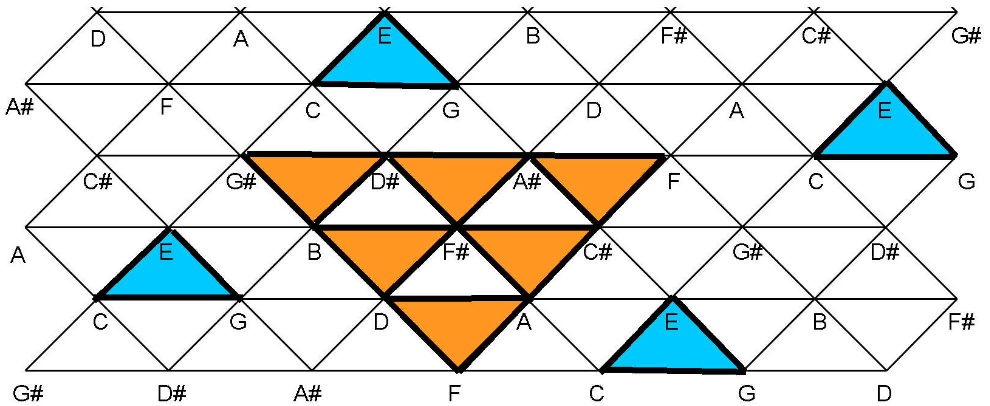
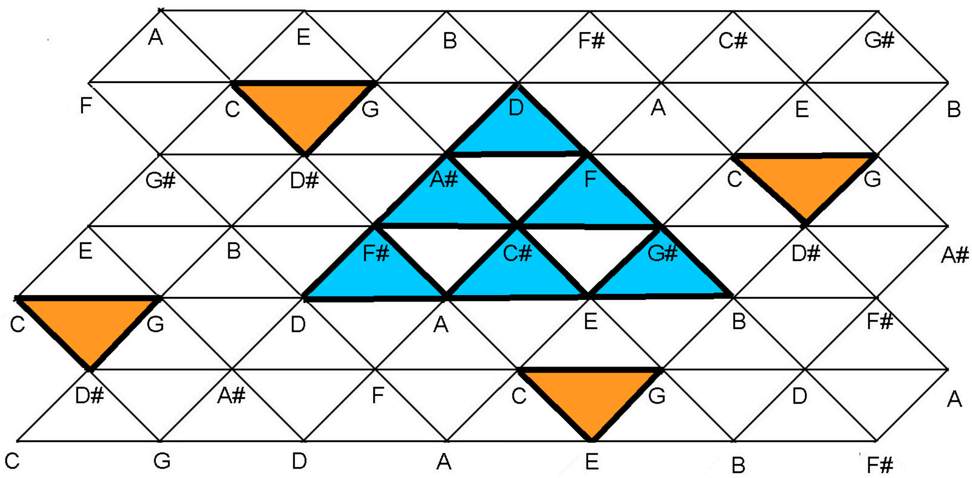
A NEAR FLATLAND WITH A BASTARD LATTICE
Kraig Grady 2/2015

It is not very often that I stumble on something that works in the 12 ET flatland so when I do I am rather excited that there might be some hope for it even only briefly. Let’s look at one of those Neo-Riemannian relationships that some make a big to do about: progressions between major and minor triads that have no tones in common. Here are two charts showing an example of C major (top) and the second of C minor (bottom) and the 6 triads of the opposite class with no notes in common.





I was curious how far one could extend this as a harmonic language or might I say sequence even if one is quickly going to run into pitches one has already used. What especially came to mind was how large a chain could be constructed without repeating any of the 6 progressions from one triad to another, nor any of the chords. In the first case one would have a chain of 12 chords (6 progressions from major and minor each) while in the latter case ideally one could go through all 12 major and 12 minor chords. There are two possible 12-chord sets that mirror each other, but not an elegant enough solution for me to pursue.

To lattice such a territory 6 connecting lines from a center point are needed to map each of the 6 possible chord progressions. An attempt to do so created quite a mess that was too hard to navigate or even finish.

Wilson, however, offers various lattices that are useful for condensing a set of relationships that can be represented on a two dimensional picture. These lattices might allow the mapping of harmonic territory such as the above progressions. Such a use of his lattices produces a strange bastard of his creation for which I may or may not be forgiven. Who can tell?

If I wanted to set up a lattice where each point had a unique set of relationships possible, either a 3 or 4 out of 7 combination product set lattice could be borrowed if it wasn't for the fact that each produces 35 points too many to contain only 24 chords. A smaller lattice of the 3 out of 6 set which in this case could show 5 out of the 6 progressions possible would produce only 20 chords that were close to the 24 desired. A feature of this lattice is that each chord would have a unique relationship to the whole, thus in a sense would be 'functional' in a non-tonal environment. It was territory I was familiar with so off I went hoping for a bit of luck.

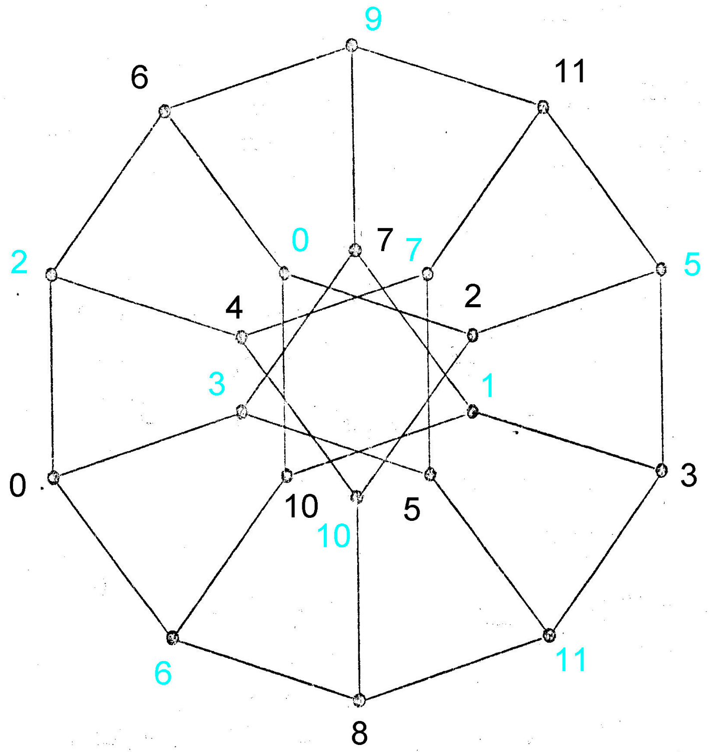
Since there are 6 possible progressions but only five available with this lattice one of the possibilities has to be omitted. I therefore had to make 6 variations, leaving out one progression each time. To chart this out, the numbers 0-11 were used with black for major and blue for minor. Luckily there were 2 sets out of the 6 that did not produce any repeated chord. That was pretty good I thought.

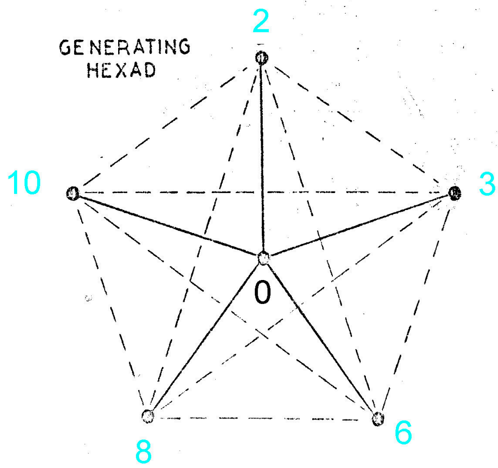
Included afterwards are 4 possible 20 tone cycles which can be rotated, as well as some eight chord cycles which might be of interest.

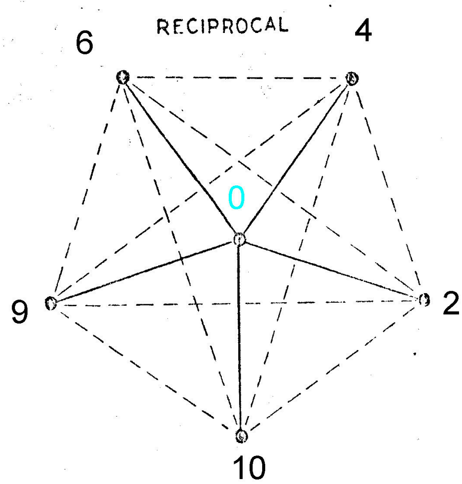
Afterwards I decided to include the other three progression sets that might also be useful musically, regardless of whether certain chords are repeated. Since these structures offer repetition of some chords they might provide something more biased, leading possibly to another form of 'functional' tonality. If one compares and folds the structure back into itself where the chords recur, reflection will show that all five progressions are possible, giving greater points of departure and return to certain chords.

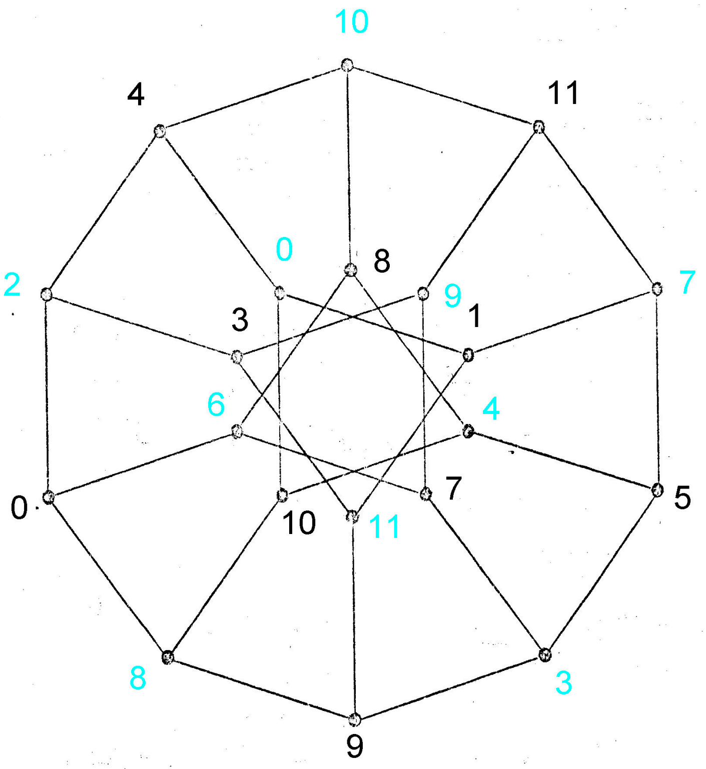
That is all for now but could be applied to other microtonal scales.

To repeat, the numbers 0-11 for scale steps so one can transpose how one wishes. black designates major and blue for minor.









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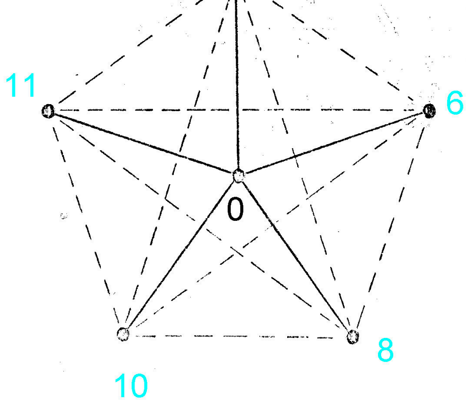

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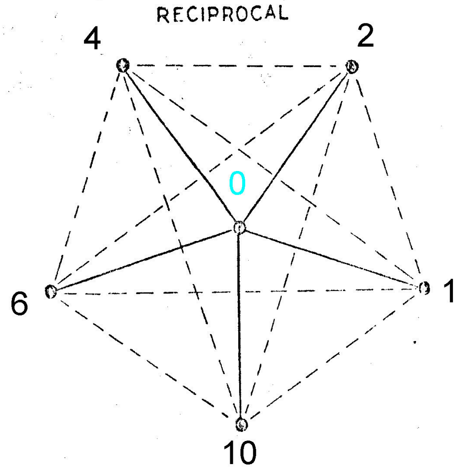
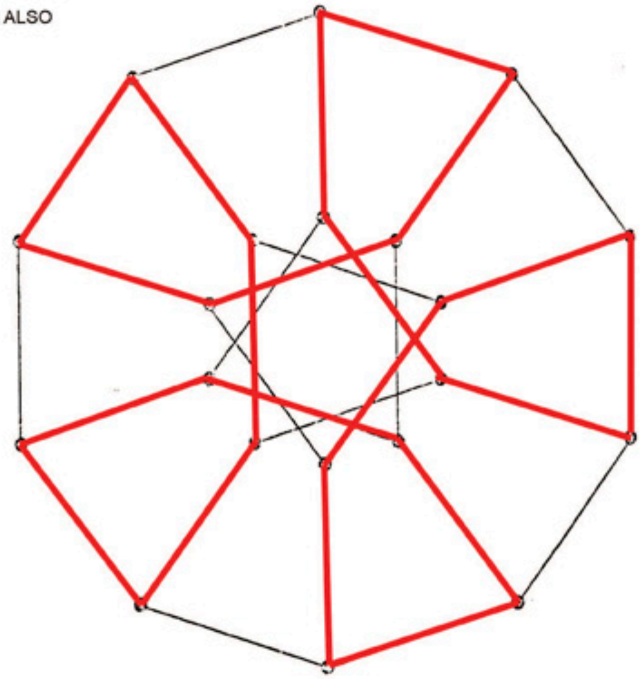
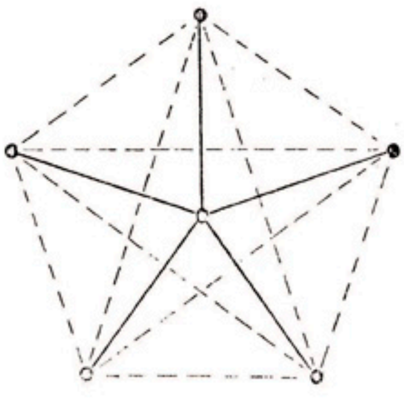
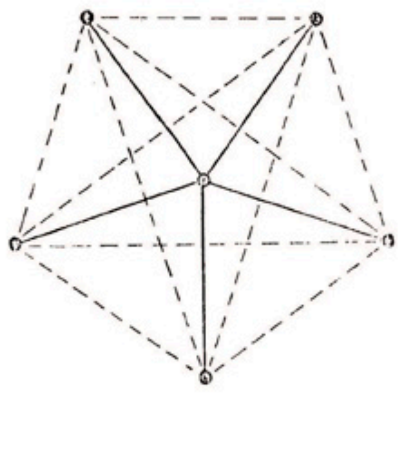


20 TONE CYCLE

36 DEGREE ROTATION ALSO

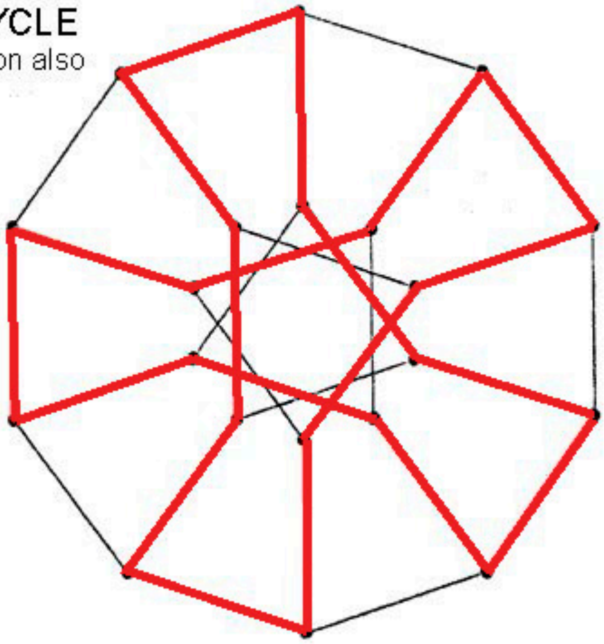


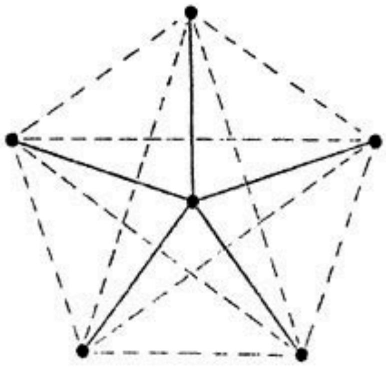


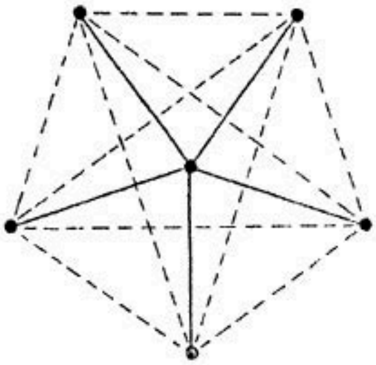


20 TONE CYCLE

36 degree rotation also

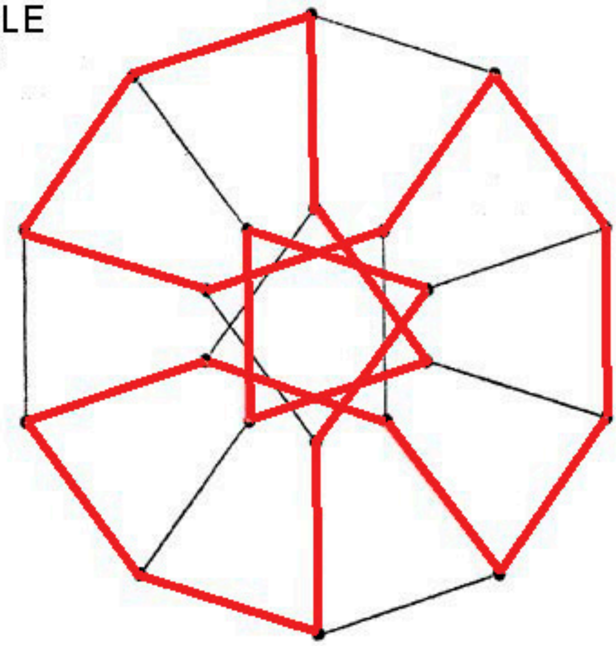


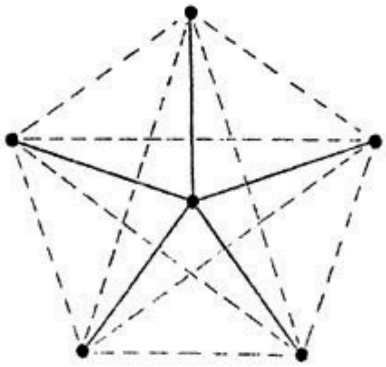


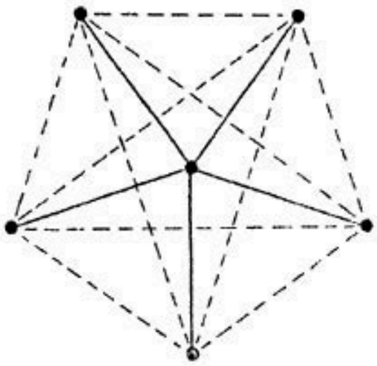


20 TONE CYCLE

10 ROTATIONS
POSSIBLE)

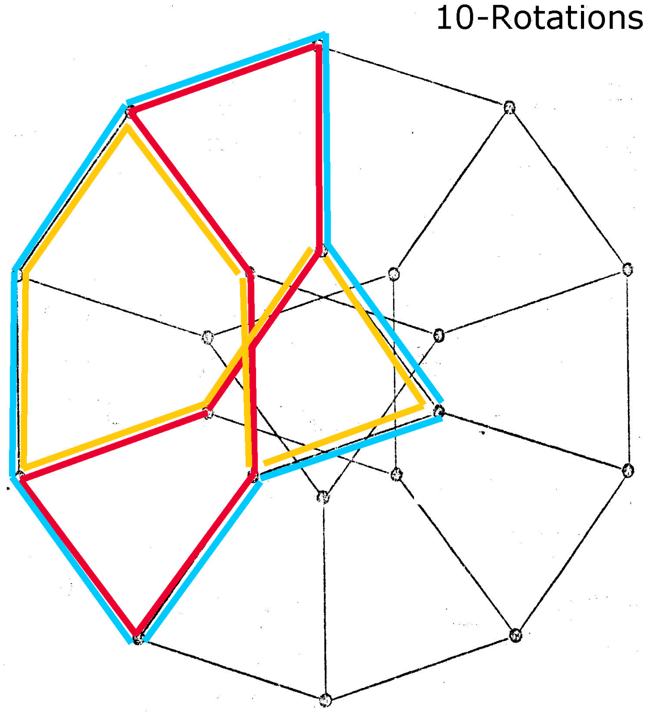


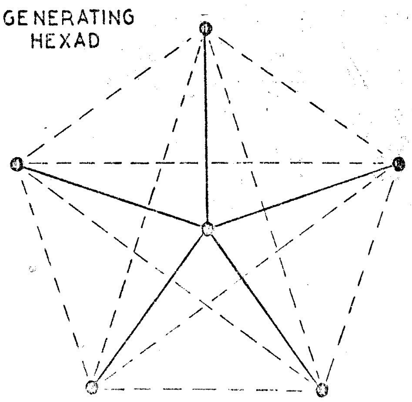


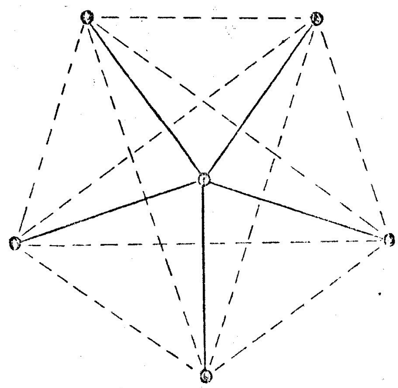


3 8-Tone Cycles Within The Dekany

10-Rotations Possible







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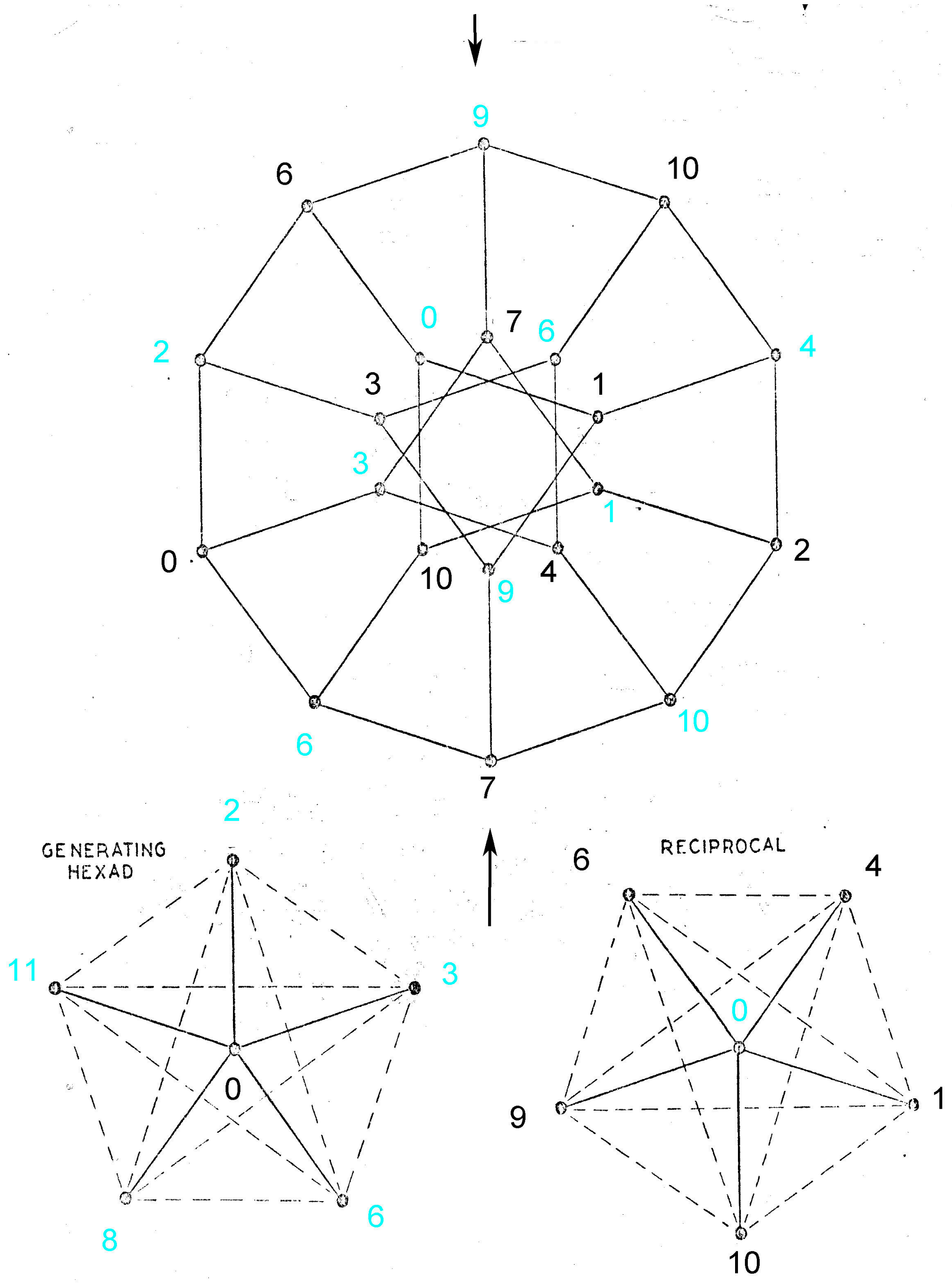
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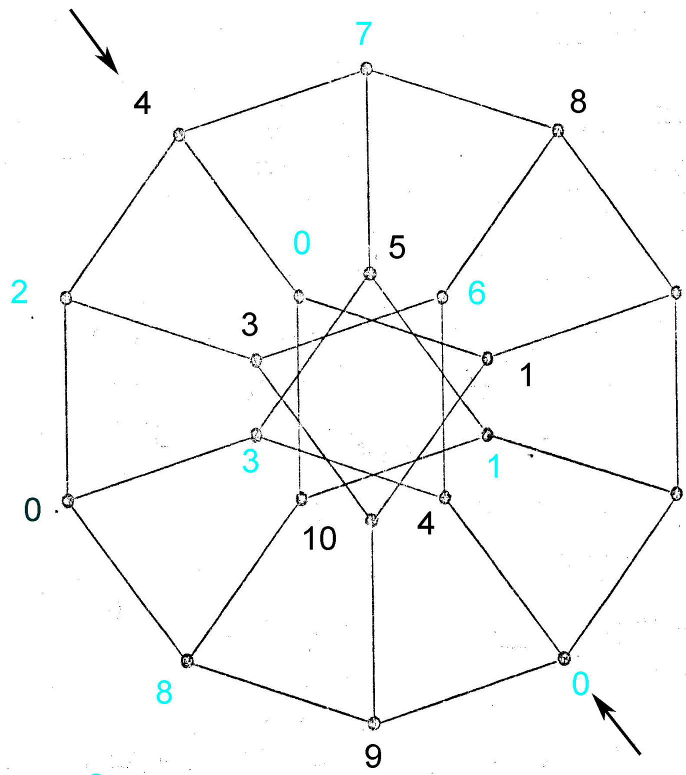
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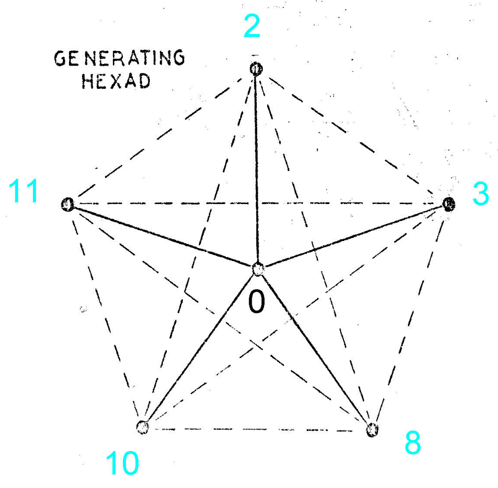
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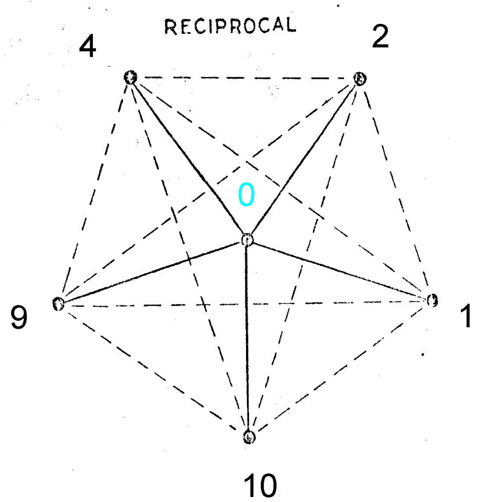
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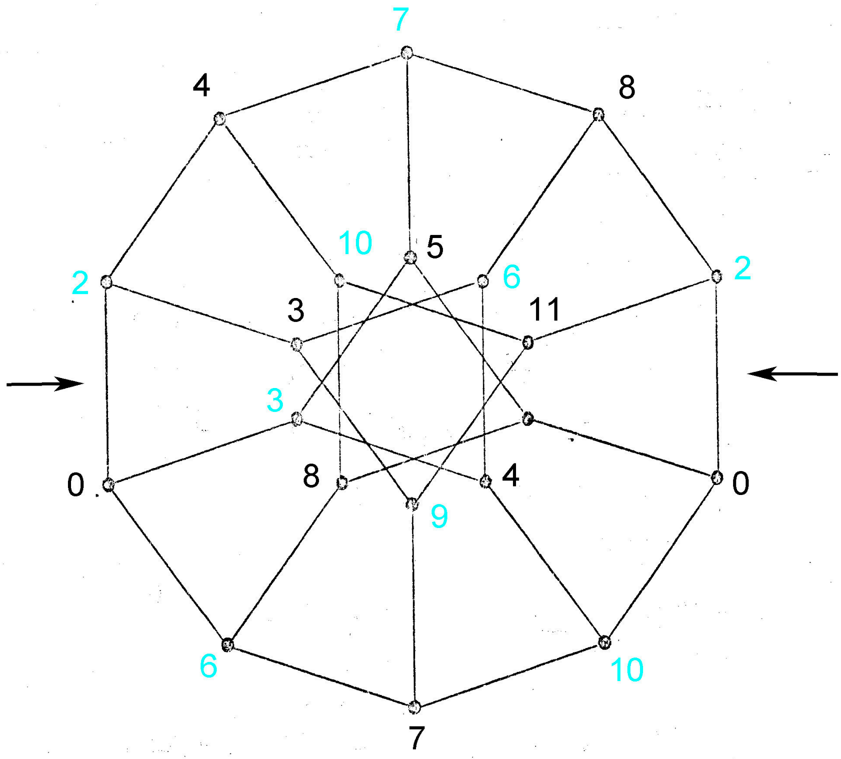

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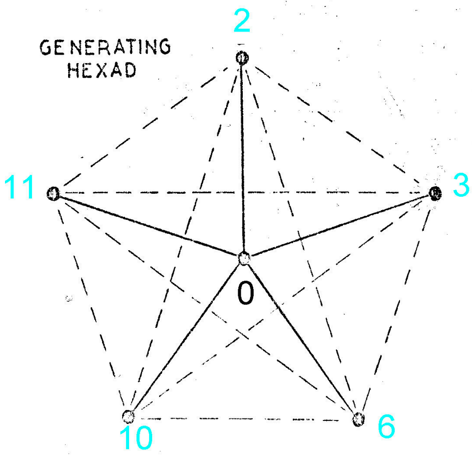

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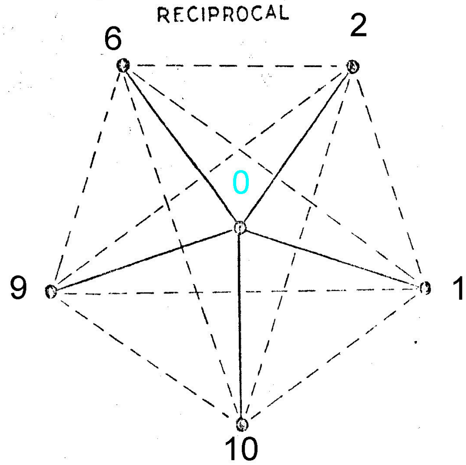

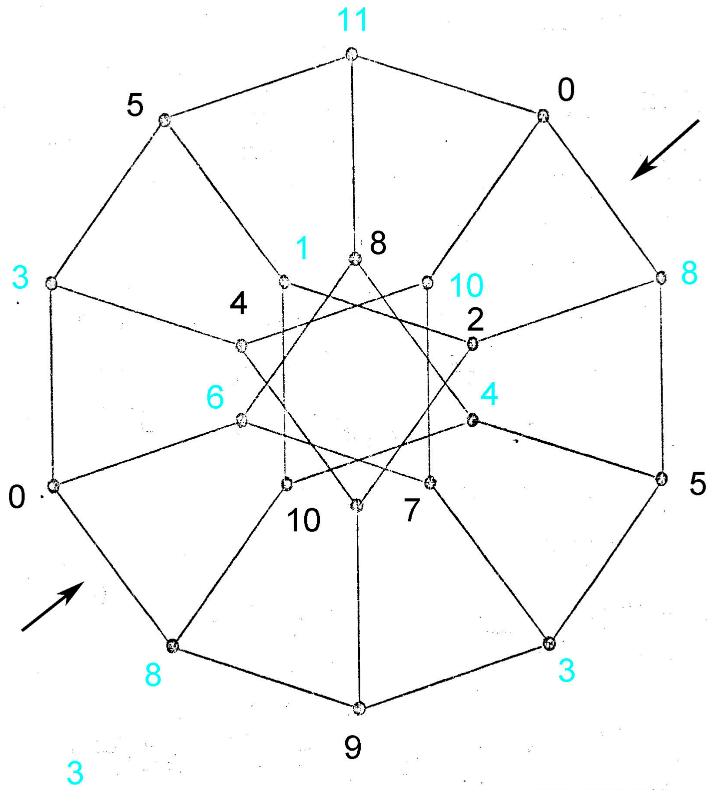

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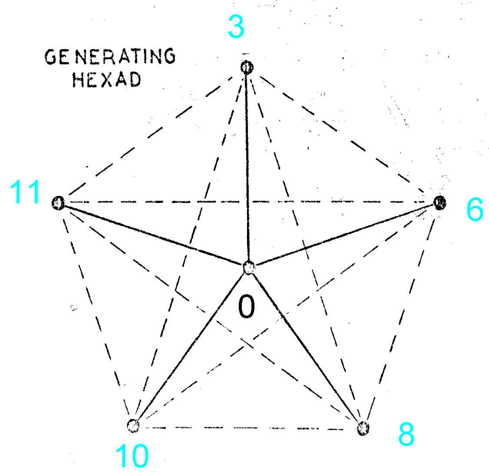

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