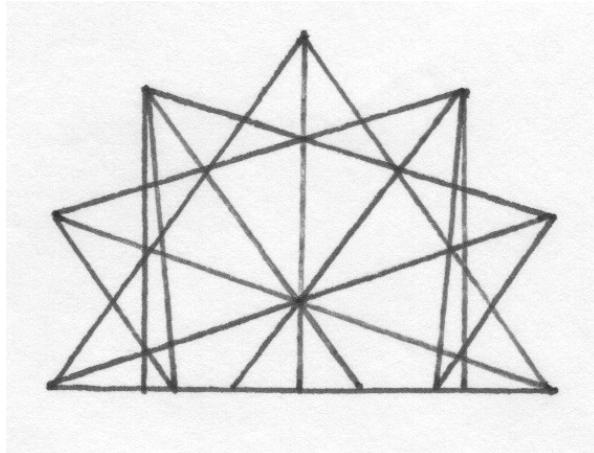


An abstract topology for 5-Limit Just Intonation Chromatic Scales

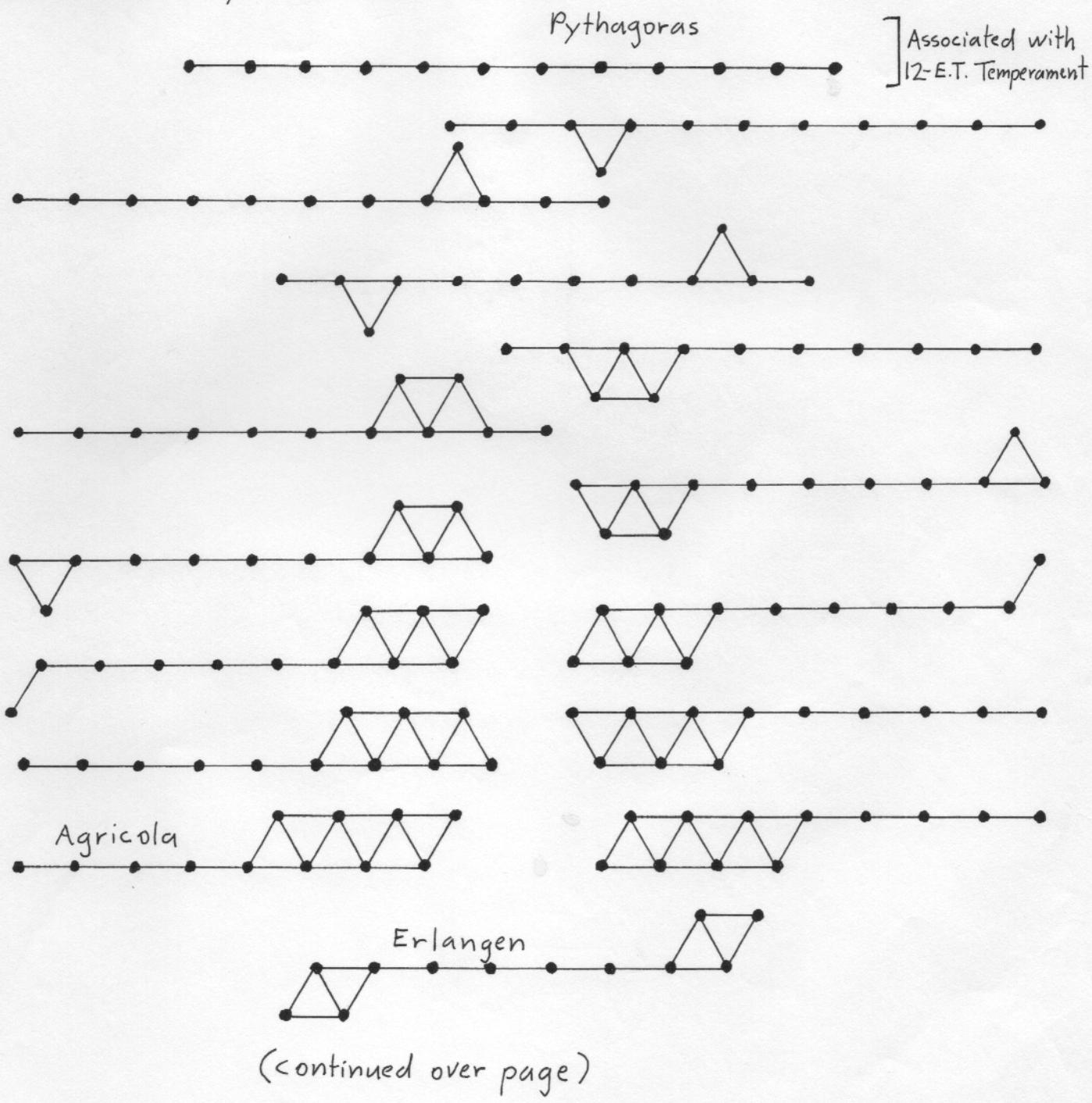


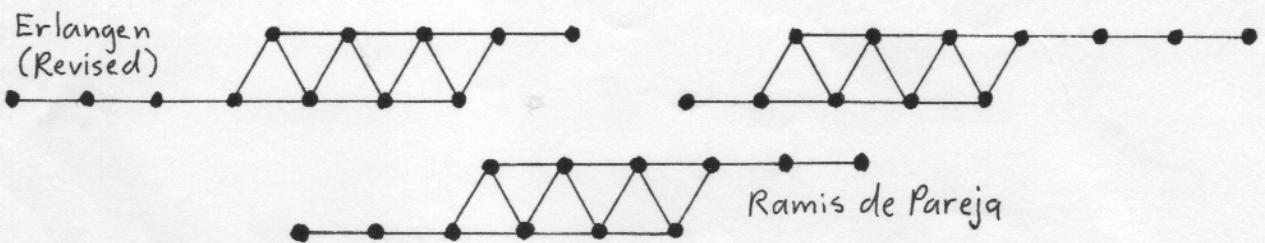
Siemen Terpstra
www.siementerpstra.com

An abstract topology for 5-Limit Just Intonation Chromatic Scales:

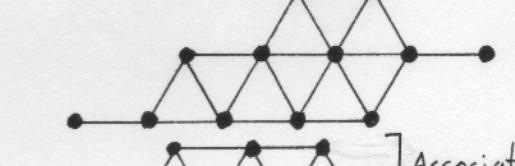
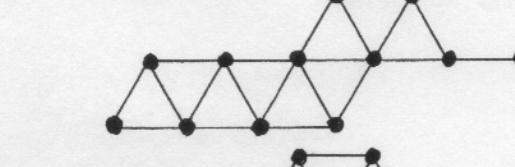
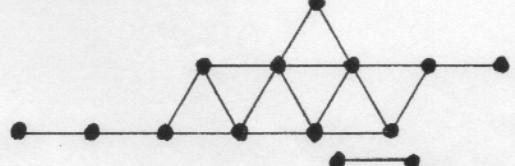
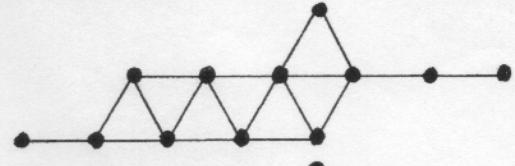
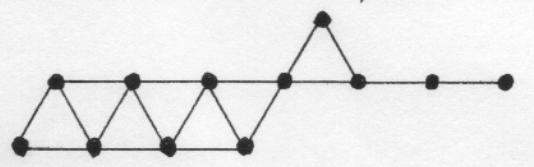
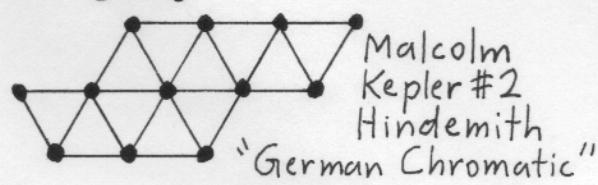
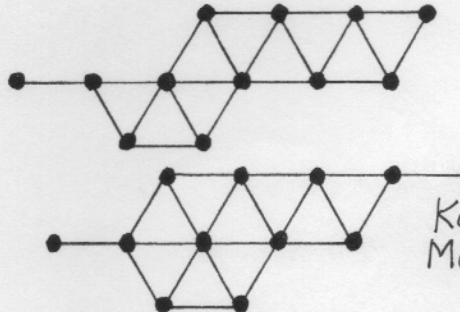
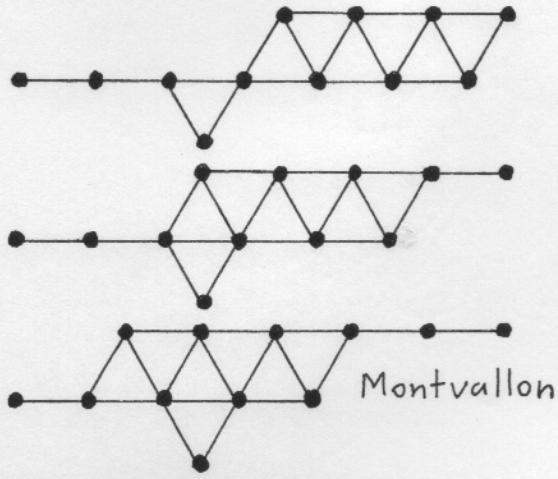
Each pattern defines a Class of Just scales, each Class embodying twelve primary modes (not presented here). Symmetrical structures are centred in the page; whereas, non-symmetrical patterns are paired by complementarity. Historical references are presented where appropriate (Gleaned from Barbour: Tuning and Temperament). The classification progresses from generally "horizontal" tunings to generally "vertical" tunings.

The first group of tunings, separated by a horizontal line, are characterized as Pythagorean. The sonic differences between them amount to only schisma shifts.

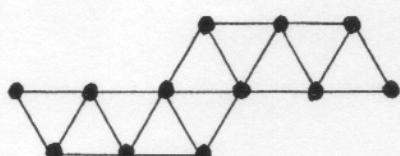




Unlike the previous patterns which have very close harmonic structures, the following group of "horizontal" tunings are not so obviously related.



Associated with 43-E.T.
and 1/5th Comma
Meantone Temperament

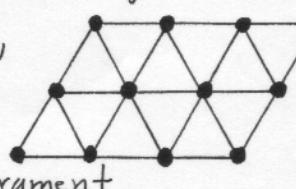


Associated with 55-E.T.
and 1/6th Comma Meantone
Temperament

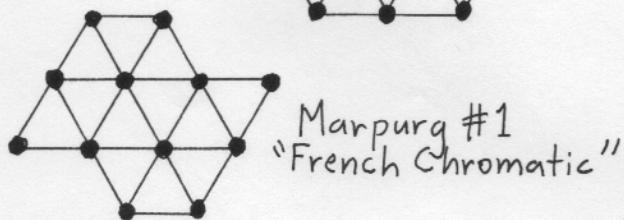
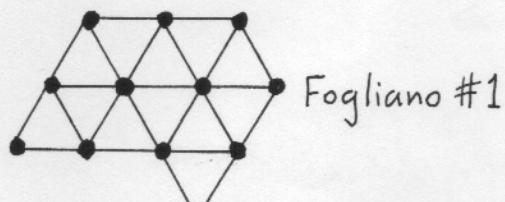
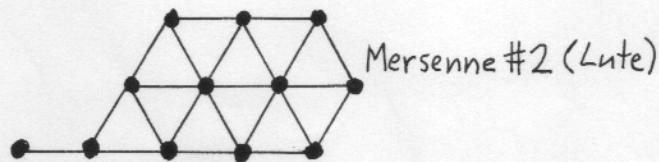
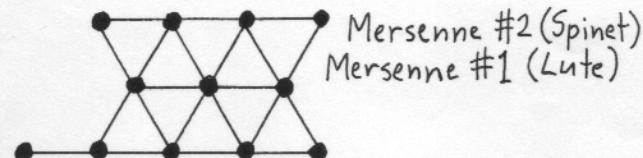
The next group of chromatic scale tunings are more "vertical" and tend to orient along the Major Third Axis of Just Intonation:

"English Chromatic"

Associated with 31-E.T.
and 1/4 Comma Meantone Temperament

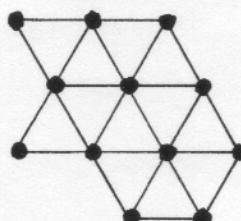
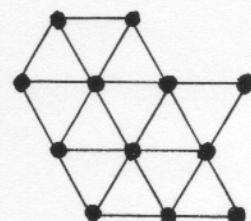
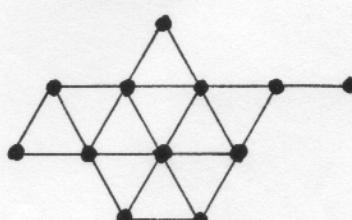
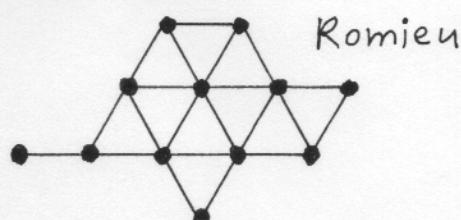
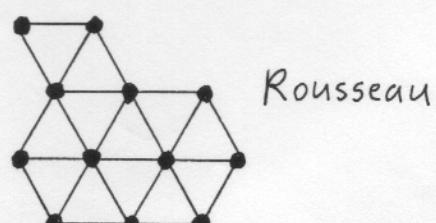
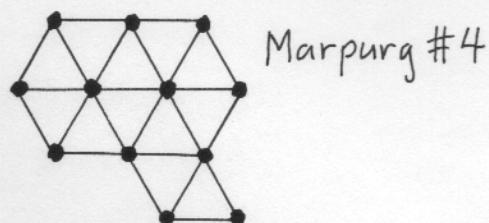
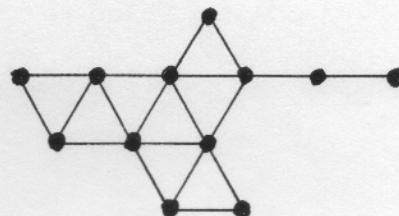
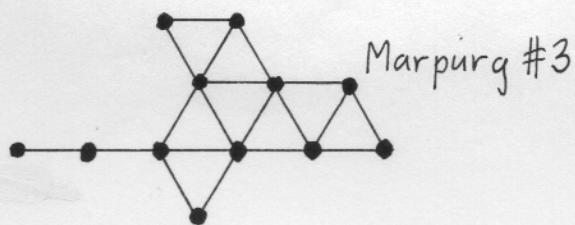


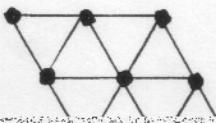
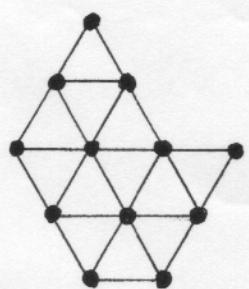
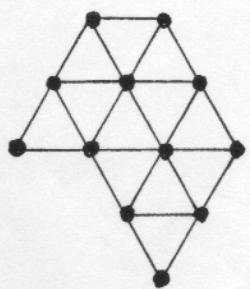
De Caus
Mersenne #1 (Spinet)
Euler
Ellis (Harmonic Duodene)
Notation archetype



} Associated with
31-E.T. and
1/4 Comma
Meantone Temperament

The final group of chromatic structures are extremely "vertical" and orient increasingly along the Major Sixth Axis of Just Intonation:





Symmetrical
Form

Associated with
19-E.T. and 1/3rd