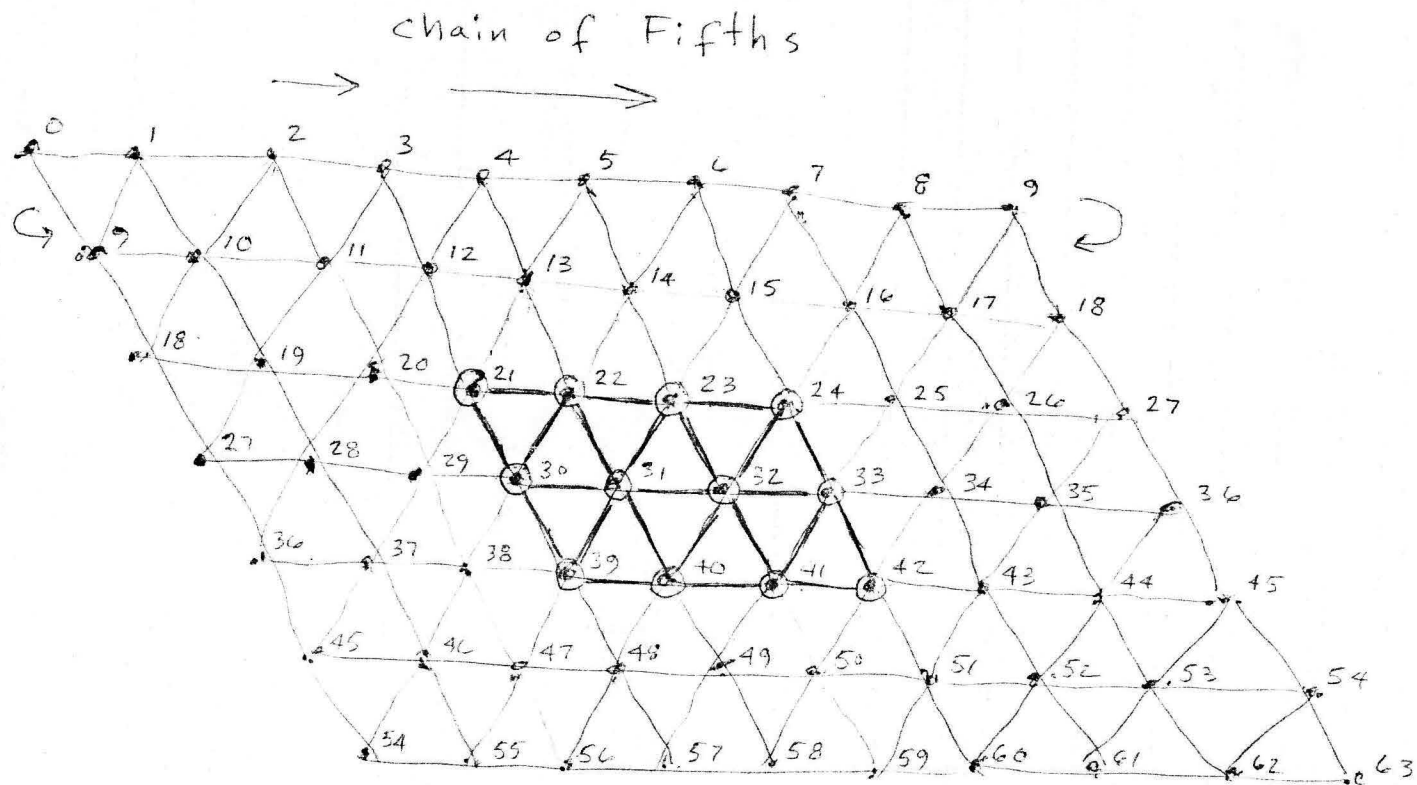


Figure 4

Bosanquet's Linear Scheme

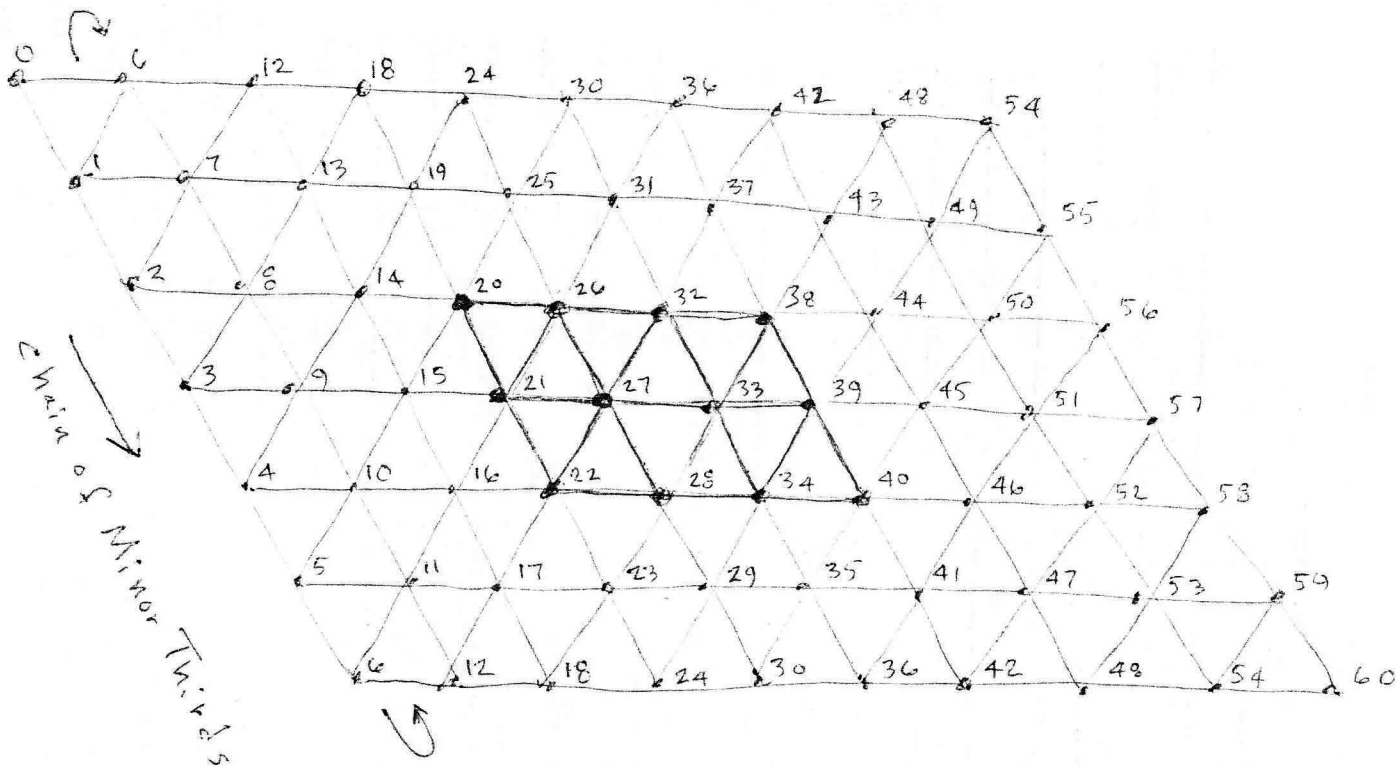


Figure 5

Hanson's Linear Scheme