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 (2^n)*(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 charts were created using multiplicative symmetries of various resizing of the octave corresponding to cycles relatively prime to the the multiplier and 12 (the number of tones in an equal temperament chromatic scale). 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 forthcoming paper in SCMC 2016 will explain the approach in detail.

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.

Notes on November 2015 Realization

The realization presented in the accompanying recording was performed at 10th Ave. Arts Center in San Diego, California, in November of 2015. The pre-performance data was gathered from the audience present at the door within 10 minutes of the concert.