

**Census Experiment #1:
An Improvisational Protocol
by Marcus Booth**

Pre-Performance Score Preparation Directions:

Part X: Harmony Directions:

1. Choose a value N, the number of populations you will survey for the harmony of the piece. (N=3 for example iteration of piece).
2. Create N number of 3x8 or 4x6 empty grids on blank index cards, corresponding to the charts below, without chord names listed.

Provide an audience member with a highlighter. He/she will highlight boxes in the manner below, which corresponds to a particular chord progression. (in the recorded example, it is a I-vi-IV-V progression in the key of C major)

1. For 3x8 cards, have the audience member highlight 2 boxes in the 1st column, 1 in the 2nd, and 1 in the 3rd.
2. For 4x6 cards, have audience members highlight 1 box in each of the 4 columns.

FINAL PREPARATION: Write down chord names corresponding to boxes that were highlighted, and read in order of I-vi-IV-V progression chords they replace. This is the underlying progression.

Improvise over this underlying progression following the patterns of rhythm and dynamics indicated in the directions below, in parts Y and Z.

Three substitution sets of eight chords (2ⁿ)*(x, y, z)

Type 448/488	Type 004/008	Type 044/088
C Major	C#/Db Major	C#/Db Minor
C Minor	D Minor	D Major
D#/Eb Major	E Major	E Minor
D#/Eb Minor	F Minor	F Major
F#/Gb Major	G Major	G Minor
F#/Gb Minor	G#/Ab Minor	G#/Ab Major
A Major	A#/Bb Major	A#/Bb Minor
A Minor	B Minor	B Major

Four substitution sets of six chords (3^n)*(x, y, z)

Type 033/099	Type 366/669	Type 336/699	Type 003/009
C Major	C#/Db Major	C#/Db Minor	C Minor
D#/Eb Minor	D Minor	D Major	D#/Eb Major
E Major	F Major	F Minor	E Minor
G Minor	F#/Gb Minor	F#/Gb Major	G Major
G#/Ab Major	A Major	A Minor	G#/Ab Minor
B Minor	A#/Bb Minor	A#/Bb Major	B Major

Note: The above harmony charts were created through C natural centric iterations of the “primal-circular substitutions” system. This approach to harmony was devised by the composer while he was a visiting researcher at IRCAM in fall 2016 with the music representations team. A paper describing the approach in detail, entitled “Primal-Circular Substitutions” is available in the Springer Lecture Notes in Computer Science. Link: https://link.springer.com/chapter/10.1007/978-3-319-71827-9_1

Part Y: Rhythm Directions:

1. Provide an audience member or outside participant with a blank index card.
2. Ask him/her to draw between 2 and 5 horizontal lines.
3. Interpret the length of each line as the relative duration of each single harmony persists in the progression determined in Part X.

Part Z: Dynamics Directions

1. Provide an audience member or outside participant with a blank index card.
2. Ask him/her to draw between 2 and 5 vertical lines.
3. Interpret the length of each line as the average relative dynamic level of each section of the progression determined by harmony.

Performance:

1. Realize the performance directions determined for harmony, rhythm, and dynamics on one or more instruments.
2. Improvise melody and/or timbre, whichever is applicable.

Note: The available recording is from a November 2015 performance at Tenth Avenue Arts Center.