

Berklee College of Music

Atomic Age: A Minimalist Approach to Music Production

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and Innovation

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Abstract

Atomic Age is an electronic album that offers listeners a maximal sonic experience through the use of minimal resources. Created with a portable production set up during two years of transcontinental travel, this body of work breaks the perceived limitations of consumer-quality hardware and software by demonstrating what is possible when an artist sets out to share their story using affordable technologies. Through forward-thinking songwriting, unique sound design, and lyrical storytelling, *Atomic Age* seeks to inspire creators and listeners to honor the resources they have at any given time or place, and remind our society that much can be accomplished with very few resources.

Keywords: digital music technology, album, music production, independent music.

1. Introduction

Throughout the history of music technology, any advancement in recording tools, software, or new types of instruments have been met with great resistance. Now in the digital age, one of the most common criticisms of digital music is that it is cheapening the quality of our music and over-saturating the market. With music production now being more affordable and accessible than ever before, many complain that anyone could create and share low-quality work, and it's diminishing our culture by lowering the standards of our music traditions. While this perspective could have some validity, *Atomic Age* offers an alternative way of looking at these advancements in music technology and social media marketing.

Having widespread access to low-cost technologies and communications benefits our society on many levels, and music is no exception to this. Like many other art forms with high costs of entry, the privilege of creating records and videos was historically reserved for the wealthy elite and larger companies that could afford to cover the high costs of recording and distributing music. With these financial barriers removed, independent artists have more power than ever to create and share their work freely, without the pressure of making music that is intended for commercial use or suited for the ears of the masses. It gives rise to niche genres, and greater participation in music-making from people of color, women, and non-binary artists.¹

Affordable music technology is not to blame for degrading the quality or evolution of modern

¹ Smith, Ebonie. "Ebonie Smith: Why Are Female Music Producers Everywhere, Yet So Invisible?"

Guest Column)." *Billboard*. March 01, 2018. Accessed October 31, 2018. <https://www.billboard.com/articles/business/8221814/ebonie-smith-female-music-producers-everywhere-guest-column>.

music, rather, it promotes diversity and allows the art form to flourish in ways that were not previously possible.

Through the writing, production, and marketing of a 12-track album that uses the latest tools in digital music technology, *Atomic Age* serves as a modern example of what artists are capable of creating with minimal resources and maximal ideas in 2019.

2. Review of the State of the Art

This project is inspired by the works of many forward-thinking artists including Herbie Hancock with his album *Possibilities*, Miles Davis with his early uses of electronic instruments in jazz on his album *Filles de Kilimanjaro*, Delia Derbyshire's work at The BBC Radiophonic Workshop (fig. 1), and Flying Lotus with his use of unique production techniques on *1983* and *Los Angeles*. Each of these artists are early adapters of the latest advancements in music technology and instruments of their respective eras, and their work paved the way for future generations of musicians to use these tools as extensions of human expression rather than devices that increase production at the sacrifice of emotional depth.



Figure 1. Delia Derbyshire at the BBC Radiophonic Workshop, 1965.

While followers of Karl Marx’s theories on technology and capitalism would argue that developments in music tech cause a decrease in value of goods and services,² the previously mentioned works are proof that technological advancement can serve to heighten artistic expression when mindfully used. In his research and essay on independent music production, Daniel Waltzer notes that “improvements in digital music production underscore a pre-existing fascination with creating artificial sounds and thus have cultural and social implications. The suggestion here is that modern technology (over the past decade in particular) has moved creativity forward—recording music is no longer confined to a small percentage of interested stakeholders.”³ Making music technology affordable and the sharing of music open to anyone promotes immense creativity and growth. It gives a voice to those who might otherwise be silent, and opens up music to a new era of sounds and styles.⁴

Albums with similar messages as *Atomic Age* have certainly been released in the past, this particular perspective on music technology will be uniquely shared through the personal lens of the producer as she uses the latest tools in digital technology to have freedom of location while writing and recording.

² Marx, Karl, Friedrich Engels, Samuel Moore, Edward B. Aveling, and Ernest Untermann. *Capital: A Critical Analysis of Capitalist Production*. Ware, Hertfordshire: Wordsworth Classics of World Literature, 2013.

³ Walzer, Daniel. (2016). *Independent Music Production: How Individuality, Technology, and Creative Entrepreneurship Influence Contemporary Music Industry Practices*. *Creative Industries Journal*.

⁴ Hu, Cherie. "Unbundling The Song: Inside The Next Wave Of Recorded Music's Disruption." *Forbes*. May 13, 2018. Accessed October 31, 2018. <https://www.forbes.com/sites/cheriehu/2018/05/13/unbundling-the-song-inside-the-next-wave-of-recorded-musics-disruption/>

3. Description

Atomic Age is a 12-track album that is written, performed, recorded, produced, and mixed using as few resources as possible in order to prioritize freedom of location, and to offset the costs of what an average independent album would cost if recorded in a traditional studio. The gear used for the production of each of the songs includes a 2015 MacBook Pro, with Ableton Live Suite and Max used as the main software to record, synthesize, and arrange all sounds and visual content. Additional plug-ins were used to supplement Ableton's built-in synthesizers and audio effects, including software by Native Instruments, Goodhertz, Waves, FabFilter, Output, and Soundtoys. Ableton's Push 2 was used as the main control surface because of its portability and ease of integration with the software, and the Apollo Twin interface by Universal Audio was the primary recording interface used for vocals and guitar, and was chosen because of its compact size and extremely high quality converters relative to its cost. Similarly, the Baby Bottle microphone by Blue was chosen for vocals because of its quality and affordability.

Exploring new locations and cultures was a high priority for the artist during the writing and production process, so a Zoom H4N Pro was used to capture field recordings while traveling across the US, Canada, Europe, and Africa. These recordings were then used as the sonic foundation of the record, as beds of ambient sound from multiple cities and natural landscapes can be heard throughout most of the tracks. Smaller samples of these recordings were also transformed into melodic synths and percussion elements, so in many cases the original source is no longer recognizable, but still embedded into the essence of the song. Rather than using pre-made drum samples and/or synthesizer presets, this process of careful audio manipulation was

used in order to create a more original sound of the album, as well as to tie each of the songs together on a level beyond genre or music style.

4. Innovative Aspects

This album is unique in that it relies heavily on sound-design to create a relationship between each of the individual songs, rather than following a more traditional genre path or storyline. Songs on *Atomic Age* can be categorized or defined as being pop, electronic, cinematic, dance, RnB, and indie-rock, and while this wide-sweeping approach could make the album sound scattered, the careful attention to detailed design and repeated use of similar sounds across multiple styles helps glue the album together in a non-traditional way.

5. New Skills Acquired

As this was the producer's first introduction to Max, one of the biggest skills she developed was the creation of abstract visuals using Vizzie. This resulted from many hours of experimenting and studying the relationships between sight and sound, and also led to the development of new synthesizer patches that were inspired by these visuals.

Recording engineering and mixing was another huge area of growth that occurred through the production of the album and studying with Daniel Castelar. Previous work from the producer was lacking in the quality of the vocal production, and simple shifts in volume, EQ, compression, and creative panning all served to improve the overall quality of the vocal mixes on *Atomic Age*.

6. Challenges

While there was much improvement made in these areas, mixing and recording engineering proved to be two of the biggest technical challenges of this project, because the

producer was not settled in a consistent studio environment. That being said, having the limitation of mixing on a laptop and headphones placed an even greater emphasis on ear-training and listening skills. The songwriting, sound-design, and fundamentals of the mix all had to be as strong as possible since there was so little gear to hide behind.

Another huge challenge the producer faced this year was project management. As the producer was working on *Atomic Age*, writing and production was also underway for eight different artists's records while working remotely, while also juggling the day-to-day tasks of running an independent record label and artist development programs. Ultimately, this particular time constraint and battle for focus was one of the biggest blessings of the process, because it forced the producer to be extremely present and deliberate with each moment available for writing.

7. Future Ramifications

Atomic Age is set to be released on Unspeakable Records through Seed Distribution on June 28th, 2019. In addition to running a social media campaign that features the album's artwork (fig. 2) and audiovisual previews, music videos and abstract visualizers will also be released for each song on the album, and will use film that was shot in each of the recording locations that were used during the music production. This video content will be hosted on the label's YouTube Channel, as well as the producer's website.



Figure 2. *Atomic Age* Artwork by Kate Ellwanger

8. Conclusion

As Rick Rubin aptly summarizes his relationship to gear, “art isn’t in the tools, material, equipment you use. It’s in the way you see the world.” No time, no budget, no resources — these are common excuses used to procrastinate, stay safe, and stay small. But creative, high-quality work is not hindered by lack of resources. Instead, it is a lack of resourcefulness that often stunts the growth of any artist or creator.⁵ *Atomic Age* brings this philosophy to life by showing what is possible with a small budget, huge creative drive, and expansive imagination.

⁵ Byrne, David. *How Music Works*. New York: Three Rivers Press, an Imprint of the Crown Publishing Group, a Division of Penguin Random House LLC, 2017.

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