John Fogarty

A Portrait of Modern Music Production

In the spring of 2021, three boys were rearranging furniture and setting up a drum kit in a basement just outside the suburbs. The room was large with tile flooring and little to no decor, just about the only thing on the wall was a television. On the other end, behind the near-assembled drum kit, there was a ping pong table. There were windows lining the southern facing wall adjacent to it, looking out towards a bundle of trees and allowing the sun peeking through the overcast May sky to light up the room. They thought the basement would be the perfect opportunity for a natural reverberation, although they were skeptical.

> *"From a technical standpoint I was like , 'this room is too big and open.' I thought it had*
> *potential to be a recording hub for the next couple weeks. I was cautiously optimistic."*
> - *Patrick*

Patrick Bielmeier had this thought as he ran mic cables from the audio interface to the drum mics. Patty is built like a 6'2" teddy bear with tanned skin as a result of Cuban ancestry. He has dark brown eyes and at this time was sporting a big poof of matching hair. Sometimes he would wear round-rimmed glasses to read music easier. As he was setting up the drum mics, the owner of said drums was relaxing in his drum throne, Peter Hunsader.

> *"I thought the roominess of the basement would be echoey and make the sound very big.*
> *Everyone playing together would also make us sound better."*

Pete is the shortest and skinniest of the 3 band members. He has wispy light brown hair that's usually in a shorter surfer cut resting above hazel eyes and a round face. The last member of the band is me. I was the bridge between Patrick and Pete in stature. My red hair was fashioned in an unfortunate crew cut above my young, green eyes and pale face. We were all gearing up to make the greatest collaboration of originals we'd written so far, an album simply titled, "Mom's friends," and this time we were going to alter our procedure.

The modern recording process is a simple one. Many contemporary composers of any genre use direct inputs to make their music. This allows them to record each instrument individually over time. For example, Patrick and I used this on our first album, "Modern Day Sex Symbols Like Us."

"it was a branching out of styles."
- *Patrick*

He didn't say much more about it (it's not his favorite work of ours). We would start by writing a single line of bass for a verse or chorus and literally copy and paste it until it was the length of a song. Then, we moved to drums, which we didn't need a drum set for. Our first album was recorded in the middle of the pandemic, rendering Pete mostly unavailable. Fortunately, the invention of Musical Instrument Digital Interface (MIDI) has made it possible to create drum loops from sampled sounds, usually real kits that have been recorded, distorted, and edited. Alternatively, drums can be created from digital sounds, like synths. Most synthesized drum hits

end up as 808s heard in bassy hip-hop, which is not something we were interested in making. We would create a drum loop using the metronome as our guide and use it as a backing track to the entire song with slight variations throughout. Then, we'd layer guitars, pianos, synths, and vocals. We only needed one microphone and one cable. If we wanted, all of our arrangements could've come from one keyboard. Using MIDI, different sounds can be assigned to said keyboard. We could've recorded all of our songs using it, but they would sound terribly electronic. Regardless of MIDI, there are also third party systems called plugins (pronounced "pluh-gins"). Plugins allow artists to pursue a specific sound by tweaking audio recordings to their design. They're essentially digital guitar pedals, but more universal and easier to use. Plugins can be used on anything from a single note to an entire song. All of these music production techniques are utilized through DAWs.

DAWs, or "digital audio workspaces," are computer programs that musicians can use to record and produce music. Before DAWs, all recordings were done on tape, also known as analog recording. The first DAW was invented in 1983 by a keyboard player looking for a MIDI sequencer, Manfred Rürup, and an engineer, Karl "Charlie" Steinberg. Their first iteration was named Multitrack Recorder and did little more than control MIDI devices, like keyboards. It was a program for the Commodore 64. To be completely honest, I think I'm too young to know what that is, but it looks like an early rendering of a computer. Despite Multitrack Recorder's simplicity, it laid the groundwork for every modern DAW, including what it eventually became. It had many iterations which eventually landed it with the name Cubase, a DAW still used by modern producers. Throughout its lifespan, Cubase has always been at odds with another DAW, Logic. Logic also got its start from a MIDI sequencer released in 1985. It went through many iterations before its developers, Gerhard Lengeling and Chris Adam of the company Emagic,

released Notator Logic; this became just Logic. Logic was the first DAW I used when learning about audio software.

Although Patrick and I both had experience on Logic, we would not be using it for this album. We were pursuing a sound that could only be achieved by synced musicians recording their respective parts simultaneously. In the modern recording era, this is something one would likely rent a studio for, but we were young and ambitious. The basement became our studio. This was the first time we tried recording separate instruments simultaneously, and we were slightly stressed about the project.

"I didn't know how I was gonna make Pete's drums blend with us. Because I was playing and also monitoring the recording, I couldn't keep track of the levels."
- *Patrick*

In a real studio there would be an audio engineer taking care of these issues. We were self-produced, so we had no such luxury. Being self-produced also held certain advantages though; there was no unnecessary input from people like managers or audio engineers. Pete was also worried about the project.

"If one person messed up we all had to start over, and little mistakes go unnoticed."
- *Pete*

In hindsight, several little mistakes did go unnoticed, and they're audible throughout the album. The average ear may not pick up on these mistakes though, and it gave our music a sense

of authenticity. Also, we had to record songs multiple times (sometimes in the upper-teens) before we ended with a take we could agree on. However, we powered through these worries and got set up.

We begin by setting up our eXternal Line Return (XLR) cables. These cables have three prongs on one side that plug into the audio interface, and three holes on the other that the three prongs of the microphone enter. We usually use six microphones at a time, one for the bass drum, one for the snare drum, one for the rack tom, one for the floor tom, and two that hang over the top of the set to pick up the cymbals and hi hat. In this case we used two more mics, one for Patrick's bass amp and one for my guitar amp. Once the microphones are plugged in, we fire up the audio interface; we use a Scarlett 18i20. The 18i simply stands for 18 inputs, meaning a sound technician can input 18 microphones or instrument cables at a time. The 20 stands for the outputs, meaning 20 things can be output into another software or interface. We only had to use two outputs.

The first output ran to a four-way headphone splitter so we could all hear what we sounded like in the mix. A frequently asked question is why we would need headphones to hear our instruments if we're plugged into amps? The answer is that the music coming through a DAW can sound different, perhaps too quiet or too loud. Some sounds can clip, which is when the sound is so loud that the mic distorts it, like a bass that's too boosted. With headphones we were able to monitor our recorded sound while playing.

The second output ran into Patrick's laptop, which was running the DAW software. Because we would all be playing live together, it's only right that we'd use the DAW Ableton Live.

"I started on Ableton and I still use Ableton. Ableton was never meant to be a DAW, it was a live performance software. It flows better."

    - *Patrick*

Patrick is correct that Ableton was never meant to be a DAW. It was developed by Bernd Roggendorf with the assistance of a techno duo known as Monolake, Gerhard Behles and Robert Henke. Behles and Henke had previously coded PX18 in 1995, which was (surprise, surprise) a MIDI sequencer. They eventually updated this to focus more on sample looping and playback for live performance. That sounds very confusing; basically they could utilize sounds being played by a computer software when performing live. If there's a sound that can't be recreated, an artist will likely play a recording of it. Live was released to the public in 2001. It is used mostly in live performance, but many people still use it in the studio because of its more creative elements.

"Ableton is by far a more creative software, Logic is more about getting a track recorded and making it sound good,"

    - *Patrick*

Ableton Live changed the rules of what a DAW could be. Its biggest contribution was a session view grid, which figuratively and literally changed the way we view music.

Back in the basement, we had Ableton up on Patrick's laptop plugged into an HDMI cable that ran to the TV. We were all positioned in a triangle around the rug. Patrick had his back to the windows with the TV on his left. His laptop was nearby, in case anything had to be changed between takes. Pete was closest to the ping pong table, with his drum kit facing the TV.

I was facing Patrick on the opposite side of the windows with the TV to my right. We could all see each other and Ableton to monitor ourselves and our sound. The two amps were next to Patrick and I, mic'd up and covered in pillows. We used these pillows to dampen the bleed of the drums. If the drums were picked up too heavily by the amp microphones, there'd be overlapping sound and the audio would become distorted. We were ready.

This was our way of returning to the past. We didn't use a metronome, so the tempo or time signature could change on a whim. We didn't have to follow the programmed recording process that we all grew up doing. Pete clicked us in for the first song.

"We were able to play more by feel, how we felt in that moment. Anytime you play with somebody you tend to play better. We were having fun! We had like a pseudo stage presence."

- *Patrick*

"There's like an intimate sexual tension between all of us that allows us to play together and feel the climax… I mean… It's easier to play and match each other's vibe."

- *Pete*

Well said Pete.

We finished our recordings in three days, but our job was still unfinished. We started the mixing and mastering process after getting all the audio tracks recorded. Mixing and mastering can be done entirely through Ableton. Plugins can be used not only for altering the sound of an instrument, but for altering the sound of an entire project. This technology allows audio

engineers to put things like compressors over pre-recorded material. A compressor controls the bass, mid, and treble of the recording, boosting or reducing any or all. In the past, a compressor would have to be controlled manually while the recording was taking place. Plugins open up a new world of mixing and mastering for self-produced artists.

Post-production, our job was easy. A distribution service called DistroKid, which costs $20 a year, sends our music to all modern streaming platforms like Spotify, Apple Music, and Youtube. This spares any modern artist from having to accomplish a record deal, and it saves them the money of having to buy and distribute CDs or vinyls. The downside of streaming is that nearly no money is made. Per stream on Spotify, our band makes $0.0018 split three ways.

Regardless of the money, we cherish this passion project of ours, and we were fortunate to use a DAW to make it.

"My favorite part was f**king up, making changes, turning the initial ideas into s**t that was palpable and better. Everyone had influence at the same time, hive mind moment."
- *Pete*

"My favorite night was when Carter came over and Demitri was yelling in the mic. We partied and we had our last little hurrah for the album. It was a good sense of finality."
- *Patrick*