James Bean
Undergraduate Research Award Submission

 Ground: for Four Players and Their Instruments is a piece of music written for flute, clarinet, violin, and violoncello. The facets of this piece that make it unique are those which may not have had any possibility of existence without the services provided by the University of Oregon Libraries.

 The material in this piece is based entirely upon the physical actions present in the making of music. For example, instead of asking a cellist to play a specific note (as Beethoven would), the directions in this piece are concerned with the placement, pressures and movements of each component of the physical process of playing that note (e.g. the cellist's left hand on the fingerboard and the right hand holding the bow). Each of these components is separated, so as to make an ensemble (of 6 or more!) out of each player.

 The string instruments have separated the location, hand shape, pressure and movement of the left hand on the fingerboard. The wind instruments have their register, singing and articulation (the things controlled by the mouth and throat) and their fingers separated. The end result then, is a performative terrain where the sonic output is able to be both in continuous flux and effervescence, but also held together tightly in continuous relationship between players – while difference and variegation increases, so too does similarity and repetition of material. This compositional process enables the material to be compressed to the point that is has been nearly extinguished, but also to the point of such high pressure that it is omnipresent.

 Many aspects of this process take tremendous resources, most of which were provided by the library. For example, as listed on the Works Consulted page, the research

necessary to enact this process effectively is extensive. A large portion of the scores needed for study (where composers may have utilized similar techniques or concepts), performance manuals (where instrumentalists have documented the advancements in playing techniques) and articles (where composers have discussed their methods) were available directly through the UO Library, either in hard copy or through access to online sources. Interlibrary Loan (ILL) was used very heavily to source rare, hard-to-find and very new scores.

In addition to the necessity of the Library, and the resources provided therein, for musical scores and print sources, the technological offerings of the institution gave life to this project. Programs such as Cycling 74's Max/MSP, the Python programming environment, MakeMusic's Finale, and Adobe Illustrator were used for the generation and notation (visual representation) of the piece. All of these tools were provided by the computers in the Library, in the Douglas Listening room, Cinema Studies Lab, and also in the MAP Library.

For this piece alone, over 600 hours were spent on library computers, spread out on large tables outside the Douglas Listening Room, or scanning through the stacks over the course of about 10 months. It is clear that not a single aspect of this project would be possible without the resources provided by the library.

Furthermore, another project of similar extension is just being completed on the Macs in the MAP Library (this time for Alto Saxophone and Voice), and another project is just commencing within the same confines (this time for String Quartet).

Without the tools provided by the library, it would be increasingly, if not prohibitively difficult for me to do my work.

Abstract:

Ground: for Four Players and Their Instruments is a piece of music written for flute, clarinet, violin, and violoncello. The facets of this piece that make it unique are those which may not have had any possibility of existence without the services provided by the University of Oregon Libraries. For this piece alone, over 600 hours were spent on library computers utilizing Cycling 74's Max/MSP, the Python programming environment, MakeMusic's Finale, and Adobe Illustrator, spread out on large tables outside the Douglas Listening Room, or scanning through the stacks over the course of about 10 months. It is clear that not a single aspect of this project would be possible without the resources provided by the library.

Human resources:

Terry McQuilkin (Douglas Listening Room, Knight Library)

Robert Kyr (Music Composition)

Jeffrey Stolet (Intermedia Music Technology)

Works Consulted

Barrett, Richard. *Dark Matter: For 19 Performers, Electronics, and Installation by Per Inge Bjørlo*. Waltham Abbey, Essex: United Music Publishers, 2003. Musical score.

---. *Opening of the Mouth: For Two Vocalists, Eleven Instrumentalists and Electronics*. London: United Music Publishers, 1999. Musical score.

Boulez, Pierre. *Le Marteau Sans Maître: Pour Voix D'alto Et 6 Instruments*. London: Universal Edition, 1957. Musical score.

---. *Pli Selon Pli*. London: Universal Edition, 1967. Musical score.

Carter, Elliott. *String Quartet No. 2*. New York: Associated Music Publishers, 1961. Musical score.

Cassidy, Aaron. *And the scream, Bacon's scream, is the operation through which the entire body escapes through the mouth (or, Three Studies for Figures at the Base of a Crucifixion): For Chamber Ensemble*. 2009. Musical score.

---. *The Crutch of Memory: Indeterminate Solo String Instrument*. 2004. Musical score.

---. *"the green is either": Three trios for Seven Players*. 2003. Musical score.

---. *Metallic Dust: Solo Amplified Bass Clarinet*. 1999. Musical score.

---. *String Quartet*. 2002. Musical score.

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Crumb, George. *Black Angels: For Electric String Quartet*. New York: C.F. Peters, 1971. Musical score.

---. *Vox Balaenae: For Three Masked Players*. New York: C.F. Peters Corp, 1972. Musical score.

Deleuze, Gilles, and Félix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*.

Minneapolis: University of Minnesota Press, 1987. Print.

Dick, Robert. *The Other Flute: A Performance Manual of Contemporary Techniques*.

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Ferneyhough, Brian. *Carceri D'invenzione I: For Chamber Orchestra*. London: Edition

Peters, 1983. Musical score

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Hinrichsen Edition, 1985. Musical score.

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score.

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---. *Terrain: For Solo Violin and Chamber Ensemble*. London: Edition Peters, 1993.

Musical score.

---. *Third String Quartet*. London: Edition Peters, 1988. Musical score.

Hübler, Klaus K. *3. Streichquartett: Dialektische Fantasie*. Wiesbaden: Breitkopf &

Härtel, 1985. Musical score.

Johnson, Evan. *Apostrophe 2 (pressing down on my sternum): For Quarter-tone*

Flugelhorn and Alto Trombone. 2009. Musical score.

Lachenmann, Helmut. *II. Streichquartett: "reigen Seliger Geister": 1989*. Wiesbaden:

Breitkopf & Härtel, 1989. Musical score.

---. *III. Streichquartett: Grido*. Wiesbaden: Breitkopf & Härtel, 2002. Musical score.

---. *Gran Torso: Musik Für Streichquartett*. Wiesbaden: Breitkopf & Härtel, 1988. Musical score.

---. *Mouvement (-Vor Der Erstarrung): Für Ensemble*. Wiesbaden: Breitkopf & Härtel, 1985. Musical score.

---. "On My Second String Quartet ('Reigen seliger Geister')." *Contemporary Music Review*. 23 (2004): 59-79. Print.

---. *Pression: For Einen Cellisten*. Wiesbaden: Breitkopf & Härtel, 2001. Musical score.

---. *Tema: Für Flôte, Stimme (mezzosoprano) Und Violoncello*. Köln: Gerig, 1971. Musical score.

---. *"...zwei Gefühle...", Musik Mit Leonardo: Für Sprecher Und Ensemble*. Wiesbaden: Breitkopf & Härtel, 2002. Musical score.

Mahnkopf, Claus-Steffen, Frank Cox, and Wolfram Schurig. *Critical Composition Today*. Hofheim: Wolke Verlag, 2006. Print.

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---. *The Foundations of Contemporary Composition*. Hofheim: Wolke Verlag, 2004. Print.

---. *Musical Morphology*. Hofheim: Wolke Verlag, 2004. Print.

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Rehfeldt, Phillip. *New Directions for Clarinet*. Berkeley: University of California Press, 1977. Print.

Stockhausen, Karlheinz. *Gruppen Für Drei Orchester*. London: Universal Edition, 1963. Musical score.

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     score.

---. *Tetras: For String Quartet*. Paris: Salabert, 1983. Musical score.