Gut vs. Data: Mapping career arcs with touring history in British indie and alternative music

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Abstract

Music managers of the United Kingdom, BBC Radio hosts witness the rise, fall, and plateau of many musicians' careers. At a recent conference, one host translated the touring history of one of the nation's biggest bands to their career arc, putting forth a niche proposition on measuring success in music. With that idea in mind, the overall aim of this thesis is to map touring histories to British indie and alternative career arcs in a post-streaming world, ultimately creating and visualizing an artist's career fingerprint through live music. The results identify and investigate patterns of career arcs that emerge when viewing artist touring histories at scale, informing music industry professionals what to look for in the future, informing young acts how to utilize live music, and informing fans of another exciting way to explore their favorite band. The uniqueness of the British music industry and the impact of indie and alternative music from the UK are discussed alongside why the live sector is so critical in the greater music industry at a time when albums are streamed and fandoms rally.

A database of British indie and alternative musicians incorporating Spotify and last.fm's APIs was created and used to derive touring histories from Songkick's API. Three primary data visualizations were made from the touring history dataset. First, a cluster of bubbles, with each bubble representing an individual artist. The bubble transitions into a strip / barcode plot for each artist. The lines on the strip plot are tour dates spread over an artist's career timeline. The strip plot transitions into the third data visualization, which sees the lines translated into circles. The circles are encoded with the size of the venue at each tour date. Adding the venue size dimension allows the audience to understand the progression of success as a larger venue size translates to greater popularity at the time of the tour date. The visualizations are packaged in a visual essay and intended to exist in a data journalism space.

Introduction

The British Broadcasting Corporation (BBC) is the largest public broadcaster in the United Kingdom, unifying much of its media—TV, web, and, notably for this conversation,

radio—in one entity. While not the only station provider, BBC Radio is the frontrunner of British airways, covering all genres of music, talk radio, visual radio productions, news, and more at a national and local level. This centralized model is often a lifeline to up-and-coming musicians, who can capture the ears of an entire nation with a single play on BBC Radio.

Under the BBC Radio division is BBC Music, which manages the actual musical content played on its channels. BBC Music began an initiative called Introducing in 2007, a gateway for new artists to be involved in the conglomerate's radio programming and take their careers to the next level. Artists add their music to an online uploader. The tracks get distributed to local hosts and show producers, who listen, broadcast, and praise as they see fit. Ten years after launching BBC Music Introducing, three years of music—470,000 tracks—had been uploaded. The success was obvious: By 2017, the program had a hand in 14 No. 1 singles (68 Top 10) and 28 No. 1 albums (54 Top 10) on the United Kingdom's charts and 58% of the acts on the prestigious Reading and Leeds lineup, the longest-running music festival in the world.[1]

In October 2019, BBC Music Introducing held its annual conference, a multi-day event where professionals spoke about careers in the music industry. The guests of honor were Catfish and the Bottlemen, who, after uploading their music to Introducing in 2009, have exploded as one of the biggest artists in the UK and became a household name over the past decade. The Welsh quartet have played to over two million people across the globe, sold over 6.5M records, and won the prestigious Best New Artist honor at the 2016 Brit Awards, the UK's Grammys equivalent.

At the conference, BBC Radio 1 host Jack Saunders surveyed the band's career-defining moments in an expansive interview. Many of those moments were fueled by their focus on live music, such as headlining Scotland's largest music festival TRNSMT and playing to an estimated 50,000 people in one night. Towards the end of the conversation, Saunders encapsulated the band's relationship with touring throughout their career and stated, "You've gone from playing all those venues—that relentless gigging at the very start—and worked your way up to all the different venues throughout the country, to the point where you have now played every single arena in the UK possible." Saunders essentially translated Catfish and the Bottlemen's career arc to their touring history.[2]

It's an intriguing proposition: mapping an artist's touring history to their career arc, a measure of success different from traditional metrics—such as chart rankings, album sales, and fancy awards—but one that goes hand-in-hand with them.

As Frith, Brennan, Cloonan, and Webster stated in 2013, "…most present accounts of 'the music industry' over-privilege the recording sector at the expense of the sector in which most musicians in all genres have been located historically: the live arena."[3] Way before streaming and YouTube, live shows were—and still are—tangible indicators of a band's popularity, physically bringing together people in a space who know and follow the

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[1] BBC, "What is BBC Music Introducing?"
[2] BBC Music, "Catfish and the Bottlemen: The Rise."
[3] Frith et al., "The History of Live Music in Britain."

music. This often translates into fandoms, famously dating back to Elvis Presley and The Beatles and still seen today from K-Pop to One Direction.

Even while becoming more advanced with modern technology (see the advent of virtual boy bands in Japan, for example), concerts are the most consistent, recognizable, and raw experiences in a music world progressively overcome with falsity and confusion. The way Billboard ranks its charts has changed, but the way musicians fill a venue with people has not—you cannot fabricate people in a space at scale like you can song streams.

Even so, in the age of streaming records rather than purchasing them, the live sector has become a more profitable—and therefore more important—aspect of the music industry at large. Yet, it is a corner with often the most archaic tools: "Old-school" record company executives frequently turn down the "Moneyball"—aka data-driven—approach used in other areas of the music industry in favor of relying on their gut and a gig to sign a new band.

The British music industry is an interesting case study because of the aforementioned media centralization by the BBC, the country's compact geographical size in comparison to the United States, and the interplay between live music and social history. Credited with the likes of The Beatles, The Rolling Stones, Oasis, Joy Division, and even One Direction, the UK has always been at the forefront of bands—indie and alternative music, in particular. With bands comes a focus on playing instruments in the live arena. All in all, British indie and alternative music—from The Rolling Stones to Blur—has made a noticeable impact on popular western music as a whole, and its intrinsic relationship with the live sector makes it a fertile place to investigate touring as a measure of success.

Thesis statement

By mapping touring histories to British indie and alternative career arcs in a post-streaming world, the overall aim of this thesis is to create and visualize an artist's career fingerprint with live music as a base measure of success. Patterns of career arcs emerge when analyzing touring histories at scale, which, in turn, allow us to predict what the future of up-and-coming artists may look like when they are too early in their careers to have worked up major charting or critical successes.

In other words, this thesis looks to shed light on whether paying attention to musicians' touring histories is a good indicator of their current and future success. The results also have potential to act as advice for up-and-coming artists who want to utilize touring as means to build momentum in their career. Lastly, by creating a unique visual of touring histories and career arcs, fans and listeners now can explore their favorite artists in a non-traditional way.

Treatment

Background

The role (live) music plays in Britain's history

Throughout the nation's history, live music has played a pivotal role as a bridge between the music industry and the State, as well as positioning itself as a thought-provoking reflection of society, economics, and class. "A history of live music is necessarily also a history of cultural politics," as Frith et al. stated in their survey of live music history in Britain. They trace the sector back to the 1950s and the end of World War II: As the country was attempting to rebuild itself, the live music sector was rebuilding its structure, and, at the same time, creating an entirely new landscape. Notably, the new landscape bred a "do-it-yourself" ethos as the age of a "teenage consumer" took hold.[4]

The DIY ethos and connections to society and class pose intriguing implications for the idea of a "working class band," a term still frequently used in conversations today. In a 2015 interview with NME (one of the most well-known and controversial British music publications), the lead singer of Catfish and the Bottlemen was asked if "working class bands" had a harder time, pointing to a quote from Oasis' Noel Gallagher and the relevance of this ethos now. He replied, "I only know one way of doing it. We were together eight years, we lived in a van for seven of those years, and we played every single venue up and down the country—if it was 10 people or a hundred people or a thousand people, we play[ed] every single place."[5]

This sentiment echoes Saunders' characterization of their career and its connection to touring in the BBC Music Introducing conference interview. "For you guys, it's just been so relentless playing live—even when you first started out, the same venues you were playing over and over again, honing your skills, getting as tight as possible as a band—and that to me feels like the thing [which] has made you go up on those stages to play to 50, 60-thousand people," the host—who currently presents the BBC Radio 1 Indie Show, a haven for new bands and artists—said. The ideas of a working class band and touring relentlessly to get your name on the map are two entirely separate concepts, yet they are not entirely mutually exclusive. Simply put, privilege—in its many forms—frequently leads to connections in the music industry, possibly accelerating career arcs and bypassing years of that "relentless gigging," as Saunders called it.[6]

A recent case study inside this phenomenon is The 1975 and their frontman. Matty Healy is the son of two successful sitcom actors in the UK—his mother, Denise Welch, performed in *Coronation Street*, *Loose Women*, and *Waterloo Road*; and his father, Timothy

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[4] Frith et al., "The History of Live Music in Britain."
[5] NME, "Catfish and the Bottlemen."
[6] BBC Music, "Catfish and the Bottlemen: The Rise."

Healy, performed in *Auf Wiedersehen, Pet*. Many criticized the band's atmospheric rise to success, which will be discussed in depth later on, as a symptom of the frontman's famous parents, but Healy stated multiple times that the accusations are far-fetched. "In the early years of growing up, you're living in a creative environment," he rebutted in a late-2013 article. "But you've got to remember, my parents weren't embraced by the mainstream till I was 17—*Loose Women* and all that. I was already in a punk band. So when you grow up in that environment, there's a weird thing of not wanting to be like your parents, because you're an individual."[7]

The interplay among social class, paths to success, alternative music, and playing instruments can be seen fifty years ago when the origins of heavy metal and Black Sabbath emerged from World War II-torn Birmingham. As premiere rock publication *Loudwire* explained,

> "This left the next generation to feel those effects economically, which led to teenagers and young adults pursuing an escape from the most blue collar of lifestyles. The steam hammers could be heard from factories pounding in the distance, and these jarring, rhythmic machinations certainly fostered an environment to where those sounds can be translated through heavy music. Life was bleak with not much to aspire to beyond a lifetime of hard-nose work, which still wasn't enough to guarantee sustainable living for a family. This grim outlook channeled into messages of hopelessness and despair, also leading to feelings of isolation and being trapped, which was found in spades in Black Sabbath's lyrical content."[8]

This historical example echoes Frith et al.'s "do-it-yourself" ethos that surfaced as the nation and live music sector were rebuilding themselves after World War II around a "teenage consumer." As John Mullen put it in his *UK Popular Music and Society in the 1970s* essay, "popular music is not just a collection of texts and music, but a series of mass activities in constant flux, reacting to social and technological transformations."[9]

British influence in popular music

Despite possessing a population size and land mass that fits in the US many times over, the UK has produced some of the most influential musicians in the history of popular western music. As the remnants of World World II began to wane into "feelings of generational revolt" and "teenage consumerism," the 1960s saw a merge of pop into rock, particularly with the advent of arguably the two most influential rock—and in general—bands in modern history: The Beatles and The Rolling Stones. The 1970s pushed rock further as punk rock (Sex Pistols), glam rock (David Bowie), and heavy metal (Black Sabbath) joined the scene as unique subgenres, all defining popular music way beyond their home nation's compact borders. The UK's insistence on live music in conjunction with the

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[7] Hann, "The 1975's Matt Healy: 'Success Is Brittle'."
[8] Loudwire, "Who Really Invented Heavy Metal?"
[9] Mullen, "UK Popular Music and Society in the 1970s."

modern development of televisions manifested in *Top of the Pops* and the more serious *The Old Grey Whistle Test.*

From Jimi Hendrix headlining Isle of Wright in 1970 to the then "Glastonbury Free Festival," the live arena found its home in popular music with the wide expansion of festivals in the UK—the world longest-running of which, Reading, in particular. "The Reading festival, which in the 1960s had featured first jazz and later rock, was the first major festival to embrace punk rock, towards the end of the decade," Mullen wrote. "Just as in the sixties there had sometimes been brawls between fans of trad jazz and those of modern jazz, punks and other rock fans sometimes fought it out at Reading." Reading, now occurring in two different cities as Reading and Leeds, maintains its influence in popular music around the globe fifty years later.

In late 2018, the 1975 were announced as one of four headliners for Reading and Leeds 2019 (the Foo Fighters, twenty one pilots, and Post Malone make up the other three).[10] It would be their main stage debut. Apple Music Beats 1's Matt Wilkinson asked lead singer Matty Healy about his band's 2019 headlining set, which he said, "It's like after I got to 13 [years old], Christmas took a backseat, and the date on my calendar was Reading and Leeds." He continued, "I mean, I've had some moments there: I saw Arcade Fire second on the Carling Stage in 2006."[11] Three years prior, while supporting their second album, the band were offered—albeit not a headlining—but a main stage spot. They turned it down and opted to headline the smaller NME side stage. Another three years prior—in 2013, a month before their debut album released and shot to the top of the UK Charts—The 1975 played a modest set on the even smaller Festival Republic Stage. Even though The 1975 themselves are a unique, modern case of skyrocketing fame in many other respects, they are in no way the only example of this kind of monumental ballot jump. Take the Arctic Monkeys, who "made a splash" on Leeds' Carling Stage (a stage designated to unknown and unsigned acts, as aforementioned by Healy in reference to Arcade Fire) in 2005 and went on to "conquer the world" with their chillingly massive headline set in 2014.[12]

It is not a significant jump to assume a popular music festival that serves 150,000 people can act as a mirror of music culture in the host country. However, it is more of a leap to assume those music festivals are also a representation of greater society in the country at the time. Yet, in a climate where gender, race, and sexuality are rightfully surfacing in most conversations, festivals are subjected to the same critical eye as other cultural phenomena. With 2019's lineup announcement, Reading and Leeds continued to attract criticism for its gender breakdown, only booking one headliner who identified as a woman in the last 20 years (Queens of the Stone Age's 2014 co-headliner Paramore—who, led by frontwoman Hayley Williams, played one of the most memorable sets in the festival's history).[13] [14]

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[10] Moore, "Reading & Leeds Festival Announce Headliners."
[11] Beats 1, "Matty Healy: The 1975, Drug Addiction and Glastonbury."
[12] Ferdinando, "The Greatest Reading And Leeds Festival Moments."
[13] McAlpine, "Reading & Leeds: the 12 Most Startling Moments."
[14] O'Connor, "By Refusing to Book Female Headliners."

The importance of the Reading and Leeds festival is not only clear in the UK itself, but also abroad. When interviewed about their headlining spot during festival weekend last year, Ohio's twenty one pilots said,

> "It's really cool to see the progression for us as a band, playing Reading and Leeds and being the last band on the bill. It's so important to us to be a part of this festival and to watch us get all the way up to the top. We still didn't know it was going to be real until we got up on stage and did it and saw the reaction and the involvement. It was special and something we'll never forget."

During the set, twenty one pilots covered Oasis' "Don't Look Back in Anger." On the cover, member Tyler Joseph underscored the influence of festivals such as Reading and Leeds on popular music in western society as a whole to this day and explained,

> "A lot of American bands or bands from other countries or other cultures just assume that they should be a part of the culture here, just assume that they deserve it. [Drummer] Josh and I have been watching festivals over here in the UK, whether it's on the internet or on TV, for years, and we always wanted to be a part of it. We felt like it was just a great way to say thanks for letting us be a part of it because we don't assume that at all, and we want to show them that we respect the history. We felt an Oasis cover was a pretty good way of saying that."[15]

Live music and fandom

The 1975 headlined a sold-out show at Madison Square Garden on June 1, 2017. Even though the Manchester four-piece were 3,000 miles from home, it matched their largest concert in the United Kingdom: London's O2 Arena, where the band did two consecutive shows in December 2016, holds 20,000. On stage that night, frontman Healy encapsulates the 1975's unusual climb to the top in a speech before the emotional track, "Me,"

> "I don't want to be annoyingly humble, but when we started—12, 13 years ago—we never thought anything like this was ever going to be possible. Thank you so much. We're not a huge radio band, we're not a band that's all over every magazine or whatever, so that's proof we are a fans' band."

And he has an important point: One would expect for a Madison Square Garden headliner—a sold-out headliner, for that matter—to, at the very least, have had a song regularly spun on mainstream radio. However, the highest a track by The 1975 has ever reached on Billboard's Hot 100 Chart was No. 80, and that was back in February 2014, more than three years prior to the show. In fact, when documenting their success in 2016, *SPIN* notes that "they might not even need a crossover hit to be one of the biggest bands in America." Yet, fans began to line up—or camp out, rather—on 8th avenue in front of Madison Square Garden an incomprehensible seven-plus days before the show. Their goal

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[15] Reading & Leeds Festival, "twenty one pilots interview."

was to secure a place in the front row, on the barrier of the general admission floor, closest to the stage. Those fans kept track of places in line by writing numbers in black ink on top of hands. In the same interview from early 2016, over a year prior to Madison Square Garden, *SPIN* wrote about the line for The 1975's show at Terminal 5, a smaller venue in New York City. That line stretched for a quarter mile. Writer Andrew Unterberger concluded that not only are The 1975 bigger than you think, but they are also more important than you think.[16]

This anecdote highlights the connection between live music and fandom. In our virtually-driven world, concerts have emerged as the most tangible and visible showing of support someone can show an artist, with many going to great lengths—as The 1975's fans did in 2017—to physically be as close to their favorite band as possible.

Gut vs. data

An expert at the intersection of music and technology, Cherie Hu—aka Water & Music—wrote a seminal piece on data and booking agents called *How booking agents use (and don't use) data.* As she explained, booking agents organize live performances, negotiate with venues, and "often play a hands-on role in building said artists' long-term touring careers." While other parts of the industry rely on analytics programs to track streaming—reminiscent of a "Moneyball" approach—booking agents have not applied the same quantitative rigor as surveyors of the live sector. "But if you think about it, the product that booking agents still engage the most with every day is still the live, face-to-face show—an irreplicable, scarce and even primal experience that has maintained the same fundamental format, value proposition and business model throughout recent history," she explained. "In fact, if revenue is any indication, the brick-and-mortar live show has only become more relevant in the wake of technological change."[17]

In a 2019 Billboard article referenced by Hu, label executives talk about the gut vs. data battle. Atlantic Records' Carrie West, at her SXSW panel on the topic said A&R "used to be a kid like me who drank six Red Bulls a day and was obsessively refreshing my feed, and then it became people who make algorithms and make software." Many are skeptical, though. Even West, who conceded, "There are cases where people have crazy streaming numbers, but they come in a room and are quiet and sullen. And that's a red flag." Rhyme & Reason Records indie label co-founder Emmy Black used an even more physical marker of fandom and success for indie duo The Front Bottoms, "All their fans were getting tattoos of them—that's just love that you can't find."[18]

Touring's importance in the age of streaming

By 2023, the live music industry was set to reach $25 billion[19], cementing the sector as an increasingly crucial cornerstone of artists' careers as streaming makes record

[16] Unterberger, "The 1975 Care Because You Do."
[17] Hu, "How Booking Agents Use (and Don't Use) Data."
[18] Cirisano, "Is Today's A&R Based on Data or Gut Instinct?"
[19] Mims, "Live Music Ticket Sales Will Exceed $25 Billion by 2023."

revenues more difficult to get. A concert allows support to materialize itself in the physical rather than online world, through devoted fandoms, ticket sales, and merch sales. However, as artists are finding instant fame on platforms such as TikTok, traditional means of up-and-comers honing skills in the live arena—what Saunders emphasized as a crucial aspect of Catfish and the Bottlemen's reliable success across the board—are being replaced with billions of streams. Hu argued you cannot perfectly mirror viral success with live music success—in fact, she said it was risky. Record company executives often underplay these Lil Nas X-type overnight wunderkinds—who are quickly famous but have no live experience under-their-belt—early in their touring schedule, ensuring they can draw any type of physical (and not online) audience in the first place, they can build hype by selling out small spaces (fear-of-missing-out effect), and they can maintain interest and don't dissipate from public consciousness after throwing funds at a massive arena tour six months down-the-line. Quoting a business intelligence analyst at Paradigm Talent Agency, Hu summarized the presence of data in the live sector:

> "I think data in the music industry needs a bit of a rebrand. A lot of agents don't like it when you just say 'let's look at the data'—but then when you start talking about things like 'charts' or 'touring history,' they become a lot more keen on listening and taking part in the discussion. And for everyone who says, 'Screw the data, I just want to listen to my gut'—I think that's amazing and they should keep doing that, because their gut is a combination of hundreds of internalized pieces of data built up over years of experience that allowed them to hone their expertise. Their gut is their experience talking."

Prior research and work

Frith et al. conducted the first survey on the history of live music in the U.K. Broken into three books, they explore the reconstruction of the live music scene post-World War II through to the 21st century.[20] However, their work is mostly narrative-driven, describing moments either around different bands (e.g., The Rolling Stones) or locations (e.g., Sheffield in November 1962) with little to no support of quantitative data. In contrast, Hu's essay on data in the booking industry is one of the most comprehensive looks at quantitative measures in the live arena. Her crucial ideas and observations, as aforementioned, point to a need for widely-available, original analysis on the subject.[21]

While slightly different than the focus presented here, *The Guardian* explored the idea of analyzing festival lineups and musician popularity.[22] Instead of using a festival lineup as an indication of popularity alone, they compared the 2014 Glastonbury lineup to Spotify streaming numbers. There was an interesting disparity between the lineup and the lineup determined by streaming—legacy acts, such as Dolly Parton, drop lower than their prescribed position, and newer acts, such as The 1975 (at the time), jump up.

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[20] Frith, "The History of Live Music in Britain."
[21] Hu, "How Booking Agents Use (and Don't Use) Data."
[22] Allen, "How would the Glastonbury line-up look if the running order was decided by streaming."

There has been some work on mapping an individual artist's touring history. Prime examples are *How U2 Rocked All Over the World*[23] and *50 Years of concerts of The Rolling Stones*,[24] which visualize the acts' extensive touring histories on maps. Carni Klirs visualized the history of Fugazi in a series of well-designed graphics, including a map of the band's touring history, a map of venues they played in Washington DC, and a tree of other artists they have toured with in the past.[25]

Platforms are being developed for analytics and predictive modeling in the live sector, such as those who gauge presale demand (RoadNation, Seated) and trackers for price for shows and artists (DEMAND).[26]

Data

A summary of the data creation and collection is as follows. The end goal was to generate a database of British indie and alternative artists' touring histories. A series of sub-datasets were formed to achieve that goal. This included artists tagged on Spotify with indie and alternative genres, which, in turn, was narrowed down to a set of artists who indicated in their last.fm profiles they were from the United Kingdom. Further curation ensued to tailor the dataset of British indie and alternative artists, which focused on augmenting the programmatic dataset with artists regularly spun on BBC Radio 1's Indie Show. In order to effectively visualize the artists on a webpage (which would be the final format of the project), the database was trimmed to 174 artists. Touring histories of these artists were pulled from Songkick, which provided metadata on each tour date. Metadata on the venue and its capacity as well as date was used for the resulting visualizations, discussed in the Visualization section below.

Database creation

As already spoken about, British music—indie and alternative, in particular—has played an important role in the development of Western popular music at large. This was prominently seen with the emergence of The Beatles and The Rolling Stones in the 1960s; continued its way through the development of rock, metal, and punk subgenres in the 1970s; blossomed on TV and at music festivals—with some of which, such as the world's longest running Reading and Leeds, still existing today; and reflected itself in societal shifts and moments. Therefore, when deciding to narrow genre and location for the purposes of this thesis about touring histories as a marker for career arcs, focusing on indie and alternative as a genre and the United Kingdom as a location was a natural choice.

A few indie artist databases do currently exist. A notable free option is the 00sindiebanddatabase, but it focuses on mid-2000s artists, which is not the needed

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[23] Bernwerd & Steinward Datastories, "U2 Rocking All over the World."
[24] CartoDB, "50 Years of The Rolling Stones."
[25] Klirs, "Visualizing the History of Fugazi."
[26] Hu, "How Booking Agents Use (and Don't Use) Data."

timeframe.[27] Because of the lack of free, up-to-date, and comprehensive indie and alternative artist databases, a programmatic methodology was devised.

Step 1: Grab indie and alternative Spotify genres

Spotify offers a comprehensive and free Web API and developer tools, allowing users to query albums, artists, playlists, tracks, and more parts of the music streaming service's platform.[28] A sample of quintessential British indie and alternative artists—Arctic Monkeys, the 1975, and Catfish and the Bottlemen—was defined. Using the Spotify Web API's browser console, the genres of these artists were searched and recorded.[29] Artist URIs were derived from the Spotify desktop app. This was done to check the assumption that artists we want in our sample are in fact tagged with "indie" and "alternative" genres. They were, so the methodology proceeded as planned.

Spotify hosts over 4200 genres, including broad ones ("pop") and specific ones ("new wave pop") and very specific ones ("Latin viral pop"). Glenn McDonald's Every Noise at Once is a website that attempts to make sense of the noise by listing, sorting, and visualizing all of these genres.[30] This was the base source of Spotify's genre landscape. All the genre names were copied from the main page and pasted into a Google Sheet (the Every Noise at Once URL includes "`scope=all`," which indicates all genres were listed and not sorted). Data filters were inserted on the list of Spotify genres in Google Sheets. Genres with "indie" and "alternative" in the name were filtered out using the data filter, copied, and pasted in their own spreadsheets. Many genres include locations in their name ("Sheffield indie," for example). Any genre which included a location outside of the UK in its name ("German alternative") was manually (not with Google Sheets' built-in data filters) removed. The result was a dataset of Spotify's indie and alternative genres.

Step 2: Pull artists from Spotify Web API marked with indie and alternative genres

The next step was to use the dataset of Spotify's indie and alternative genres to find artists tagged with at least one of the entries. To do this with the Spotify Web API, a search query was written.[31] The search query required the genre name, as well as included a series of optional parameters. The optional year parameter was written into the search query as well. The timeframe was limited from 2006 to present day. The year 2006 was chosen as a start date because that is the year Spotify was launched; therefore, post-2006 can be thought of as the post-streaming era. The resulting search query (`'genre:"indie pop" year:2006-2020'`) was drafted for every genre with Google Sheets' concatenation formula. The optional market parameter was set to "GB" (the United Kingdom's two-letter ISO ALPHA-2 country code), and the type of result was set to artist. Said succinctly, this

[27] Geere, 00sindiebanddatabase.
[28] Spotify, "Home: Spotify for Developers."
[29] Spotify, "Get an Artist."
[30] McDonald, Every Noise at Once.
[31] Spotify, "Search for an Item."

query searched Spotify's Web API for any artist tagged with the genre, available in the UK market, and was active in between 2006 and 2020.

The data processing language used for this entire project was Python. A Python wrapper for the Spotify Web API, Spotipy, was found and used inside a Jupyter Notebook environment.[32] The Web API was hit with the genre search queries and the artist results were stored in a Pandas dataframe, which was converted to a CSV and uploaded to Google Sheets. The result was a dataset of more than 4600 artists tagged with at least one indie and alternative genre on Spotify. This can be extrapolated more simply to a dataset of indie and alternative artists. The dataset included Spotify's "popularity" parameter, which is defined as,

> "The popularity of the artist. The value will be between 0 and 100, with 100 being the most popular. The artist's popularity is calculated from the popularity of all the artist's tracks."[33]

Step 3: Cross reference with location using last.fm API

Even though genres with a location outside of the UK in its name were removed from the indie and alternative genre dataset in Step 1, non-British artists could still be tagged with the more broad genres, such as "indie rock." Therefore, the dataset of indie and alternative artists from Step 2 still had to be filtered for artists from outside the UK. Spotify's Web API does not include a query for artist location. Because of this, a different API needed to be used.

last.fm is a music website that tracks what users' listen to in order to craft detailed listening profiles.[34] It also includes pages for artists, which features metadata such as a biography, photos, and similar artists.[35] Like Spotify, last.fm offers a free web API. Unlike Spotify, last.fm's API allows the querier to access metadata, namely those biographies. Inside the biographies are often an artist's home location. The query from last.fm's API used to scrape this information is "`artist.getInfo`."[36] Again, a Python wrapper for last.fm's API, pyLast, was found and used in a Jupyter Notebook environment.[37] Every artist from the indie and alternative dataset was queried against last.fm's API with pyLast, and their biographies were stored in a Pandas dataframe, which was converted to a CSV and uploaded to Google Sheets.

A combination of Google Sheets' built-in features, manual vetting, and curation on the artist biographies dataset followed. First, using Google Sheets' data filter, any artist with less than a 25 Spotify popularity score was removed. Second, any artist who indicated a home location outside the UK in their biography, who upon a Google Search was found to be not from the UK, or whose location could not be found within the last.fm biography or the Google Search were manually removed. Any genre false positives were manually

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[32] Plamere, "Plamere/Spotipy."
[33] Spotify, "Get an Artist."
[34] Last.fm, "About Last.fm.
[35] Last.fm, "Catfish and the Bottlemen Music, Videos, Stats, and Photos."
[36] Last.fm, "Artist.getInfo."
[37] Pylast, "Pylast/Pylast."

removed (namely, grime artists). Any artists who released their first album before 2006 were manually removed. Using curation and tracklistings from BBC Radio 1's website, any artists regularly played on the BBC Radio 1 Indie Show were added.[38] The result was a dataset of over 400 British indie and alternative artists who released their debut album after 2006 and have, therefore, existed in the post-streaming era.

Step 4: Pull tour dates from Songkick's API

In order to more effectively visualize in the final visual essay (see Visualization section below), the resulting British indie and alternative dataset from Step 3 was manually curated down from 400 artists to 174 artists. The next step was to pull touring histories for those 174 artists to create the goal database of British indie and alternative touring histories. To do so, Songkick's free web API was used. Songkick is an online repository of concerts and live music, allowing users to track shows and find tickets.[39] Music fans often see Songkick used as a plug-in on artist websites to list upcoming tour dates. To query touring histories, the Songkick API requires an artist ID. The dataset right now only includes artist name. The Songkick API also offers an artist ID search query.[40] Again inside a Jupyter Notebook environment, Songkick's API was hit with an artist ID search query for every artist in the dataset using Python's Requests library. The resulting artist IDs and names were stored in a Pandas dataframe, converted to a CSV, and uploaded to Google Sheets. The artist IDs were then used to query all the artists' gigography, aka their past events. These were also stored in a Pandas dataframe, converted to a CSV, and uploaded to Google Sheets. The resulting dataset was touring histories for the final list of British indie and alternative artists.

Step 5: Pull venue capacities from Songkick API

The touring history data was first cleaned. Dates before 2000 (false positives) and festival tour dates were removed. The date was also formatted from the `start` column. A series of Google Sheets formulas extracted the `venue id` from the `venue` JSON object. The venue IDs were pasted in their own sheet. In a Jupyter Notebook again using Python and Requests, the venue IDs searched the Songkick API for venue capacity using the venue details query.[41] Venue IDs and capacities were stored in a Pandas dataframe, which was saved as a CSV and uploaded to Google Sheets. The resulting dataset was venues and their associated capacities.

Step 6: Merge into final database

The last step was to merge the venue capacities with the touring histories and format the data for the visualization. The venue capacity CSV was uploaded to Google Sheets. The venue capacities were to be binned by small, medium, and large venues. To

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[38] BBC Radio 1, "Radio 1's Indie Show with Jack Saunders."
[39] Songkick, "Bringing the Magic of Live Music to Fans Everywhere."
[40] Songkick, "Artist Search."
[41] Songkick, "Venue Details."

determine the cut off for each bin, descriptive statistics were performed on the venue capacities, taking the minimum value, the maximum value, the median value, and the mean value into account. From there, a small venue was determined to have less than 800 capacity (the median), a medium-sized venue had between 800 and 5,000 capacity (the mean), and a large venue had over 5,000 capacity. Small venues were assigned a value of 1, medium venues were assigned a value of 2, and large venues were assigned a value of 3. Venue IDs that returned no capacity value were assigned a NULL value. Because the goal is to find trends rather than map every single tour date, missing venue capacities were not manually found. However, this is a logical expansion to the project (see Future Investigation section).

A Google Sheets Vlookup using the venue ID as a key found the associated venue capacities and linked them to the artist touring histories. The artist name, date, and venue capacity columns were moved to a new Google Sheet. The columns were renamed `name`,`date`,`venue_size`, respectively. A final column of 1s, `tour_date,` was added for the final visualization. The artists were filtered one last time. Artists with less than 30 tour dates were removed as well as artists who had over 50% of their venue capacities as NULL. The Google Sheet was saved as a JSON to be inputted in the visualization.

Step 7: Small multiples and tagging

The resulting touring histories were visualized in small multiple format, as described in the Visualization section below. They were manually tagged with one of six different career arcs.

I. Steady Risers

Steady risers are artists, usually farther along in their career, who display a steady rise to success. They often tour in a lot of small venues at the start, eventually advance into medium-sized venues, and go on to play large venues almost exclusively.

II. Big Players

Big players are artists, also farther along, who usually explode into large venues early on and maintain those large venues throughout their career.

III. Consistent

Consistent artists display a healthy career—usually a tad bit shorter in length than steady risers and big players, but not always—of medium-sized venues, with the potential to move up at some point. Either way, they're maintaining a loyal fanbase.

IV. Getting There

Artists classified as getting there have careers that are just taking off. Their popularity is rising—they are probably playing medium-sized venues consistently—but they still have a ton of potential to grow even more down-the-line.

V.   Overnight successes

Overnight successes are very early in their career—who, after having not toured at all or just in small venues—exploded into large venues. It is rare but does happen due to a variety of circumstances, most prominently a large artist taking them out on tour to open their shows.

VI.   New to the Scene

Artists who are new to the scene are also very early in their career. Many are touring heavily to increase exposure, even if just in smaller venues. Others, like overnight successes, are getting picked up occasionally by established acts for an opener slot, letting them dip their toes in large venues.

The tags were added as a crosswalk in Google Sheets and matched with their touring histories to create the final dataset.

Data Access

Due to Songkick API restrictions[42], only the stripped down final dataset of British indie and alternative artist touring histories from Step 6 is available on Github at https://github.com/caitlynmralph/thesis/blob/master/data/small-data.json. All data used in the visualization was converted to JSON format for easy D3 manipulation using a Google Sheet add-on.

Visual metaphors from the data

A barcode is a unique identifier for products in a store. Touring history for an artist is their unique identifier—their barcode—showing where they have been and containing additional metadata. It tells us something about the product—the artist—we are analyzing. The touring histories inherently speak to a timeline-based visualization. The length of a barcode plot can represent time, with a binary variable happening at different points along the timeline. In this case, the binary event is a tour date occurring at that moment on the timeline. Barcode charts relay density and frequency. They also have an interesting musical quality—almost resembling blurred sheet music or the neck of a bass guitar. Barcode plot is a colloquial name for a strip plot, which it will be referred to from here on out.

When thinking about circles, people, and data visualization, circles often contain a unit—an amount—of people. In this case, circles literally translate to venue capacity, which,

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[42] Songkick, "API Terms of Use Agreement."

by definition, also contains an amount of people. The visual metaphor translates smoothly, allowing lines on the strip plot to evolve into circles encoded with the venue size at each tour date. The resulting visualization acquires a musical quality in flow, texture, and form. Visual inspiration was taken directly from Martin Wattenberg's "Shape of Song." The project displays circles lined up on a song's timeline in what Wattenberg calls an arc diagram. The edges of the arc connect two repeating passages of a song's composition.[43]

Visualization

Design

Mockups of the visualization were created in the online prototyping software Figma. Figma is a free platform that allows Google Docs-like editing among peers and straightforward CSS copy-and-paste, so the style is easily repeated in the frontend. Organized inside the Figma for this project were a board of design inspiration, a previous design project also for inspiration, links to pertinent documents, rough sketches, rough mockups, preliminary data results, high fidelity mockups, real copy, the font study, the color study, and the final hero image.[44]

A font and color study were performed. For the font study, the initial intention was to use both a sans serif and serif font.[45] After prototyping, a simple Helvetica was chosen. Since the resulting visualization is intended to exist in the data journalism space (more on that below), the recognizable, clean, and Swiss nature of Helvetica is incredibly easy to read, does not distract from the visuals, and does not feel clucky but also does not disappear on the page. The reason it should not disappear from the page is that it is aimed to be a piece of journalism, so the words do matter, to an extent. The idea of pairing with a serif font was discarded in favor of just the sans-serif. An additional font restriction was cost, so the possible corpus was limited to built-in families and Google Fonts.[46]

For the color study, The 1975's albums were used as inspiration.[47] The 1975 are a continual source of design inspiration as their visuals are integral to their entire image as a band. Each album inherits its own universe of colors and overall look, feel, and style, which can easily be extracted and used as inspiration for design formats outside of album covers, photos, and set designs. Art from three of their albums were placed in the Figma, and the colors were extracted using the eyedropper tool. Four colors were derived from each album. In the end, colors from their most recent album, *Notes on a Conditional Form*, were chosen. The album cover was designed by Samuel Burgess Johnson, who also does most of their other visual work as well.[48] Even though many will not pick up on this visual decision, it is a nice connection for those who do, so much so it is worth noting. This included two

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[43] Wattenberg, Shape of Song--Method.
[44] See Appendix 1.
[45] See Appendix 2.
[46] Google Fonts.
[47] See Appendix 3.
[48] Instagram, "Samuel Burgess-Johnson (@Samuelburgessjohnson)."

base colors—a dark gray (#282828) and a smooth cream (#F3EEE9)—as well as a bright yellow accent color (#EEFF00). Instead of just using black and white, the gray and the cream add more intention and depth to the page, softening the visuals. The gray served as the base background while the cream served as the base background for the text and circles in the data visualization. The yellow served as an accent, such as for text highlight and axis labels.

The header included a large accent circle in the same style as the circles in the data visualization for decoration. In the project's hero image, low opacity images of the artists spoken about in the visualization were collaged in the background. As discussed below, imagery helps ground the topic to those who are new to the concepts of touring (live shows, venues, venue capacities) and the artists themselves. The overall design was supposed to feel polished but engaging, clean but not sterile, and journalistic but non-traditional.

Implementation

As aforementioned, the project culminated in a web app. The base Javascript framework used was Vue.js[49], but the Vue.js framework Nuxt.js[50] was ultimately used to build the web application. Vue and Nuxt are approachable and versatile frameworks that split the code into components, so you can easily break-off parts of the web app in their own digestible sections. It also offers a variety of plugins to enhance the web application's components.

Two plugins were used in particular for this project. First, scrollytelling was chosen as a format, a decision that is discussed in greater detail below. The Vue wrapper, vue-scrollama[51], for Javascript scrollytelling library Scrollama[52] was implemented, which uses intersection observer and a series of steppers throughout the components. Second, Data-Driven Documents, or D3, a Javascript library to build data visualizations by directly manipulating the Document Object Model, or the DOM, was also implemented for all the visualizations.[53] The web app was hosted on Github pages.

Website walkthrough

Since the result is supposed to exist in the data journalism space as a visual essay, narrative is an important aspect of the web app. The visual essay's narrative uses a pyramid structure, starting with a small example, progressively showing more examples, and then finally revealing all the data. This is in contrast to the inverted pyramid structure used in journalism where all the most important information is presented at the top. This slow build-up structure was chosen to build the reader's understanding of the non-traditional data visualization and its topics. It also assumes the reader is there to understand the

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[49] Vue.js, "Vue.js."
[50] Alexchopin, "Nuxt.js - The Vue.js Framework."
[51] Vgshenoy, "Vgshenoy/Vue-Scrollama."
[52] Russellgoldenberg, "Russellgoldenberg/Scrollama."
[53] Bostock, "Data-Driven Documents."

overall story rather than play with the data in a dashboard-like format. While a dashboard and more tool-esque structure was a viable option, it was not the intended form of consumption. The goal was to see trends in the data even though it is robust enough to explore. The visual essay and its visualizations were designed to live on a magazine or some other music journalism outlet's website.

Again, to build the reader's understanding of the non-traditional visualization and its dataset, scrollytelling was chosen as the main navigation format. Scrollytelling allowed the visualizations to actually be built piece-by-piece and therefore broken down into understandable portions. Later in the visual essay, it allowed for each career arc pattern to be dissected, explained, and compared next to each other. It also mirrors scrolling through a longform journalism article. Instagram photo and YouTube video embeds are used as a motif throughout to actually show the artists, the venues, and the live shows being discussed.

The visual is split up into five components / sections.

I.   Introduction[54]

The introduction includes the header (title, deck, and byline) at the top as well as scrolly text introducing the project's main concepts. First, it explains why UK and indie / alternative music was choses as a locale and genre. It then explains the BBC Music Introducing interview with Catfish and the Bottlemen, in which BBC Radio 1 host Jack Saunders said the following,

> "You've gone from playing all those venues—that relentless gigging at the very start—and worked your way up to all the different venues throughout the country, to the point where you have now played every single arena in the UK possible."

This essentially translates Catfish and the Bottlemen's touring history to their career arc. The importance of concerts and the live arena is laid out before stating how record company executives often still rely on their gut rather than data to pursue a new artist.

II.   Single band explainer[55]

The introduction transitions into the second section by telling the reader they are now going to test the radio host's theory about Catfish and the Bottlemen, their touring history, and their career arc. By focusing on one example from the dataset, we can help the reader understand the new concepts at play: artists, live music, touring, and the visualization itself. The visualization is not a traditional data visualization—a bar chart, line chart, etc. First, the artist is represented as a circle. The circle is transformed (triggered by a scrollytelling step) into a strip plot, with the length of the bar being the artist's career timeline and the lines representing a tour date existing at that point in time. Again,

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[54] See Appendix 4.
[55] See Appendix 5.

triggered by a scrollytelling step, the lines are transformed into circles encoded with venue size at that date. There are three sizes of circles. The smallest-sized circle represents a venue size of at most an 800-person capacity, the medium-sized circle represents a capacity of 800 to five thousand people, and the largest-sized circle represents a five thousand-plus person venue size.

In the specific Catfish and the Bottlemen example shown, it is interesting to see how the tour dates form around their album cycles with a long lead up to their debut at the start of the strip plot. Yet, there is nothing concrete to gauge the band's popularity from just a tour date beyond demand to play a show somewhere. Even though this is not the case, those shows could be at the same pub in their hometown of Llandudno, Wales. However, the size of the venue at a tour date does translate to popularity. A larger venue size means the booking agent thinks the artist can sell enough tickets to make the tour date profitable. If Catfish and the Bottlemen are booked to play the 20-thousand cap Manchester Arena, the agent believes they can play to 20 thousand people in Manchester as opposed to 200 people in Manchester. When we transition into the circles and the venue size view, not only do we observe Catfish and the Bottlemen's touring history, but we also understand their career arc: a steady rise of success.

III.   Multi-band explainer[56]

There are more patterns we can observe in these touring history career arcs. The narrative focuses on six in particular, represented by six different artists. They are shown in the visualization initially as six dots. Once the dots transition into strip plots, we can see a few artists are farther in their career while others are still fresh. Again, though, there is not anything to gauge success. Once we transition the lines into circles encoded with venue size, the individual patterns emerge.

Stockport's Blossoms—considered the big indie breakout after Catfish and the Bottlemen, as they themselves stated in a recent NME interview[57]—follow a similar pattern as their Welsh predecessors: They toured in small venues a ton at the start, eventually advanced into medium-sized venues, and now play large venues consistently. We'll classify them as steady risers.

In contrast, Arctic Monkeys—arguably the genre-defining band of the past decade and a half—exploded into large venues and have maintained their popularity. They're classified as a big player.

Little Comets represent an artist who has stayed consistent playing medium-sized venues throughout their career. In fact, Catfish and the Bottlemen often opened for the trio in their early days.

Sam Fender was the recipient of 2018's Brits Critics Choice award, and he since has climbed a steep but steady ladder of success. His career is classified as getting there. With still time to grow in popularity, he's now playing medium-sized venues consistently.

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[56] See Appendix 6.
[57] NME, "Blossoms | In Conversation."

London-based Filipino indie rapper No Rome jumped into large venues at the start of his career, opening for his labelmates The 1975, and attaining overnight success.

Lastly, sixteen-year-old Alfie Templeman is classified as new to the scene. While not having a ton of tour dates yet, he's occasionally played larger venues by opening for established indie acts such as Sundara Karma and Sports Team, gaining significant exposure early in his career.

Within each of these categories, you can see sub-patterns emerge from the larger patterns, such as artists who maintain their popularity, artists who lose their popularity, and artists who lose their popularity but regain it later in their career. Another factor is success outside the UK, in Europe and the United States, in particular. The 1975 have seen a ton of crossover success around the world, as well as Arctic Monkeys and Catfish and the Bottlemen.

IV.   Small Multiples[58]

Once the reader has a grasp of the visualization, its concepts, and the different categories, the floor is opened up to the entire database, represented in small multiples sorted by classification. To introduce each category, a new example is presented.

Steady Risers: The 1975—arguably one of, if not the, the biggest band in the UK right now—are an interesting case for many reasons and require an entire deep-dive of their own. For purposes of this discussion, their career arc shows steady and consistent growth into larger venues with a little bit of an explosion with their debut album in 2013, not unlike Catfish and Blossoms.

Big Players: The Kooks and The Wombats both emerged with huge indie debut records about a decade ago and have continued to hold a spot on festival lineups and large venues long into their career.

Consistent: These artists are classified as consistent because they've steadily played medium-sized venues throughout their healthy career, such as Deaf Havana, Circa Waves, and Twin Atlantic.

Getting There: Genre-bending alternative / emo hip-hop artist YungBlud has emerged as one of the most-talked about new artists of 2020, and his successful venue size increase in a relatively short period of time is indicative of the sentiment.

Overnight Successes: The 1975 run an independent record label called Dirty Hit and often take their labelmates out on their big tours—so much so, that three of the four overnight successes listed below (No Rome, beabadoobee, and the Japanese House) are examples of it.

New to the Scene: Lauran Hibberd has been touring in small venues for a while, but the exposure coupled with her increased BBC Radio 1 play and subsequent hype, may push her into getting there territory soon.

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[58] See Appendix 6.

V.   Conclusion[59]

The importance of the very-profitable live music industry is restated before discussing how concerts materialize fandom in the physical rather than online world, which is even more important in the age of viral instant fame. Essentially, everything Saunders says was important to Catfish and the Bottlemen's early success is being replaced with streams, but music and technology expert Cherie Hu explains how relying on those streams is risky. A quote by a Business Intelligence Analyst at a talent agency wraps up the gut vs. data sentiment before the methodology is explained at the bottom.

Conclusion

Music industry conversations more often than not are drifting to the data—streams, charts, etc. This thesis argues touring history deserves a place at the table of success metrics in music. By creating a database of British indie and alternative musicians and their touring histories, it was able to pinpoint patterns of career arcs, ones that shed light on up-and-coming artists and which path they may end up taking in their own careers. The patterns were validated with multiple artists showcasing similar arcs.

Anecdotally, artists with top 40 radio or viral social media hits play smaller venues than tried-and-true artists who spent time touring and garnering a loyal fanbase. As aforementioned, relying on viral fame is risky and cannot be perfectly mirrored by live music success, to the point where record company executives often underplay these fresh artists to see if they can even pull a crowd in-person like they do online. With live music success comes ticket sales, merch sales, exposure, and longevity. Live music creates an intimate, raw, memorable experience between an artist and a fan, one that is difficult to translate to the virtual world.

Future investigation

There are two recommendations for future investigation. First, some capacities are missing for venues in the dataset. It would take a lot of manual work, but it may be worth filling out the rest of the venue capacities to get the most complete picture possible (as discussed in the data section, artists who had at least 50% of their tour dates with an associated venue size were included in the final visualization to ensure a level of completeness). This complete dataset would be able to be reused for the second recommendation, which is expanding to more genres and artists from different locales. There could be a comparison to a pre-streaming artist. Lastly, Instagram photos were used throughout the web app. While more an exercise in fan art rather than music industry data analysis, another possible related visualization would be to map a musician's tour online through posted photos on Instagram over time.

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[59] See Appendix 7.

References

Alexchopin. "Nuxt.js - The Vue.js Framework." NuxtJS. Accessed May 2, 2020.
https://nuxtjs.org/.

Allen, Paddy, and Guardian music. "How Would the Glastonbury Line-up Look If the
Running Order Was Decided by Streaming Numbers?" The Guardian. Guardian News
and Media, June 20, 2014.
https://www.theguardian.com/music/ng-interactive/2014/jun/20/glastonbury-2
014-line-up-by-streaming-numbers.

Apple Music. "Matty Healy: The 1975, Drug Addiction and Glastonbury | Apple Music."
YouTube, November 30, 2018. https://www.youtube.com/watch?v=gmZCHCWwp2I.

BBC Music. "Catfish and the Bottlemen: The Rise." YouTube, December 19, 2019.
https://www.youtube.com/watch?v=ZXZ8xPU29b4.

BBC Radio 1. "Radio 1's Indie Show with Jack Saunders." BBC Radio 1. BBC. Accessed May
2, 2020. https://www.bbc.co.uk/programmes/m00008zy/episodes/player.

Bernwerd & Steinward Datastories, Eugene Tjoa, and Jurjen Knarren. "U2 Rocking All
over the World." U2 Rocking all over the world. Accessed March 28, 2020.
http://u2allovertheworld.com/.

Bostock, Mike. "Data-Driven Documents." D3.js. Accessed May 2, 2020.
https://d3js.org/.

CartoDB. "50 Years of The Rolling Stones." Visualizing 50 years of The Rolling Stones.
Accessed March 28, 2020. http://rollingstones.vizzuality.com/#/.

Cirisano, Tatiana. "SXSW 2019: Is Today's A&R Based on Data or Gut Instinct?" Billboard.
Billboard, March 14, 2019.
https://www.billboard.com/amp/articles/business/8502501/sxsw-2019-ar-based-
on-gut-data-atlantic-kobalt-weigh-in.

Ferdinando, Stephen. "The Greatest Reading And Leeds Festival Moments." Radio X,
March 1, 2016.
https://www.radiox.co.uk/festivals/reading-and-leeds/the-greatest-reading-leeds
-festival-moments-ever/.

Frith, Simon, Matt Brennan, Martin Cloonan, and Emma Webster. *The History of Live
Music in Britain*. London: Routledge, Taylor & Francis Group, 2016.

Geere, Duncan. 00sindiebanddatabase. Accessed March 28, 2020.
   https://www.duncangeere.com/00sindiebanddatabase/.

Google Fonts. Google. Accessed March 28, 2020. https://fonts.google.com/.

Hann, Michael. "The 1975's Matt Healy: 'Success Is Brittle'." The Guardian. Guardian
   News and Media, October 31, 2013.
   https://www.theguardian.com/music/2013/oct/31/1975-matt-healy-success-is-br
   ittle.

Hu / Water & Music, Cherie. "How Booking Agents Use (and Don't Use) Data." Patreon,
   February 6, 2020. https://www.patreon.com/posts/33804326.

Instagram. "Samuel Burgess-Johnson (@Samuelburgessjohnson) • Instagram Photos and
   Videos." Instagram. Accessed May 2, 2020.
   https://www.instagram.com/samuelburgessjohnson/.

Klirs, Carni. "Visualizing the History of Fugazi." Accessed March 28, 2020.
   https://www.carniklirs.com/project/fugazi.

Last.fm. "About Last.fm." Last.fm. Accessed May 2, 2020. https://www.last.fm/about.

Last.fm. "Catfish and the Bottlemen Music, Videos, Stats, and Photos." Last.fm. Accessed
   May 2, 2020. https://www.last.fm/music/Catfish and the Bottlemen.

Last.fm. "Artist.getInfo." Last.fm. Accessed May 2, 2020.
   https://www.last.fm/api/show/artist.getInfo.

Loudwire. "Who Really Invented Heavy Metal?" YouTube, February 13, 2020.
   https://www.youtube.com/watch?v=fdFN7AqU1BY&list=PLvXmarOi5xICAIHEW0OA
   sMLdBANGBrBZo&index=7.

McAlpine, Fraser, and Jamie Milton. "Reading & Leeds: the 12 Most Startling Moments in
   the History of the Festival." BBC Music, August 21, 2017.
   https://www.bbc.co.uk/music/articles/550e5cef-9ac0-42b9-a141-2aa72889648e.

McDonald, Glenn. Every Noise at Once. Accessed May 2, 2020.
   http://everynoise.com/everynoise1d.cgi?scope=all.

Mims, Taylor. "Live Music Ticket Sales Will Exceed $25 Billion by 2023, Says Study."
   Billboard, September 24, 2019.
   https://www.billboard.com/articles/business/touring/8530894/ticket-sales-25-bi
   llion--study .

Moore, Sam. "Reading & Leeds Festival Announce Headliners and First Acts for 2019."
   NME, November 21, 2018.

https://www.nme.com/news/music/reading-leeds-2019-festival-line-up-tickets-2404763.

Mullen, John. "UK Popular Music and Society in the 1970s." *Revue Française De Civilisation Britannique* 22, no. hors-série (2017). https://doi.org/10.4000/rfcb.1695.

NME. "Catfish And The Bottlemen: 'You Can Do Whatever You Want Whether You're Working Class Or Not'." YouTube, December 2015. https://www.youtube.com/watch?v=iEJrcF0JfAI&t=135s.

NME. "Blossoms | In Conversation." YouTube, March 27, 2020. https://www.youtube.com/watch?v=WQYlQlPCa70.

O'Connor, Roisin. "By Refusing to Book Female Headliners, Reading and Leeds Are Keeping Themselves on the Wrong Side of History." The Independent. Independent Digital News and Media, November 21, 2018. https://www.independent.co.uk/arts-entertainment/music/features/reading-leeds-headliners-women-lineup-music-industry-sexism-foo-fighters-1975-a8644591.html.

Plamere. "Plamere/Spotipy." GitHub, May 1, 2020. https://github.com/plamere/spotipy.

Pylast. "Pylast/Pylast." GitHub, May 10, 2020. https://github.com/pylast/pylast.

Reading & Leeds Festival. "Twenty One Pilots Interview - Dancing Security, Oasis Covers and More." YouTube, October 11, 2019. https://www.youtube.com/watch?v=1nMWFC1sSVE.

Russellgoldenberg. "Russellgoldenberg/Scrollama." GitHub, March 24, 2020. https://github.com/russellgoldenberg/scrollama.

Songkick. "Bringing the Magic of Live Music to Fans Everywhere." Songkick. Accessed May 2, 2020. https://www.songkick.com/info/about.

Songkick. "Artist Search." Songkick API. Accessed May 2, 2020. https://www.songkick.com/developer/artist-search.

Songkick. "Venue Details." Songkick API. Accessed May 2, 2020. https://www.songkick.com/developer/venue-details.

Songkick. "API Terms of Use Agreement." Songkick API. Accessed May 2, 2020. https://www.songkick.com/developer/api-terms-of-use.

Spotify. "Home: Spotify for Developers." Home | Spotify for Developers. Accessed May 2,
    2020. https://developer.spotify.com/.

Spotify. "Get an Artist." Spotify for Developers. Accessed May 2, 2020.
    https://developer.spotify.com/console/get-artist/?id=0OdUWJ0sBjDrqHygGUXeC
    F.

Spotify. "Search for an Item." Spotify for Developers. Accessed May 2, 2020.
    https://developer.spotify.com/documentation/web-api/reference/search/search
    /#writing-a-query---guidelines.

Unterberger, Andrew. "The 1975 Care Because You Do." Spin, February 11, 2016.
    https://www.spin.com/featured/the-1975-new-album-interview-i-like-it-when-yo
    u-sleep-for-you-are-so-beautiful-yet-so-unaware-of-it/.

Vgshenoy. "Vgshenoy/Vue-Scrollama." GitHub. Accessed May 2, 2020.
    https://github.com/vgshenoy/vue-scrollama.

Vue.js. "Vue.js." Vue.js. Accessed May 2, 2020. https://vuejs.org/.

Wattenberg, Martin. Shape of Song--Method. Accessed May 2, 2020.
    http://turbulence.org/Works/song/method/method.html.

"What Is BBC Music Introducing?" BBC. BBC. Accessed March 28, 2020.
    https://www.bbc.co.uk/programmes/articles/5lvdZfbkPG7lbdRvDgtpwB7/what-is
    -bbc-music-introducing.

Appendix

Appendix 1

Appendix 2

Appendix 3

Appendix 4

Gut vs. Data

Mapping career arcs with touring history in British indie and alternative music

Caitlyn Ralph

The Beatles, The Rolling Stones, Oasis, Joy Division, and even One Direction—The United Kingdom has always had its ==bands.==

For over half a century, the impact of British music—indie and alternative, in particular—on Western popular music has been deep-rooted and persistent, and its focus on ==gigantic music festivals== and the ==live arena== is the genre's rallying cry.

Saunders essentially ==translated Catfish and the Bottlemen's career arc to their touring history==.

It's an intriguing proposition: mapping an artist's touring history to their career arc, a measure of success different from traditional metrics—such as chart rankings, album sales, and fancy awards—but one that goes hand-in-hand with them.

Appendix 5

This dot represents the band.

Let's expand the dot into a bar. The ==length== of the bar is Catfish and the Bottlemen's ==career timeframe==, and each ==line== is a ==tour date==.
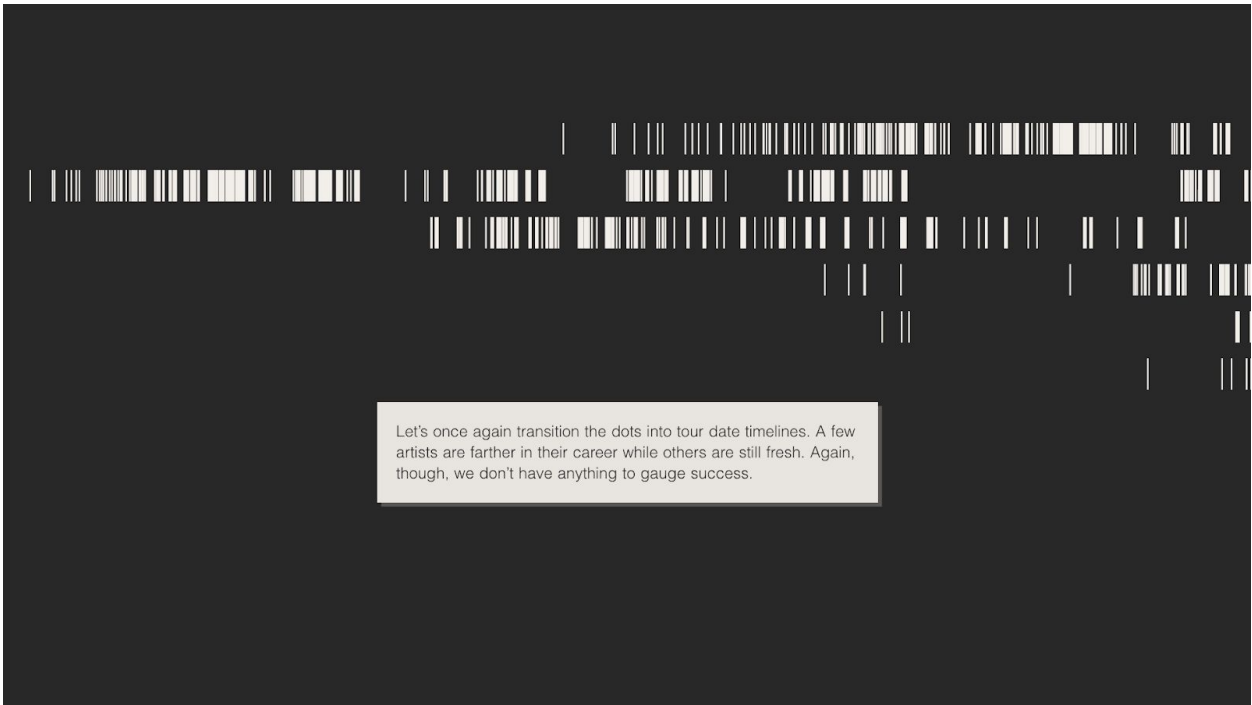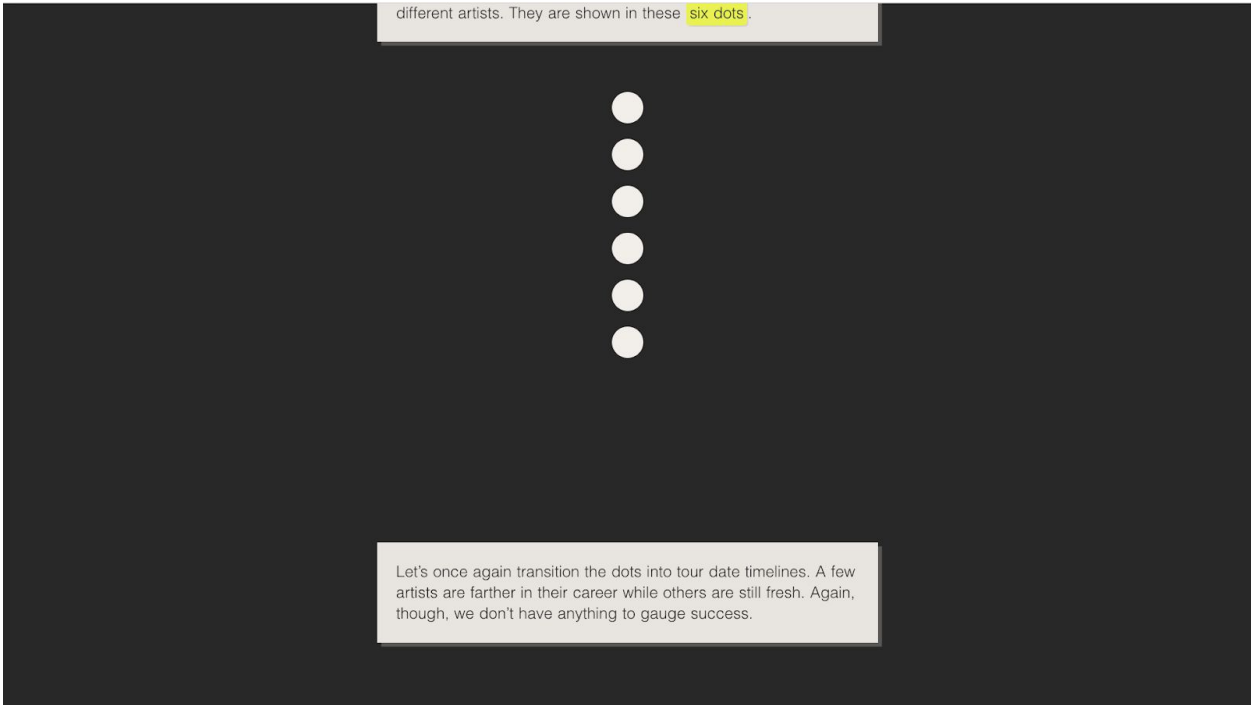
According to the bunch of lines at the beginning of the bar, there is a lot of consistent touring early in their career. This continues with short breaks between albums. So far, this is in line with Saunders' assessment.

It's interesting to see how the tour dates form around their album cycles with a long lead up to their debut at the start. Yet, there is nothing concrete to gauge the band's popularity from just a tour date beyond demand to play a show somewhere. Even though this is not the case, those shows could be at the same pub in their hometown of Llandudno, Wales.

The small circle translates to a small venue with up to an 800-person cap, the medium circle translates to a medium-sized venue ranging from an 800 to 5,000-person cap, and the large circle translates to a large venue with a 5,000+-person cap.

Appendix 6

different artists. They are shown in these six dots .

Let's once again transition the dots into tour date timelines. A few artists are farther in their career while others are still fresh. Again, though, we don't have anything to gauge success.

Let's once again transition the dots into tour date timelines. A few artists are farther in their career while others are still fresh. Again, though, we don't have anything to gauge success.

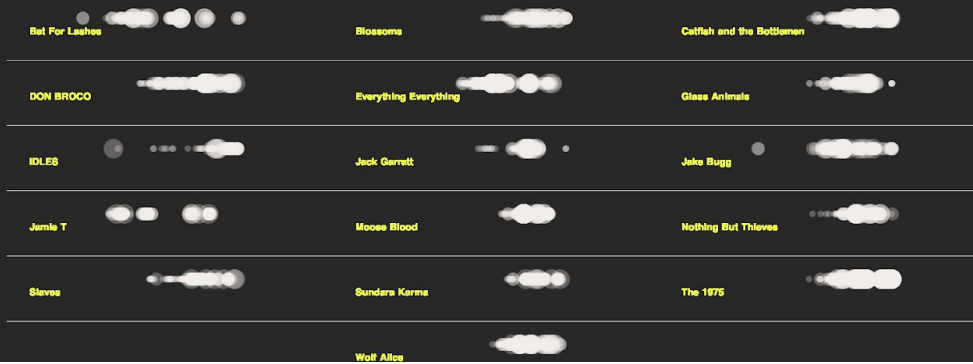Once we transition the lines into circles encoded with venue size, the individual patterns emerge.

Stockport's Blossoms—considered the big indie breakout after Catfish and the Bottlemen, as they themselves stated in a recent NME interview—follow a similar pattern as their Welsh predecessors: they toured in small venues a ton at the start, eventually advanced into medium-sized venues, and now play large venues consistently. We'll classify them as steady risers.

Appendix 7

Steady risers

The 1975—arguably one of, if not the, the biggest band in the UK right now—are an interesting case for many reasons and require an entire deep-dive of their own. For purposes of this discussion, their career arc shows steady and consistent growth into larger venues with a little bit of an explosion with their debut album in 2013, not unlike Catfish and Blossoms.

Bat For Lashes

Blossoms

Catfish and the Bottlemen

DON BROCO

Everything Everything

Glass Animals

IDLES

Jack Garratt

Jake Bugg

Jamie T

Moose Blood

Nothing But Thieves

Slaves

Sundara Karma

The 1975

Wolf Alice

Appendix 8

By 2023, the live music industry was set to reach $25 billion, cementing the sector as an increasingly crucial cornerstone of artists' careers as streaming makes record revenues more difficult to get. A concert allows support to materialize itself in the physical rather than online world, through devoted fandoms, ticket sales, and merch sales. However, as artists are finding instant fame on platforms such as TikTok, traditional means of up-and-comers honing skills in the live arena—what Saunders emphasized as a crucial aspect of Catfish and the Bottlemen's reliable success across the board—are being replaced with billions of streams.

In an essay titled How booking agents use (and don't use) data, music and technology expert Cherie Hu (aka Water & Music) argued you cannot perfectly mirror viral success with live music success—in fact, she said it was risky. Record company executives often underplay these Lil Nas X-type overnight wunderkinds—who are quickly famous but have no live experience under-their-belt—early in their touring schedule, ensuring they can draw any type of physical (and not online) audience in the first place, they can build hype by selling out small spaces (fear-of-missing-out effect), and they can maintain interest and don't dissipate from public consciousness after throwing funds at a massive arena tour six months down-the-line. Quoting a business intelligence analyst at Paradigm Talent Agency, Hu summarized the presence of data in the live sector:

"I think data in the music industry needs a bit of a rebrand. A lot of agents don't like it when you just say 'let's look at the data'—but then when you start talking about things like 'charts' or 'touring history,' they become a lot more keen on listening and taking part in the discussion. And for everyone who says, 'Screw the data, I just want to listen to my gut'—I think that's amazing and they should keep doing that, because their gut is a combination of hundreds of internalized pieces of data built up over years of experience that allowed them to hone their expertise. Their gut is their experience talking."

Methodology: To create a database of British indie and alternative artists, the Spotify, last.fm, and Songkick APIs were used in succession. Artists tagged with "indie" and "alternative" genres were derived from Spotify, their bios for indicators of location were derived from last.fm, and their tour dates and associated venue sizes were derived from Songkick. This was combined with manual curation throughout the process. The resulting list of artists released their debut album after 2006, are from or are based in the United Kingdom (or, in some cases, Ireland), had more than 30 recorded tour dates from Songkick, and had more than 50% recorded venue sizes for those tour dates from Songkick.

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