Producing Music Using Negative Harmony
Jeremy Ahn
Advisor: Dr. Max Keller

Abstract
This project uses Negative Harmony as a basis and reference point for producing original songs in the style of instrumental jazz and funk. Negative harmony is a loose term that describes a technique of reharmonization made popular by musician Jacob Collier. While negative harmony is best understood as a reharmonization technique, writing new songs and chord progressions that strive to replace common chord progressions with their negative harmony counterparts can also be an effective way to demonstrate negative harmony. Music can be made with unconventional sounding but harmonically viable chords that challenge both the musician and the listener to grow in the process.

Presentation Outline

1. Introduction
   a. Common chord progressions can be heard in songs like Happy Birthday, Twinkle Twinkle Little Star, or Ode to Joy
   b. Overtones
      i. Pythagoras Experiment, string division, naturally occurring overtones
   c. Negative Harmony
      i. Ernst Levy, A Theory of Harmony
         1. Discusses polarity of notes and chords
      ii. Jacob Collier, “Interview: Jacob Collier (Part 1)” by June Lee
         1. Describes negative harmony through inversions
   d. Research Question: What is the usefulness of Negative Harmony? What is the role of Negative Harmony as a compositional and reharmonization tool?

2. Methodology
   a. Produced songs through Ableton Live using virtual instruments and plug-ins controlled by MIDI keyboards
   b. Album: 6 songs
   c. Style and arrangements were based on jazz standards, Anomalie and Jacob Collier
   d. The Goal of the project was Composition, not full production
      i. Inversion Charts, Reharmonization

3. Results
   a. Songs: City Jam, Brazil, End of the Road, The Subway Sparrow, *Fat Cat Abbey, *Full Swing in a Summer Moon [* - not shown]
   b. Transcriptions, Ableton Sessions, and recordings available

4. Conclusion
   a. Made 6 songs with negative harmony
   b. Used negative harmony in a non-traditional way for the sake of a more pleasing sound
   c. Further research
      i. Finish producing the songs (Record real instruments, mixing, mastering)
      ii. Produce more songs
      iii. Explore concepts of reharmonization and jazz harmony
      iv. Practice
Select Annotated Bibliography


This album has grown to become one of my favorite collections of music. The amount of talent and musical genius that shines through Jacob Collier and the music he makes never ceases to amaze me. When the songs have invented meters (time signature), altered tuning, and reharmonizations beyond comprehension that use much more than just negative harmony, it is no wonder how two of the songs earned him Grammy awards. Though I am convinced I will never reach his level of musicianship, I am nonetheless truly and deeply inspired by Jacob Collier to make music for the soul.

Collier, Jacob. “Interview: Jacob Collier (Part 1)”. Interview by June Lee. *YouTube*, 14 April 2017, [https://www.youtube.com/watch?v=DnBr070veNE&t=107s](https://www.youtube.com/watch?v=DnBr070veNE&t=107s)

This online interview was my first encounter with negative harmony. In the interview, June Lee (who uploaded the video) asks Jacob Collier, a multi-instrumentalist, about several music topics. Around 2 minutes into the interview, Lee asks a question about negative harmony, to which Jacob responds with a wonderful explanation on the subject. Collier describes negative harmony using a common progression in C major: A7-D7-G7-C. By taking the ‘negative’ counterpart, Collier quickly converts the progression to: Eb-6 - Bb-6 - F-6 - C, a chord progression I use quite often in my own piano playing. Even though it is a YouTube video, I stand by Collier’s explanation of negative harmony because he explains it in a way that is very understandable for me. His music also reflects the depth of his understanding of not just negative harmony but all aspects of music theory.


This album is similar to the one by Jacob Collier in that it seems difficult to place it in any one genre. The songs use a generous amount of complex negative harmonies and jazz theory that always seem to me otherworldly. The closest title for genre might be electronic funk, and I wholeheartedly love the hard grooves he produces. All of his songs are instrumental and are largely based on electronic synthesizer sounds that he plays on midi keyboards. The album is a perfect example of what I hope to accomplish with this project.


This book serves more or less as the cornerstone of my project. I was first introduced to negative harmony through an interview of Jacob Collier, and Jacob Collier referred to this book. Essentially, Ernst Levy describes his theories for harmony, polarity, tonal structures and functions, etc., demonstrating the concept of equal tonal gravity and its applications. Although the entire book has very interesting ideas about music theory, the chapters on triads and chords and their opposite polarities will be especially important for my research in negative harmony. Levy will essentially provide a great deal of the technical information I would need to know to understand the applications for negative harmony.