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PHOTOGRAPH BY David LaChapelle

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On the Cover

Lizzo photographed in Los Angeles on November 26th, 2019, by David LaChapelle.

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STACK IT.
BUILD IT.
MIXIT UP.



What's new and what you might have missed - from the latest original podcasts and videos to reviews of music, movies, and more

PHOTOS

Australia Goes Up in Flames

All eyes are turned to Australia in 2020, as the climate crisis continues to unleash devastating brushfires across the continent. Our photo series documents the human (and animal) costs of this spiraling calamity - and searches for hope amid the devastation.



MOVIES

Sundance: Taylor Swift, Will Ferrell, **Ethan Hawke**

We hit Park City, Utah, for the best of this year's Sundance Film Festival, including a Taylor Swift documentary (below), a Will Ferrell/Julia Louis-Dreyfus comedy, Ethan Hawke's Nicola Tesla biopic, and much more.



VIDEO

Life Stories **From Robbie** Robertson

In his interview for "The First Time," the songwriter remembers falling in love with the guitar, stepping onstage with Bob Dylan in 1965, playing Woodstock with the Band, hang-

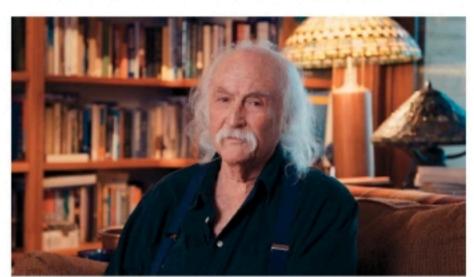
ing out at Big Pink, writing "The Weight," and forging a lifelong creative bond with Martin Scorsese.



VIDEO

The Man Who's Seen (and Done) It All

In our original video series "Ask Croz," David Crosby answers your questions about music, sex, drugs, and more. You'll see him tell a heroin addict how to kick the habit, expound on the health benefits of CBD extracts, and offer some tips for the father of an internetaddicted teenager. It's funny, moving, and 100 percent Croz.







'Useful **Idiots**'

Find these guests and others on Matt Taibbi and Katie Halper's irreverent political talk show

- Michael Moore
- ▶ Nina Turner
- Krystal Ball
- Glenn Greenwald

MUSIC

2020's Most **Anticipated Albums**

Bruce Springsteen, Lana Del Rey, Adele, Drake, and Justin Bieber are all among the A-list acts we're expecting new music from in the months ahead. Plus: Will Rihanna release the reggae-tinged album she's been working on for years? Is Neil Young's lost Seventies album Homegrown as great as its myth suggests?





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EVERY BIT EARNED | SINCE



"When I say unity, I don't mean everybody agreeing on policy. I mean transcending every political disagreement."

-PETE BUTTIGIEG

Lizzo's Pop Revolution



LATE LAST YEAR, a two-year-old recording by Detroit-born singer-songwriter Lizzo, "Truth Hurts," leaped above hits by Taylor Swift, Shawn Mendes, Billie Eilish, and Ed Sheeran to become the top song in America. With its loopy piano and strings, and brashly hilarious message of self-empowerment, there's never been a song quite like it. And there's never been a pop star quite like Lizzo, a plus-size, classically-trained flutist and freestyle rapper who struggled for more than a decade (including a stint in a prog-rock band) before her song appeared in the Netflix movie Someone Great (starring Gina Rodriguez as a ROLLING STONE reporter) and suddenly, out of nowhere,

blew up. "Everything changed for her literally the next day," says senior writer Brittany Spanos, who wrote this month's cover story. "It was Shazammed at a crazy rate. All these memes started happening with it on TikTok. It was crazy."

Spanos followed Lizzo from her home in Los Angeles to a Texas tour stop to track her wild year. At first, Spanos says, "I felt like she was putting up a barrier around me." But when they met a week later, backstage before a Dallas Jingle Ball show where Lizzo was surrounded by family and friends, the singer began to open up about her experiences growing up in her grandparents' Baptist church and her decade-long musical and spiritual journey. "Therapy taught her to be more vulnerable and to open up about her self-esteem issues," says Spanos, who notes that Lizzo also consults regularly with a psychic and astrologer. "A lot of Lizzo's concert is really about inspiring people with how they live their lives – she'll admit that life is messy and sometimes you can feel really depressed, but you're here, you've made it to this moment, let's enjoy it together."

Spanos, who joined ROLLING STONE shortly after graduating from NYU in 2014, has covered everyone from Stevie Nicks to Tom Morello, and has written cover stories on Cardi B and Janelle Monáe. She grew up near Chicago as a die-hard fan of Green Day and Nirvana (she has the band's stoned smiley-face logo tattooed on her right forearm) but has equal reverence for (and encyclopedic knowledge of) artists from Harry Styles and Fifth Harmony to Ariana Grande, which has earned her the role of ROLLING STONE's chief authority on pop music. "I went through periods where I was like, 'Pop is not supposed to be good music,' " she says. "But then I realized that if it brought me joy, it is good music. Listening to a Jonas Brothers album made me feel the way I did when I listened to Led Zeppelin. That's why I hate the term 'guilty pleasure," she says. "If it's good, it's good."





Email us, confidentially, at Tips@ RollingStone



A truck hauling oil-andgas waste in Ohio

INSIDE THE STORY

Radioactive **America**

Facing the health risks of the oil-andgas industry's underregulated waste

ENVIRONMENTAL JOURNALIST Justin Nobel spent two years investigating the potential health crisis caused by toxic waste from the oil-and-gas industry. "When you visit fracking zones, you enter a surreal world of contamination," he says. "Residents are forced to keep daily diaries of their health problems." Through hundreds of interviews, Nobel reveals that the industry produces nearly a trillion gallons of waste a year - much of it radioactive - and what that means for the workers in its path. "Oil-field radioactivity has been downplayed for generations," he says. "My hope is this article will unveil the struggle of workers and residents to the public."

GUIDE

The Greatest Music Scenes in America Now



WITH THE MUSIC business booming, ROLLING STONE introduces a new annual franchise to discover the greatest cities and venues in America. In Tulsa, Oklahoma, we found both a thriving underground rock and hip-hop scene, as well as a local billionaire pouring hundreds of millions of dollars into the city's art scene,

hoping to create the next Austin. In Denver, the Mission Ballroom has a stage on tracks to adjust floor size depending on the performer. Other legendary cities like Chicago and Nashville are reinventing themselves. Chicago is experiencing a jazz renaissance, where the speakeasy Dorian's Through the Record Shop hosts up-and-comers and legends alike. With growing indie and punk, scenes, Nashville is no longer limited to country music. "The goal isn't to get signed anymore," says senior editor Patrick Doyle. "It's to get in a room and make some really great music."

Correspondence



"Don't think a woman can't beat Trump. I started out all-in for Warren, and this interview reminded me of why I liked her in the first place."

—@OriginalSlicey, via Twitter

Warren's Resilience

For our January cover ["Elizabeth Warren: The Rolling Stone Interview," RS 1335], the Massachusetts senator sat down with staff writer Tessa Stuart to talk country music, policies, and why she will be the best president. While the fight for the Democratic nomination continues, Warren clearly won over some readers. "I have a new admiration for her," tweeted Nik Donaldz, "This is a fascinating interview, particularly when she explains how 'far left' plans are actually rooted in so many Americans' realities, like student-loan debt. She's passionate for the right reasons." Anita Johnson

wrote, "So ready to vote for Elizabeth: Thoughtful, educated, caring, and inspiring! Can you imagine these same questions answered by a Republican?" Others were not convinced of Warren's electability. "I honor all that she is, but Warren cannot beat Trump," tweeted Alice Croll, "He wounded her with Pocahontas and will continue to demoralize her on the socialism angle." Kelly Epperson had a message for those still doubting: "I wish all the naysayers would just read the interview and listen to what she says, not what others have told you she's saying. It could lead you to stop parroting the party line."



@JWoutlaw13: "If she likes Hank Williams, then she's OK with me."



Music That Defined the 2010s

For everyone about to complain about the number-one album, My Beautiful Dark Twisted Fantasy ["The Best Albums of the Decade," RS 1335], it epitomized hip-hop as a high-concept art form and ushered in a new wave of black vulnerability in songwriting. Genius.

James Jake, via Facebook

[Interstate Gospel at number nine] — More proof that it deserves a Grammy!

—Deb Basinger, via Twitter

I appreciate how ROLLING STONE's list of best albums of the decade is almost an explicit rebuke of the "rock is dead" criticism that emerged over the past 10 years. In that vein, it didn't include Cage the Elephant, who cemented modern rock.

-Spencer Wagner, via Twitter

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TRIBUTE

William Greider, 1936-2019

William Greider was a great journalist who never thought of himself that way. He thought of himself as a man with a job to do - which was to use his talents to call out the crimes of the rich and privileged, and do what he could to restore faith in American democracy, Born in Ohio in 1936, he began his journalism career in 1960 at the Wheaton Daily Journal in Illinois, and joined The

Washington Post in 1968. He moved to ROLLING STONE in 1982 and spent 17 years here as National Affairs editor. From a cramped Washington, D.C., office on 17th Street NW, Greider filed stories about everything from the nuclear freeze to the impeachment of Bill Clinton. He was one of the first journalists in America to take the climate crisis seriously, writing about the risks of a superheated planet



in the late 1980s. There was nothing flashy about Greider: He wrote in blunt language, and smoked Camel unfiltered cigarettes, and never went to A-list parties. ("Your job is to tell the truth," he told me at lunch in D.C. one day. "And don't be fucking lazy!") Greider's books, including Secrets of the Temple: How the Federal Reserve Runs the Country (1987) and Who Will Tell the People: The Betrayal

of American Democracy (1992), were powerful explorations of the battle between capitalism and democracy that, 30 years later, feel prophetic. "Politics is not a game," he wrote in 1992. "It exists to resolve the largest questions of society - the agreed-upon terms by which everyone can live peaceably with one another." He died on Christmas Day at the age of 83. JEFF GOODELL





Vitamin H: Harry Styles Takes L.A.

when harry styles wanted to celebrate his excellent new album, Fine Line, he went all the way: a one-night-only show at the L.A. Forum in December, featuring a surprise duet with his idol Stevie Nicks on "Landslide." Two days before the show, hard at work rehearsing with his band in Hollywood, Styles kept singing even while getting a vitamin IV — in his customary mix of high fashion and thrift-shop clobber, rocking Gucci shades and a T-shirt from U.K. indie band Swim Deep.

Fine Line topped the ROLLING STONE 200 Albums chart in December — the last album of the 2010s to do so — 10 years after Styles first blew up with One Direction. As he says, the songs come from "a long period of self-reflection and selfacceptance. I went through a lot of personal changes. I just had the conversations with myself that you don't always have." The album is full of romantic heartache, magic mushrooms, and glamrock power moves. The 25-year-old even tracked down the woman who built Joni Mitchell's dulcimer so he could play one on "Canyon Moon," which he calls "Crosby, Stills, and Nash on steroids."

Harry heads out on his world tour in April. "I just feel more comfortable being myself, which makes the environment for making music just like a playground."

Styles getting an intravenous dose of vitamins during a December rehearsal



PHOTOS

Bob Marley: The Legend Lives On

DENNIS MORRIS FIRST met Bob Marley at the Speakeasy Club in London in 1973. "During soundcheck, he asked me what life was like as a young black British kid," recalls the photographer, who was a high school student in England at the time. Marley was impressed enough to spontaneously ask him to come along for the rest of the tour. "The next day, I met Bob and the rest of the Wailers at their hotel and climbed in their transit tour van," Morris continues. "Bob then turned around and said to me, 'Are you ready, Dennis?' and my life-changing

adventure began." Morris became a friend to the reggae superstar for the next eight years, capturing candid, soon-to-beiconic images of Marley strumming a guitar, dancing, and

Bob Marley: Portraits of the King Atelier Gulla Jonsdottir Los Angeles, February 3rd-9th

playing ping-pong – a collaboration that lasted until Marley's death from melanoma in 1981. This month, Morris' photographs from those unforgettable days will be on display in Los Angeles, at a gallery show organized to mark what would have been Marley's 75th birthday. "He gave me confidence, he gave me hope, he gave me identity, he made my dreams possible," Morris said in a statement. "And for millions of others worldwide, he did the same. Live up Bob, the Rebel lives on." ANGIE MARTOCCIO

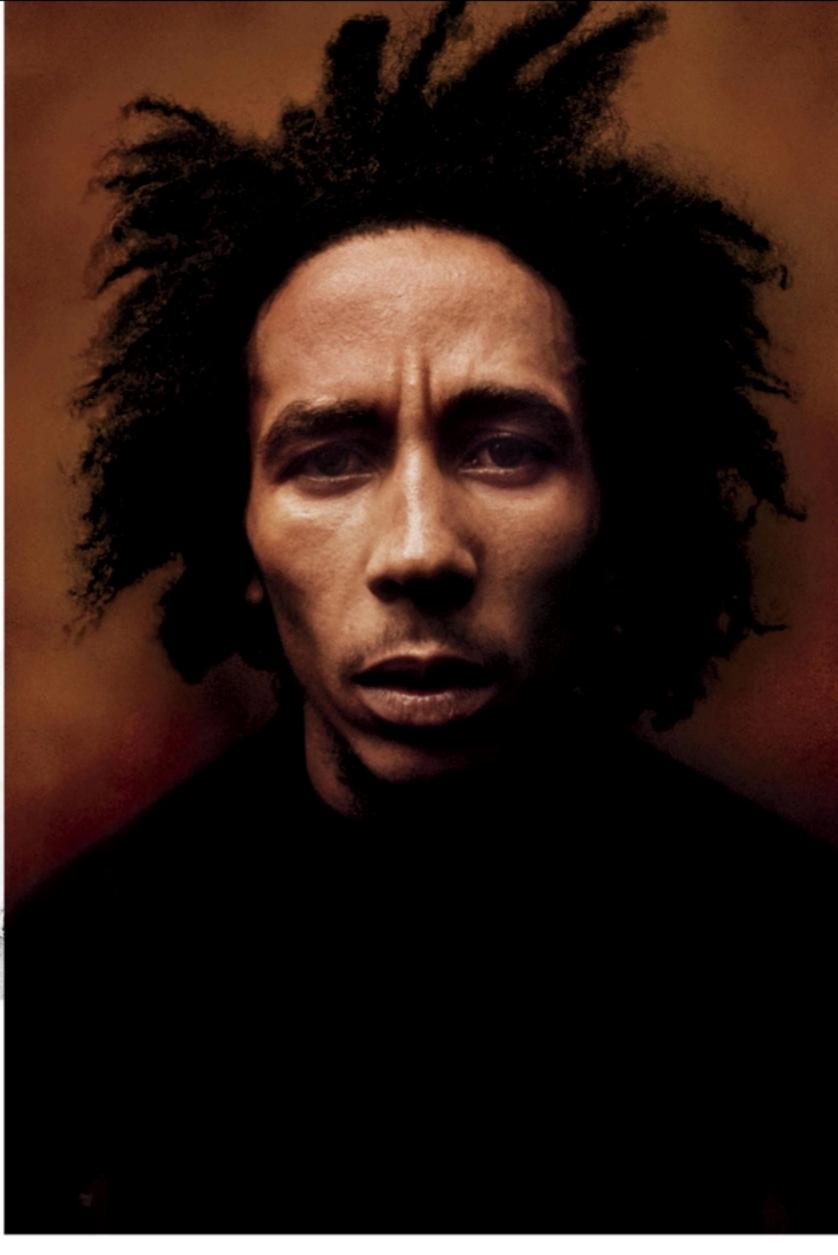


DEEP THOUGHTS

"It was said that Bob smoked over one pound of ganja a day," Morris says. "He and I had many conversations."

ON THE ROAD, 1973 ▶

"None of my portraits of Bob were taken in a photo studio," Morris says. "All were taken on location."



SOCCER MOMMY

N JUNE 2018, Sophie Allison took the stage at amphitheaters across the eastern United States as the opening act for poppunk mainstays Paramore. For Allison, who writes and performs perceptive, melancholic rock songs under the name Soccer Mommy, playing for outdoor crowds of dancing emopop fans that summer felt, at times, like an unlikely match.

"It's hard having to play in front of an audience that sometimes does not like it, or just doesn't care," says the singer-songwriter, 22,

who's also opened for Kacey Musgraves and Vampire Weekend over the past two years. "There are definitely times where I am shocked at audiences liking us. Someone like Paramore I'm surprised the fans would be into this."

Listening to Clean, her 2018 studio debut, it's easy to hear why Allison found such wide appeal so quickly, with her forthright lyrics about adolescent insecurities and her singalong melodies. Her biting kiss-offs ("Your Dog") and her admiring odes to heartbreakers ("Cool") pull as much from Sonic Youth as they do from Taylor Swift. On her new album, Color Theory, Allison turns the focus on her earlier memories, with a wider-ranging sound that includes hints of in-

FAST FACTS

LISTEN UP Allison's favorite LPs from 2019 range from Wilco to Lana Del Rey to FKA Twigs.

HOT PROPERTY

Her cassette-only 2016 release, For Young Hearts, recorded in her NYU dorm, is now a collectors' item, with prices as high as \$124.99 on Discogs.

dustrial rock and songs about internal and familial conflicts dating back to her preteen years.

Allison began writing and recording songs at home during the summer after high school, releasing them online with album titles like Songs for the Recently Sad. The Soccer Mommy project became more fully realized while she was an undergraduate at New York University; Allison was taking music-business courses but was uninterested in a career that didn't involve writing or performing onstage. She took to emailing booking agents during class time to land gigs, playing shows at the now-defunct Silent Barn in Brooklyn, and eventually scoring a deal with Mississippi indie label Fat Possum.

PLAY BALL ▼

Buying soccer balls and outfits for the kids back in Trench Town, Jamaica. "He was an incredibly generous man," says Morris.

VIBRATION ▶

Onstage at the Hammersmith Odeon in London in 1976: "At the time, it was the largest PA system the venue ever had."





ALONG FOR THE RIDE A

Morris took this photo not long after his first time meeting Marley, in 1973. "He asked me if I would like to come on tour with the band," Morris recalls. "'Yeah!' I replied in my Cockney accent."

STIR IT UP A

An afterparty at a Paris club. "The club had a reputation for being very elitist, and many guests were in awe to see so many Rastafarians in the club," Morris says. "Bob had a ball."

REDEMPTION SONG ◀

Marley in 1981. "We sat, we spoke, we reasoned as usual, but this time it was different," Morris says. "I never knew how ill he was....It was the last time we would meet."

For Clean, she teamed up with producer and engineer Gabe Wax (Fleet Foxes, the War on Drugs). "I hadn't really recorded in a real studio, so I didn't know what I was doing," she recalls. "I was going on faith that Gabe could help me make what I wanted. Fortunately, he did."

Color Theory, too, mixes darkness with light. Lead single "Lucy" playfully personifies heartbreak as the devil himself: "Hair like a feather, black leather, with a charming smile/He'll touch you and burn you." The seven-minute "Yellow Is the Color of Her Eyes" delves into her mother's battle with a long-term illness. Allison worked with Her Smell director Alex Ross Perry on an accompanying short film that cap-

"If I didn't [sing honestly about dark emotions], it would just be making fake songs, and nobody wants to listen to that."

tures her anxiety about being away from her mom while she was on tour.

Allison wrote the new album mostly on the road - "I like to write all the time, especially when I'm bored in the car," she says. In 2019, she and her band went to Nashville's Alex the Great Studios, where Yo La Tengo worked in the Nineties, to record. Allison wanted Color Theory to feel like "a dusty old cassette tape that has become messed up over time," and hidden in the studio archives, she found a close approximation: floppy disks full of string arrangements and samples. Elsewhere, she tracked down field recordings from factories for a "gritty, disintegrated vibe," inspired in part by Tori Amos.

Soccer Mommy will be back on the road next month, playing shows across the U.S. and Canada. Allison's got her eye on further experimentation, with more demos in her back pocket, and an itch to get out of the "female indie rock" genre box she's often placed in. "I want to make things that are more electronic, more folky, more poppy, even," she says.

That said, she won't be shying away from the brutal honesty in her lyrics anytime soon. "I know that I can have these melodies that pull some of the darkness out of it," Allison reflects. "But if I didn't do that [darkness], it would just be making fake songs, and nobody wants to listen to that." CLAIRE SHAFFER



4. Caroline Rose

"Feel the Way I Want"

"I'm so in love with myself," Rose sings, walking a fine, funny line between embodying and parodying Kanye-size arrogance. The song's springy, synth-y track (recalling classic Madonna and recent Carly Rae Jepsen) helps the loopy irony go down buttery smooth.

Neon Indian

"Toyota Man"

Neon Indian came up as part of the hipster boomlet "chillwave" in the early 2010s. But the band's leader, Alan Palomo, takes a new turn here, tapping his Mexican roots as he sings in Spanish over an enjoyably playful low-fi, Latin-tinged pop tune that takes a Beck-ish path to borderless good times.

Aryeh makes dolefully tripped-out R&B with the free-form joy of Frank Ocean. On "Patagonia," he literally calls himself "a diamond from the Y2K" while still managing to sound cute and innocent.

7. Rat Boy

"Victim of a System"

Mixing rap, reggae, and rock, U.K. troubadour Rat Boy fights his nation's "brain-dead" post-Brexit atrophy, and big ups Public Enemy, the Beasties, and Black Flag in the process.

8. Margaret Glaspy

"Killing What Keeps Us Alive"

A starkly beautiful image of a fading relationship. Glaspy carefully goes from chilly vocoder ballad to lovely piano crescendo, building something tender in love's ashes.

For reviews, premieres, and more, go to Rolling Stone.com/ music

Squirrel Flower

"Red Shoulder"

Fans of self-emptying young rockers like Lucy Dacus and Snail Mail will love this slow-burn guitar exorcism from Squirrel Flower (a.k.a. 23-year-old Ella O'Connor Williams). She sings about intimacy as a kind of torment, erecting a huge wall of noise against her angst.

10. Drive-By Truckers

"Thoughts and Prayers"

Patterson Hood of the Drive-By Truckers has become one of finest chroniclers of Trump's America. Here, he offers a gun-violence lament with a happy ending: Politicians paying for their crimes in perp-walk parades down the Capitol steps.



Real-life advice from a guy who's seen, done, and survived just about everything

I used to be very civic-minded, but the election of Trump and my family's belief that everything you say can be used against you has worn me down to the point that I became afraid of the fight. How do I find that fire again?

-James, NY

Look at the situation we're in. We have global warming and a president who doesn't believe in it or anything that doesn't provide a personal profit to himself. The guy running the Senate, Mitch Mc-Connell, also only cares about profit. We can't not fight them. I can't conceive of rolling over and putting my paws up. We must fight.

I love your music, and I think your recent run of four albums in five years are up there with your best work. The thing is, my wife will only listen to Rick Astley and George Michael. How can I get her to appreciate your music?

-Richie, WI

It's hopeless. Give it up. Get another wife. How can she resist the magnificence of my music? It's so stunning. But some people don't like it. Maybe try smoking a joint with your wife and then see if she likes my music better. Somehow those two things work together: my music and joints. Try that. But maybe you need to get remarried.

GOT A QUESTION FOR CROZ? Email AskCroz@

Rollingstone.com

radiantly catchy songs,

spinning spoils of his

2. Frances

Quinlan

"Your Reply"

like this ode to the head-

freshly minted stardom.

Quinlan, frontwoman in

released her solo debut,

that evoke the lyrical and

melodic invention of Elvis

the standout "Your Reply."

band Hop Along, just

Likewise, full of songs

Costello and Courtney

Barnett, Just check out

Tyler, the

"Best Interest"

The L.A. rap renegade

showed some surprising

IGOR, and he keeps the

ed chipmunk soul.

warmth on his 2019 album

vibe going here, delivering

a lovely slice of openheart-

Creator

the great Philly indie rock

INTRODUCING

KHALID FOR LEVI'S®



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DON'T CALL THEM KHAKIS

The Mix

HIGHEST-GROSSING FEMALE TOURS OF ALL TIME





Madonna's Wild **Cabaret Party**

The 'Madame X' tour has her bringing a new sound to her smallest rooms in years. We look at her most impressive tour stats



Longest residency of this tour

17 nights in New York



Number of phones allowed inside

Zero



Nightly costume changes

Nine

Number of Portuguese Batuque Singers 15 Madonna brings out Orquestra Batukadeiras, an all-women vocal group she discovered while living in Lisbon for three years.

Start Time

Original start time on ticket

8:30 p.m.

Revised start time after fans bought tickets

10:30 p.m.

Reported start time on November 7th at Las Vegas' Colosseum

12:07 a.m.

WARDROBE BREAKDOWN: WHAT SHE BRINGS ON THE ROAD



Eye patches 24

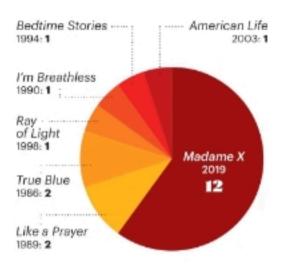
> Fedoras 19

Pairs of shoes 150

Versace robes 30

Handcuffs

'Madame X' Set List Breakdown





Oldest Hit in the Set List "Papa Don't Preach" True Blue, 1986

The highest bid (so far) for a Polaroid selfie Madonna auctions off during the show

Guinness World Records She's Broken

> 17 INCLUDING



Most costume changes in a movie. In Evita, she changed 85 times



Best-selling female artist

335 million+ albums and singles sold



Highest-grossing tour per show: 2006's Confessions

\$3.2 million nightly

M&M'S" NOW STUCK IN A CHOCOLATE BAR.

WHAT'S NOT TO LOVE?



Welcome to High Fidelity, 2020 A.D.

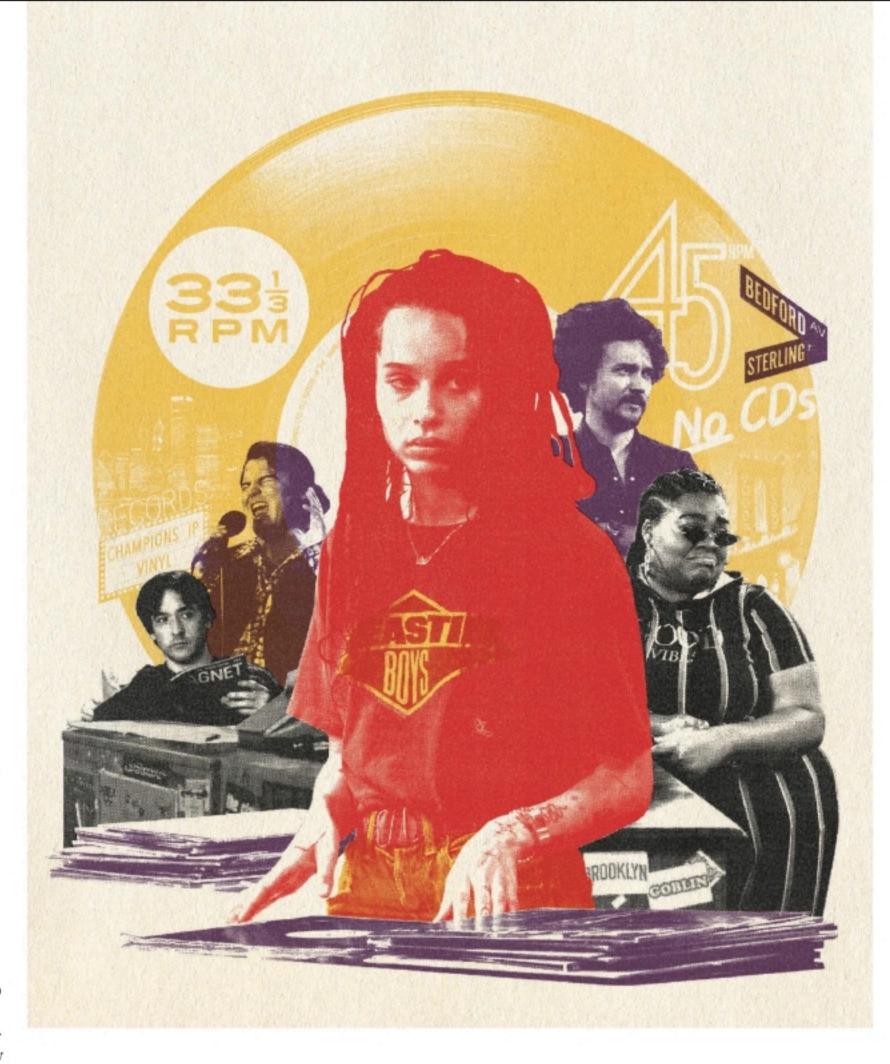
The author on why Hulu's gender-flipped series based on his music-superfandom novel makes perfect sense by NICK HORNBY

you want to survive as a writer. The publication of *High Fidelity*, in 1995, was just the first step in an ambitious 25-year plan: a successful American edition, even though I set the book in London (check); a much-loved Hollywood movie (check); and then a gender-flipped TV series starring a woman who was six years old when the book was published, but whose talent and star power were obvious even then (check). It is very satisfying when these things pay off.

All of this, including finishing the novel in the first place, seemed highly unlikely right up until the point where everything actually happened, and Zoë Kravitz's Hulu series (premiering February 14th) is perhaps the most unlikely High Fidelity iteration yet. That it makes so much sense, and speaks so directly to a contemporary audience, is a tribute to the star; it also says something about the ability of pop, rock & roll, etc., to inspire enduring devotion and provide a crucial sense of identification.

When I wrote the book, I had wondered whether all that was on the way out. The original Rob Fleming was beginning to suspect that he had dedicated the first half of his life to a cause that was no longer meaningful or relevant. Virgin and Borders megastores were replacing independents. CDs had replaced vinyl. Only a few German boffins had heard of MP3s. Who could've predicted that by 2020 the megastores would all be dead and that the plucky if impoverished Robs of the world would be the last ones standing?

High Fidelity the TV show deals with the world we're in now. The playlists are made digitally, yet the hearts that are broken by feckless men and women are still inconveniently and painfully analog. Somehow, Rob survived the move into the 21st century, because people are still willing to pay for something that's as ubiquitous as the air we breathe. After I began to use Spotify, I



thought, "This is incredible: every piece of music I'll ever need, in a small box in my pocket." But I started to feel that I wasn't paying the music enough attention, or giving it enough respect. With a record, you have to sit still and listen for 20 minutes, rather than skip after the first 10 seconds. Many of us are surrounded by books we'll never part with because they tell us who we are. The same applies to music. We want to make our mark, peel off, find a little corner of the planet that is uniquely ours. Our tastes reflect back an image of ourselves, invariably an image much more flattering than a selfie. I didn't know in 1995 that I was writing a book that would serve as a mirror to future generations. They too would look in it and see themselves.

And I didn't know that High Fidelity was going to be a TV series until plans were relatively advanced. When I sold the film rights to the book during the Nineties, I sold the TV rights too. But in late 2018, a friend of a friend of Zoë's got in touch to say that she wanted to talk. It's weird that her mother was in the movie. It's weird that both of them have posed naked for the cover of this magazine. Maybe this was all some kind of gimmick? But any

Kravitz
(center) stars
in Hulu's High
Fidelity TV
show, along
with David H.
Holmes and
Da'Vine Joy
Randolph
(right); John
Cusack and
Jack Black
(left) in the
2000 movie

doubts about her suitability for the gig, and her deep cultural seriousness, were dispelled partly by our conversation, and partly by the first playlist she sent me, featuring tracks by Alice Coltrane, Tierra Whack, William Onyeabor, Shuggie Otis, Betty Davis, Sun Ra, the Clash, Spirit, the MC5, and Darondo. Zoë might be a bona fide movie star, but she's done a lot of crate-digging. I was pretty sure that she'd do a good job. She has.

Every time I've had cause to dip back into the book, I've been struck by its melancholy. That's transferred to the series; Zoë's Rob has the blues. Her music is a shield against the world, but it can't provide all the protection she needs – and in any case, her generation has more to worry about than mine ever did.

I don't think anyone who has read and loved the book, and/or seen and loved the movie could be disappointed with the series. And if I catch anyone saying it's self-consciously "woke," what with its gender reversals and its inclusion of more than one race/sexuality, I will come 'round to your house and put you back to sleep. Because, guess what: High Fidelity isn't just about you. It's about people who aren't like you, too. @

ILLUSTRATION REFERENCE, FROM LEFT; SHUTTERSTOCK, 2; PHILLIP CARUSO/HULU, 3

In honor of 'Bad Boys for Life' - Michael Bay's new entry into the esteemed canon of police-friendship cinema - we charted the best uniformed duos in film. The criteria: the unlikeliness of each pairing, and their willingness to bend the rules by Anna Peele



BY THE BOOK

The Mix

SPOTLIGHT

Black Pumas' Mighty Roar

The Austin duo surprise even themselves with the retro-soul magic that happens when they team up – and the Grammys agree

FEW SHORT years ago, no one had huge expectations for Black Pumas, including its two founding members. Guitarist and producer Adrian Quesada had left the Grammy-winning Latin funk band Grupo Fantasma and needed a singer for instrumentals he'd cut in his home base of Austin. A friend turned him on to Eric Burton, a busker from L.A. who had grown up with gospel and was 13 years Quesada's junior. Neither man had heard of the other, and it took Burton a few days to return Quesada's call. "I was talking to my friends, and they said, 'Dude, hit that guy back up,' "Burton recalls. "They kind of scoffed at me for leaving him hanging."

In the studio, Burton's voice, which recalls a more somber Curtis Mayfield, proved to be a natural addition to Quesada's punchy R&B and retro-soul tracks, and before long they had forged an entire, self-titled album. The next surprise came when the two began gigging at a local club. "I remember telling my wife not to come – give us a few weeks because it might suck the first couple of times," Quesada recalls. To his surprise, Burton, who starred in school plays as a kid and still aspired to an acting career, displayed what his bandmate calls "James Brown-level frontman chops." "As soon as we stepped off the stage the first time," Quesada says, "we pulled each other aside and said, 'There's a spark here.' "

Within months, Black Pumas were packing Austin clubs and landed a record deal. In another shock, they scored a Best New Artist Grammy nomination, putting them up against the likes of Billie Eilish and Lizzo. "I can hardly believe we are part of the conversation, because we haven't been a band very long," says Burton, who no longer has to earn a living delivering packages for Amazon, but is feeling at least some pressure related to his new fame. "I've had to be more professional, or else I'm going to get fired." DAVID BROWNE







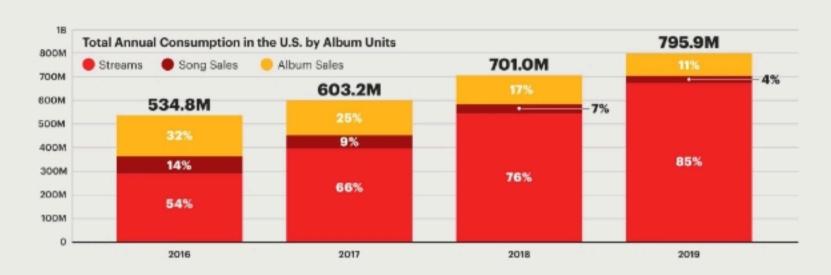
How We Listened in 2019

Streaming soared, vinyl kept growing, and Post Malone proved unstoppable. Our year-end stats take you inside the year's biggest trends by EMILY BLAKE

Streaming: Good News, Mostly

STREAMING'S TIPPING POINT came in 2016, when streams swelled to 432 billion and became the main source of music consumption in the U.S. Every year since, while sales have plummeted, overall album consumption has increased.

Our year-end numbers show that this upward trend continued in 2019, with U.S. consumption up 13.5 percent, to 795.9 million album units. (The main metric for ROLLING STONE'S albums charts, album units, combines digital and physical album sales, digital song sales, and audio streams, using a custom weighting system.) Streaming's share also continued to swell, accounting for 85 percent of all units. There were 705 billion total on-demand



audio streams in 2019, and when you include video streams, it was the first year on-demand streams surpassed 1 trillion.

While 1 trillion is massive, it's not all good news. Streaming growth is starting to slow, and, with it, the rise in overall consumption. Year-on-year, on-demand audio-stream *growth* decreased nearly 25 percent. There's been speculation that on-demand video services like Netflix have already hit market saturation; music streaming could be on its way there too.



Top Streamed Albums

		STREAMS
1	Hollywood's Bleeding	3.17B

2

When We All Fall Asleep...

2.36B

3

Ariana Grande
Thank U, Next

2.22B

4



Khalid Free Spirit

1.67B

5



Post Malone
Beerbongs &
Bentleys

1.62B

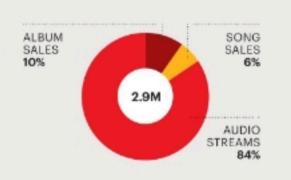
This list measures on-demand audio streams in the U.S. from January 1st through December 31st, 2019, as recorded by Alpha Data. For the full list of the top albums of 2019, visit RollingStone.com/charts/albums/year-end.

Republic Shows Up

It was a massive year for Republic Records, which shattered the competition in the upper ranks of ROLLING STONE's year-end charts. Half of the top 10 albums and three of the top 10 songs of the year were from Republic artists. Taylor Swift's Lover was the Number One album by sales, while Post Malone's Hollywood's Bleeding and Ariana Grande's Thank U, Next were streaming giants.

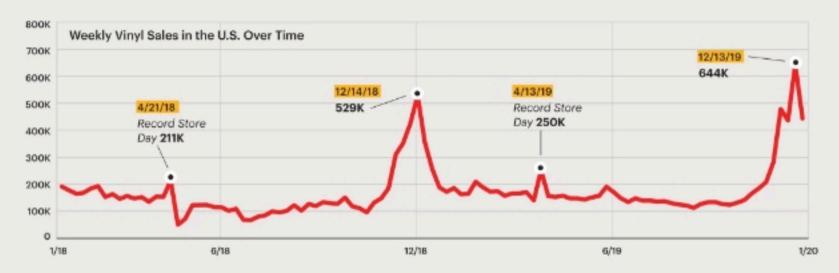
Post Malone Double Dips

2019 was the year Post Malone transformed into the most indestructible force in popular music. He was the most-streamed artist of 2019, knocking Drake off a throne he sat on for four years. As if the enormity of Hollywood's Bleeding wasn't enough, 2018's Beerbongs & Bentleys ranked fifth in streams a year after its release. The album is a streaming smash, with 84 percent of its units coming from streams.



MANY INDUSTRY EXPERTS feared that the growth of digital music — first downloads, then streaming — would send record collections the way of the eight-track and the VHS tape, quashing any notion of music being something that people actually owned. But throughout the 2010s, the numbers showed that listeners are still extremely interested in buying actual physical albums — that is, if those albums are 10 or 12 inches wide.

Vinyl sales soared throughout the decade, and that trend continued in 2019. Vinyl sales in the U.S. increased 10.5 percent, to 10.7 million, with LPs accounting for 19.2 percent of all physical album sales, according to Alpha



Data. Since 2014 alone, vinyl album sales in the U.S. have grown 175 percent.

There's certainly a nostalgia factor at play, with legacy acts like the Beatles and Pink Floyd consistently having the top LPs of each year. And it probably isn't a coincidence that their comeback coincided with the Polaroid camera's. But there are signs that it isn't all nostalgia: In 2019, Billie Eilish, Taylor Swift, and Harry Styles released albums that were massively successful on vinyl. Younger fans want something to hold onto as well.

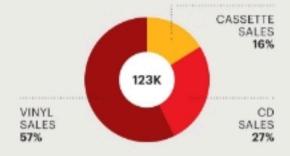


An Album That Can Do Both

Can an album pull in more than 2 billion streams and also be the top-selling vinyl album of the year? Billie Eilish's debut LP, When We All Fall Asleep, Where Do We Go?, proved to be the album that can do both, and also disproved anyone who thought Gen Z doesn't buy music. When We All Fall Asleep, Where Do We Go? sold almost 12,000 more copies than any other album.

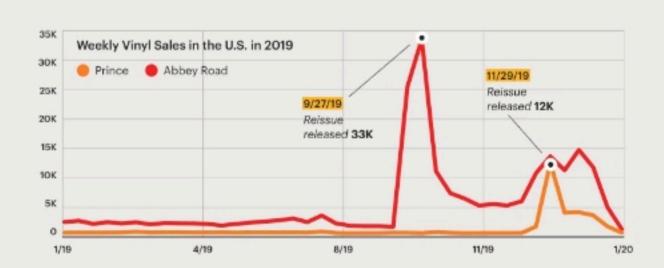
A Blockbuster Soundtrack

If the 2010s had an equivalent to the Forrest Gump soundtrack, it would be the soundtrack to Marvel's superhero blockbuster Guardians of the Galaxy. It's a commercial juggernaut, and one that's made for the turntable, with classics like "Ain't No Mountain High Enough," David Bowie's "Moonage Daydream," and the Jackson 5's "I Want You Back." Fiftyseven percent of the album's physical sales last year were vinyl sales.



The Reissue Boost

while the Greatest-Hits Album may be on its way out — who needs it when you can make your own greatest-hits playlist on Spotify? — reissues are still very much alive. In 2019, labels continued to repackage and remaster old material and dig into the vault for unreleased tracks, in an effort to bring a second life to decades-old albums. Abbey Road's 50th-anniversary reissue featured 23 out-takes and demos; Prince's 1999 had "Purple Music," an 11-minute fan favorite that had existed in bootleg form for 37 years but never got a proper release. Both hit the RS 200 upon rerelease, with Abbey Road at Number Three and 1999 at Number 31. And as this graph shows, they also caused a spike in popularity for each classic album.



The Mix

TECH

BEST NEW HEADPHONES FOR 2020

The finest options out there, from highly crafted throwbacks to ergonomic noisecanceling earbuds

By TIM CHAN



Jabra Elite 75t \$180

If you're going for a run or heading to the gym, try these earbuds, which are mapped to fit the shape and contours of your ear. The result is a slightly smaller pair of buds, but one that provides a more secure fit. Jabra's noise-reducing capabilities keep your audio crisp and clean even when you're on the move.



Apple seems to have addressed

complaints about its previous buds, namely the loose fit and poor range of sound. This welcome update gets you a better listening experience, with the addition of noise cancellation and new silicone tips that grip your ears.





LUXURY

Focal Stellia \$2,999

These headphones deliver flawless sound in a sleek package. Audiophiles will appreciate the full range and faithful sound reproduction. Their technical prowess is on full display, thanks to the M-shaped inverted dome driver, which provides a more engaging and satisfying sonic experience.



A pair of wireless buds that deliver a lot of bass for their buck, with surprisingly powerful sound from a tiny package. The cozy tips fit supersnug in your ear canal, eliminating outside noise and guaranteeing fuller sound.



OVERALL

Bowers & Wilkins PX7 Wireless \$399

With up to 30 hours of playtime and a carbon-fiber shell inspired by the look and feel of state-of-the-art automotive design, there's a lot to like about these wireless headphones from B&W. But what really sets them apart is the way music sounds so much more rich and detailed when you put them on.

ICK FLEETWOOD should be relaxing. Fleetwood Mac just wrapped up a 13-month world tour - their first since parting ways with Lindsey Buckingham and replacing him with Tom Petty and the Heartbreakers guitarist Mike Campbell and Crowded House frontman Neil Finn but the 72-year-old drummer is already deep into planning his next project: a tribute concert to Peter Green, who co-founded Fleetwood Mac and wrote many of the group's early classics before being sidelined by mental illness and addiction issues. The show is set for February 25th in London, with special guests David Gilmour, Christine McVie, John Mayall, and Steven Tyler. "I wanted people to know that I did not form this band - Peter Green did," Fleetwood says. "And I wanted to celebrate those early years of Fleetwood Mac, which started this massive ball that went down the road over the last 50 years."

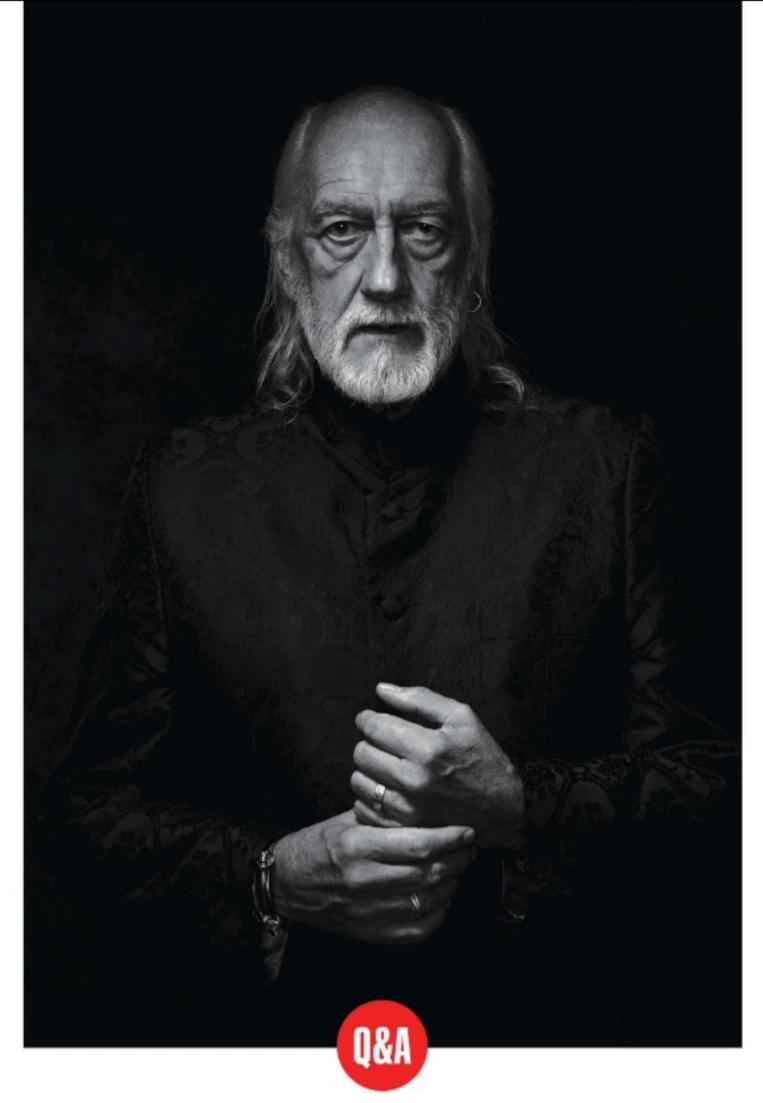
Peter Green hasn't been seen much in public over the past decade. When is the last time that you and he spoke?

It was about a year and a half ago. I went out with my girlfriend, and spent the day with him. He's not the Peter that I knew, clearly. But he plays acoustic guitar. He loves painting, and fishing is his hobby. It's no secret that he took a left turn and never came back, but he's OK. He also has really little or no ego at all, which is unbelievable. You want to go, "Do you realize what you did?" "No, no. Yeah, I suppose so." He has no ego about what he did.

Might he perform at the show?

No. But it seems he's going to come. He wants to keep a very, very low profile, and that's fine. This is about the journey Peter took into the music, and that music is still alive. Everyone that's on this show has their own poignant story about being connected to that early band.

Will John McVie be there? Not as of the moment. He's in the middle of one of his



Mick Fleetwood

The drummer on paying tribute to Peter Green, Fleetwood Mac's future, and his relationship with Lindsey Buckingham

By ANDY GREENE

sailing trips. But Christine [McVie] will be there.

Peter was one of about 10 guitarists who have left the band over the years. Why can't you and John ever hold onto guitarists? We don't really know. It's daunting when you look at all the great guitarists that have come through our ranks. But John and I have always just kept the band going. We can't do this on our own. Every time [someone leaves] we go, "Well, what the fuck

are we going to do now? Find another guitar player!"

I've heard there's talk of a Fleetwood Mac Broadway musical.

There's always been talk about doing something like that. I hope it can happen at some point. A lot of people, understandably, would say, "Wow, that would make a really good musical." It is an incredibly interesting story, especially the period around Rumours. But it's not formed.

How do you feel physically, after wrapping up that recent marathon tour?

It's actually coming off the road that's the downer. You find yourself wondering why you start to get antsy around 8 p.m. It's this military-type of stress where you just keep going and going, so you have to be careful with how you work your re-entry so you don't beat yourself up too much.

What are the future plans for the group? I've read that

Stevie Nicks is preparing a long solo tour.

We had a lovely get-together in L.A. about two weeks ago after the tour. We are all very open to that continuing in the band. There's no breaking up of the band. We were like, "Give us a break. Give us a few weeks before we start wondering what to do." In the New Year, we'll touch on what the vision is.

What is your vision for what that might be?

We're not going to do a [long] tour, I would say, ever again. But there's loads of alternatives. People like Peter Gabriel have a lovely way of working where they go and just do four or five major festivals during the summer. That's the sort of vision that I see for Fleetwood Mac. We're able to cherry-pick things that have dignity, and are fun to do, and they're historically interesting.

A lot of bands are doing farewell tours now. Can you ever see Fleetwood Mac doing one of those?

I suppose. It would the right thing to do, to let people know you're not wanting to play again. We are not at that point, but if we get there, it's a pretty good, gracious thing to let people know they'll never see the band play again.

Do you see any scenario where you'd ever play with Lindsey Buckingham again?

No. Fleetwood Mac is a strange creature. We're very, very committed to Neil and Mike, and that passed away a time ago, when Lindsey left. And it's not a point of conversation, so I have to say no. It's a full drama of Fleetwood Mac, no doubt. His legacy is alive and well, and as it should be. A major, major part that will never be taken away, and never be down-spoken by any of us. Neil and Mike have tremendous respect for Lindsey. The situation was no secret. We were not happy. It was not working, and we parted company. And that really is the all of it.

Have you spoken to Lindsey since his heart attack? I have not. @

IN DEPTH

Why Copyright Lawsuits Are Scaring Off Songwriters

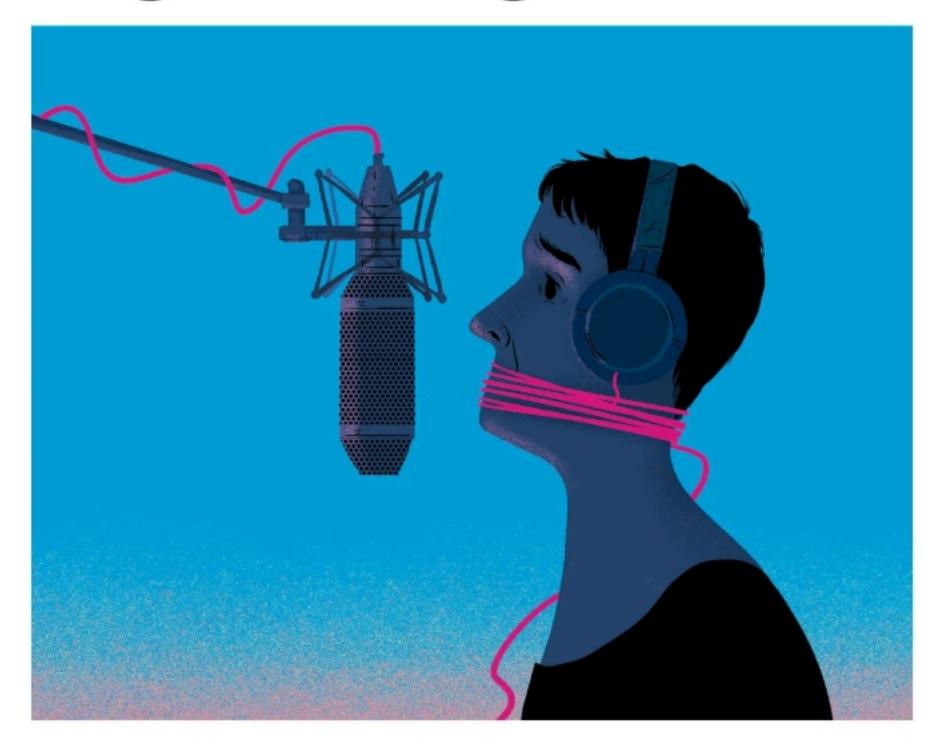
With chart-topping artists being sued for millions in infringement claims, a chilling effect has hit the studio By AMY X. WANG

Robin Thicke, Pharrell Williams, and T.I.'s "Blurred Lines" as a half-forgotten hit song from 2013. The music industry remembers it as its worst nightmare.

In the five years since a court ruled that "Blurred Lines" infringed on Marvin Gaye's 1977 "Got to Give It Up," demanding that Thicke and Williams fork over \$5 million to the Gaye estate for straying too close to the older song's "vibe," the once-sleepy realm of music copyright law has turned into a minefield. Chart-topping musicians have been slapped with infringement lawsuits like never before, and stars like Ed Sheeran and Katy Perry are being asked to pay millions in cases that have many experts scratching their heads. Across genres, artists are putting out new music with the same question in the backs of their minds: Will this song get me sued?

"There is a lot of confusion about what's permissible and what's not," says Sandy Wilbur, a forensic musicologist who served as an expert witness for the defense in the "Blurred Lines" case. Because cases are decided by "the average listener, who is not an educated musicologist or musician," she notes, "labels are very afraid." Since that game-changing ruling in 2015, Wilbur says, she's received triple the number of requests from music companies to double-check new songs before they are even considered for release.

How did this culture of fear drift into the recording studio? The answer is twofold. While copyright laws used to protect only lyrics and melodies (a prime example is the Chiffons' successful suit against George Harrison in 1976 for the strong compositional similarities between his "My Sweet Lord" and their "He's So Fine"), the "Blurred Lines" case raised the stakes by sug-



gesting that the far more abstract qualities of rhythm, tempo, and even the general feel of a song are also eligible for protection - and thus that a song can be sued for feeling like an earlier one. Sure enough, a jury in 2019 ruled that Katy Perry owed millions for ostensibly copying the beat of her hit "Dark Horse" from a little-known song by Christian rapper Flame, stunning both the music business and the legal community. "They're trying to own basic building blocks of music, the alphabet of music that should be available to everyone," Perry's lawyer Christine Lepera warned in the case's closing arguments.

That case, which Perry's team is currently in the process of appealing, suggests a second point: Plaintiffs in copycat cases are largely targeting megahit songs because they've seen where the money is, and the increasing frequency of those court battles in headlines is causing an avalanche effect of further infringement lawsuits.

All of this is striking fear into professional musicians' hearts. A few months ago, Emily Warren, a songwriter who's worked with the likes of Shawn Mendes and Dua Lipa, released a song with a country artist that had a similar chorus to a pop song released at the exact same time - a total coincidence, she says. "Even though I'd never heard [the other song], it still felt like a tricky thing," Warren says. Neither of the two artists took any action against each other, but the situation opened Warren's eyes to how easily sticky situations can arise by accident. "The more cases are publicized, the more fearful people are," she says.

While some record labels may have the budget to hire on-call musicologists who vet new releases for potential copyright claims, smaller players who can't afford that luxury are turning toward a tried-and-true form of protection: insurance. Lucas Keller the founder of music management company Milk and Honey, which represents writers and producers who've worked with everyone from Alessia Cara and Carrie Underwood to 5 Seconds of Summer and Muse - recently began encouraging all his songwriter clients to purchase errors-and-omissions insurance, which protects creative professionals from legal challenges to their intellectual property. "We all feel like the system has failed us," Keller says. "There are a lot of aggressive lawyers filing lawsuits and going ham on people."

(He's particularly critical of publishers whose rosters are heavier on older catalogs than new acts: "Heritage publishers who aren't making a lot of money are coming out of the woodwork and saying, 'We're going to take a piece of your contemporary hit.'")

CLOCKWISE FROM TOP LEFT, BROADIMAGE/SHUTTERSTOCK, BRAD ELTERMAN/FILMMAGIC, ANTHONY HARVEN/SHUTTERSTOCK, SCOTT DUDELSON/GETTY MAGES, CHELSEA LAUREN/ SHUTTERSTOCK, AFFLUSA/SHUTTERSTOCK, BOB LATOUR/SHUTTERSTOCK

The Year in Infringement Claims

In the shadow of the \$5 million "Blurred Lines" ruling, there's been an uptick in copyright lawsuits and related controversies over hit songs



Ariana Grande & 2 Chainz

JANUARY 2019
Critics point out that
Grande's "7 Rings"
sounds similar to
2 Chainz's 2011 "Spend
It"; Grande smooths
over any perceived
tension by having
2 Chainz appear on a
remix of her song.



Led Zeppelin & Spirit

An appeals court
says it will review an earlier ruling on whether
or not Led Zeppelin
stole the opening
guitar riff of "Stairway
to Heaven," putting
the music industry
on edge.



Ed Sheeran & Marvin Gaye

JULY 2019
A judge cancels a scheduled jury trial pitting Gaye's estate against Sheeran's "Thinking Out Loud,"

against Sheeran's
"Thinking Out Loud,"
saying he wants to
wait for the resolution
of the ZeppelinSpirit case first.



Juice WRLD & Yellowcard

OCTOBER 2019

Emo band Yellowcard sues for \$15 million over perceived similarities between "Lucid Dreams" and their "Holly Wood Died." (The band says it will continue the suit after Juice's death.)



Lizzo & Raisen et al.

Two songwriters
accuse Lizzo of denying
them credit on "Truth
Hurts"; Lizzo countersues, claiming they
had no part in the creation of her hit (whose
best-known line came
from a viral tweet).



Miley Cyrus & Michael May

JANUARY 2020
Cyrus settles a \$300
million lawsuit with
Jamaican songwriter
May, who claimed
she ripped off his 1988
track "We Run
Things" for her 2013
hit "We Can't Stop."
Terms are undisclosed.

Under E&O policies, insurance companies can cover several million dollars of an artist's costs if they lose a copyright lawsuit. Joe Charles, senior vice president at insurance provider Alliant America, says that as many as half of his personal A-list music clients a roster of stars who already pay for tour insurance and other standard entertainment-industry policies - have recently shown interest in E&O coverage. "When a major claim is all over the press, we'll get 10 to 20 calls from musicians asking how they can protect themselves and what it will cost," Charles says. The number who've actually purchased the insurance is smaller due to the high costs, which can run from \$20,000 to \$250,000 a year, depending on the artist's prior legal runins, their audience size, and how much they want to insure.

Artists are understandably reluctant to publicly disclose that they have copyright insurance, which could open them up to an increase in lawsuits. But music attorney Bob Celestin, who's helped represent acts like Pusha T and Missy Elliott, says it is safe to assume that the majority of artists who show up in Top 10 chart positions are covered in this way. Big labels, too, usually have comprehensive insurance policies that protect them against copyright issues. Yet these policies have gaps. "An artist could find themselves uninsurable if they've had numerous claims and the insurance companies have already paid out millions in costs and settlements," Charles says. "Or they might find a carrier willing to write it, but the rates are going to be astronomical."

Songwriters, who may not have the financial wherewithal of celebrity artists but are equally liable for copyright claims, are often the most vulnerable. "We're all nervous and afraid to fall into a battle over something as minor as a few notes or words," says Ross Golan, a producer and songwriter who has released songs with stars like Ariana Grande and Justin Bieber. Warren says she's even heard of some megawatt artists keeping musicologists on personal retainer to help them avoid lawsuits.

"There's more conversation on the front-end as songs are being created," says Joel Timen, vice president of A&R and publishing at Curb Word Entertainment. "A lot of my songwriters have been asking more questions: 'Does this melody or pre-chorus section remind you of anything? Should we be careful?'"

The popularity of cheap music-production software, which offers the same features to every user, has added another layer of risk. "Music is now more similar than it is different, for the first time," Golan says. "People are using the same sample packs, the same plug-ins, because it's efficient." Then there's the issue of the finite number of notes, chord progressions, and melodies available. Or, as Wilbur puts it, "There are no virgin births in music. Music comes out of other music."

The copyright lawsuit boom, and its unintended side effects, may be just getting started. In 2014, rock band Spirit accused Led Zeppelin's Robert Plant and Jimmy Page of lifting the opening guitar riff of "Stairway to Heaven" from a 1968 instrumental called "Taurus"; a jury threw out the case in 2016, determining that Plant and Page didn't plagiarize the musical motif - only to see the case turned around two years later on appeal, when a three-judge panel ruled that the original trial involved errors in jury proceedings. ("The jury is a whole other conversation," says Keller, the music manager. "In British court, they'd just ask a musicologist to decide. In American court, we bring in 10 random people.") In 2019, the court of appeals decided to reconsider the original panel's ruling; it will likely issue a decision in the spring of 2020.

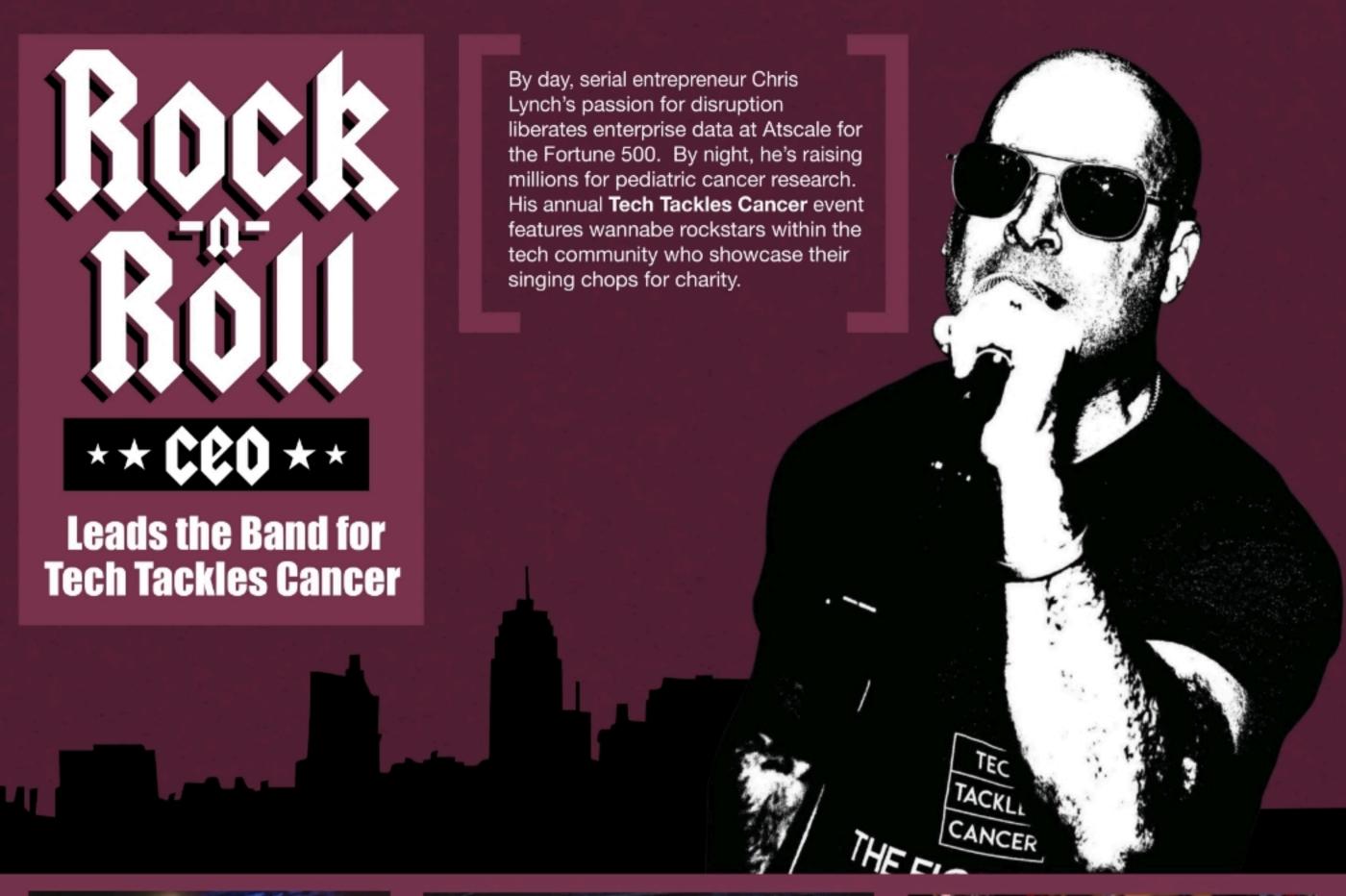
Artists, songwriters, producers, and labels are now awaiting the next Zeppelin verdict, with many hoping that a judgment in Page and Plant's favor could unwind some of the headache-inducing ambiguity introduced by the "Blurred Lines" ruling. Others see the case, which has a chance of going all the way up to the Supreme Court, as a reopening of Pandora's box. Will the latest ruling clarify the scope of music copyright - or muddy it even further? "At what point is an element of creative expression protectable?" says media intellectual-property attorney Wesley Lewis. "Litigators are all hoping for more clarity." @

LIL PEEP'S Death Heads to Court

Who bears the legal responsibility for the young rap star's fatal 2017 overdose?

TWO YEARS AFTER Lil Peep died on a tour bus in Tucson, Arizona, the late rapper's mother and his record label are in a heated court battle over who was responsible. Peep died due to an accidental overdose of fentanyl and Xanax in November 2017, just weeks after celebrating his 21st birthday. In October 2019, his mother, Liza Womack, filed a lawsuit against First Access Entertainment, the management company that signed Peep to a multiyear contract in 2016, claiming that it played a part in her son's death by pushing him "onto stage after stage in city after city, plying and propping him up" with drugs and having him sign an "asymmetrical joint-venture business enterprise." In a December 2019 filing, First Access disputed all claims, including negligence, breach of contract, and wrongful death. Attorneys for First Access said that the company was never legally responsible for Peep's well-being - and cited precedents like the 2013 case by Michael Jackson's estate against AEG Live as examples of music companies' limited responsibility for artists' personal conduct. "Any contention that this was a mere business agreement flies in the face of the multitude of facts that say otherwise," Womack's lawyer, Paul Matiasic, tells ROLLING STONE. (FAE's lawyers did not respond to multiple requests for comment.) The fight will begin in earnest in April 2021, when Womack's case goes to trial. Visit RollingStone.com for updates. Jonathan Bernstein AND AMY X. WANG











Join Chris, John (blue mohawk), Chris Jr (drums) and TTC at the next fundraising event in September 2020 at the House of Blues Boston.

TTC has raised over two million dollars since its inception in 2013. This year, do your part in the fight against pediatric cancer by helping them meet their most ambitious fundraising goal to date: \$1M (ttcfund.org/donate)

Tech Tackles Cancer partners with three charities who help cancer patients across all stages of the illness.



St. Baldrick's is the leading investor in childhood cancer research outside the U.S. Government. More children are lost to cancer in the U.S. than any other disease — in fact, more than many other childhood diseases combined. Worldwide, a child is diagnosed with cancer every 2 minutes.



One Mission is a pediatric cancer charity that does whatever it takes to get kids through cancer treatment. One Mission programs make living in the hospital less lonely and stressful, bring back joy in a time of fear and uncertainty and give kids and their loved ones the support they need to get through the emotional and financial challenges of treatment.

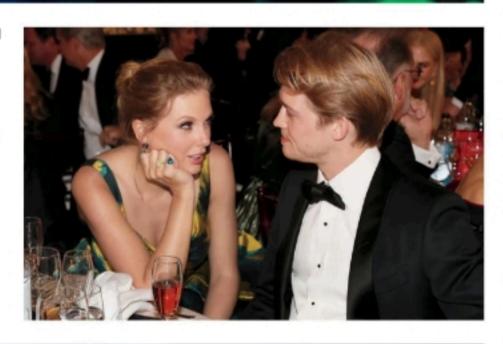


Boston Children's Hospital, the primary pediatric teaching affiliate of Harvard Medical School, is home to the world's largest research enterprise based at a pediatric medical center. Its discoveries have benefitted both children and adults since 1869.



AFTER THE GOLD RUSH

Taylor Swift made a rare public appearance with actor Joe Alwyn at the Golden Globes, where she was nominated for Best Original Song, Elton John (below), who won the award for his biopic Rocketman, celebrated with lifelong co-writer Bernie Taupin and Little Women co-star Laura Dern. "It was one of the most emotional moments of my life," Elton said of Rocketman.





version of "Heart-shaped Box." "I was in the most insane mosh pit of

my life in this room," Beck told the crowd at the Hollywood Palladium.

◀ BIEBZ GETS BACK Justin Bieber's been

quiet for the past few years, but he plans to come roaring back in 2020. The singer just released "Yummy," his first new single in three years, and he's also promising fans a new album, tour, and docuseries in the coming year. "As humans we are imperfect," Bieber recently said. "My past, my mistakes, all the things that I've been through, I believe that I'm right where I'm supposed to be, and God has me right where he wants me. I feel like this is different than the previous albums, just because of where I'm at in my life."



Random Notes K-POP BALL DROP BTS (pictured with Post Malone) wowed. fans who waited

NEW YORK'S FINEST LL Cool J performed a medley of his hits in Times Square.

Pop's 2020 Vision

The Grateful Dead have been doing legendary New Year's Eve shows for 50 years, and they did not disappoint when it came time to truck on into 2020. Dead & Company opened their second decade of existence at the Chase Center in San Francisco with an NYE epic, bringing on dancers dressed as 1920s flappers and lifting Ken Kesey's daughter Sunshine and Jerry Garcia's daughter Trixie above the crowd inside a miniature biplane from which the pair doused the crowd with confetti. Meanwhile, centuries and galaxies away in time and culture, human dancing bear Post Malone rang in the New Year in front of millions of revelers in Times Square, capping off the 47th edition of Dick Clark's New Year's Rockin' Eve, which included performances by Sam Hunt, Alanis Morissette, and BTS. The K-pop boy band is about to release Map of the Soul: 7 and will be on tour later this year.





▲ WELCOME TO MY NIGHTMARE

Alice Cooper hosted his annual charity event, the Christmas Pudding fundraiser, in Phoenix, where he was joined by the Alice Cooper Group, Rob Halford of Judas Priest, and Johnny Depp, who plays with Cooper in their L.A. band, the Hollywood Vampires. The pair also auctioned off a custom guitar (which went for \$43,000) and performed a memorable version of David Bowie's "Heroes."

RANDOM QUOTE

hours in the cold to watch them play.

"Got that experimental throat surgery that lets me sing barbershop quartets without having to make three friends."

-Conan O'Brien on Twitter



A OFFSET TAKES THE CAKE

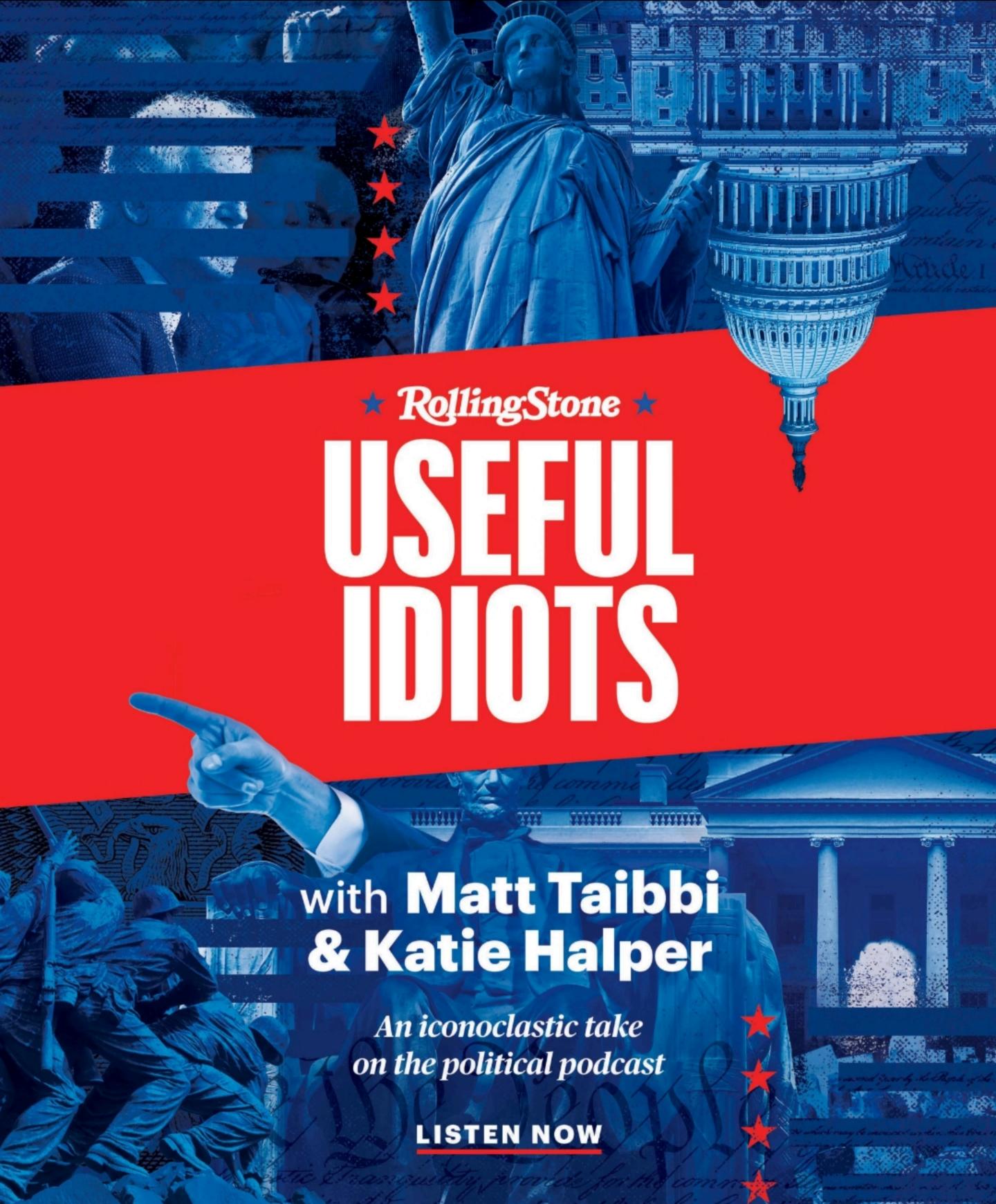
Offset celebrated his birthday in L.A. with a Call of Duty cake, a feast catered by Popeyes, a room full of strippers, and his wife, Cardi B, who encouraged the evening's performers by shouting, "Make that big booty work!" Cardi is reportedly putting the finishing touches on her new album, which she says will be called Tiger Woods, "because remember when everybody was talking shit on Tiger Woods...and then he fucking came and won that green jacket?"





Kraft For the win win







National

NTHONY FERRANTE had just arrived for work at the Eisenhower Executive Office Building, next door to the White House, when the first attack hit. Around 7 a.m., internet service went out across the United States and parts of Europe. Reddit, Netflix, and The New York Times website wouldn't load. Ferrante couldn't check Twitter for updates because that was down too. "No one knew what it was," he says. "It was definitely chaotic."

It was Friday, October 21st, 2016. In two weeks, Americans would pick a new president. When Ferrante, a director in the White House's cybersecurity team, realized the internet had gone dark across the country, he feared the worst. Ferrante thought he was witnessing a dry run for an attack on the election.

A native of Portland, Maine, with pale Nordic features and a sharp widow's peak, Ferrante hacked his first computer when he was 10 and studied computer science at Fordham. He was destined for a cushy career as a cyber expert in the private sector when the September 11th attacks happened. He quit corporate America, joined the FBI, and specialized in tracking terrorists on the internet; in his first case at the bureau, he helped foil the terrorist plot to blow up the PATH train tunnel between New York and New Jersey. Over the next decade, he rose to become one of the FBI's top cybersecurity agents and helped write President Obama's directive that created the first chain of command in the event of a major cyberattack on U.S. soil.

In late 2015, Ferrante moved to the White House to run the National Security Council's Cyber Incident Response Desk, a small team whose job was to lead the government's response to a major cyberattack. But by the summer of 2016, his focus had narrowed to a single but growing threat: Russian interference in the election. He and his colleagues had received intelligence reports about strange activity targeting state election websites. At first, the details were sketchy and there wasn't enough data to draw any connections. Then, in July, the head of elections for Illinois noticed a huge amount of data flowing out of his voter registration system. The FBI discovered that Illinois had been hacked; the culprits accessed databases with information on hundreds of thousands of voters and stole an unknown quantity of data.

The FBI sent an urgent alert to state election chiefs, encouraging them to search their systems for any digital breadcrumbs that matched data from the Illinois breach. Ferrante came to work each morning to find that several new states had been targeted with the same sorts of tools and techniques that Illinois had experienced. With the FBI's help, his team concluded that Russian-based hackers had penetrated two state voter databases (Illinois was one, the other was not publicly named) and scanned election websites in every state. "We knew at that point we were dealing with a large-scale coordinated campaign," Ferrante says.

President Obama wanted a national cybersecurity preparedness plan for the upcoming election, and Ferrante was put in charge of creating it. He and his team spent months researching every detail of American elections and running different scenarios. What if a million people showed up to vote in Florida only to be told there was no record of them as a voter? What if a cyberattack took down the division of the Associated Press that supplies election-night reporting data to major news organizations like CNN? What if the internet crashed on Election Day?

That last scenario felt a lot less hypothetical on October 21st as Ferrante scrambled to figure out why the huge swaths of the internet were dark. He called his counterparts at the FBI, CIA, Department of Homeland Security, and National Security Agency; they were just as confused as he was. By midday the outage was international news, spreading from the East Coast to the West. It was only after the third wave of attacks, Ferrante says, that the FBI made contact with an internet-domain company in New Hampshire called Dyn. The company eventually shored up its servers that day, and the internet was restored.

Ferrante and his team had by that point conducted perhaps the most exhaustive study of the potential threats to our convoluted voting system. There were the cyberthreats they had envisioned and prepared for: hacked voter registration databases, disruptions to the flow of information on election night, faulty voter equipment. By Election Day, these threats weren't all speculative: Two teams of Russian hackers, known as Fancy Bear and Cozy Bear, had broken into the Democratic National Committee and stolen reams of data. The Dyn attack, resulting from a massive botnet that exploited flaws in internet-connected gadgets and appliances such as home security cameras and WiFi routers, showed it was possible to wreak havoc on the internet itself. (To this day, the culprit of that attack remains unknown. The FBI hasn't announced any arrests and won't comment on its investigation.)

For Election Day, Ferrante created the first-ever cybercommand post in the White House Situation Room. From six in the morning until the election was called for Donald Trump, he and his colleagues monitored the vote, but the day passed without incident. The sense of accomplishment he felt was outweighed by a sinking feeling over what he knew Russia had already done. By hacking the Democratic Party, spreading disinformation on social media, and compromising confidential voter data, it had proved to the rest of the world it was possible to successfully interfere in a U.S. election and come away largely unscathed.

Obama hit Russia with new sanctions and expelled 35 of its diplomats in his final days in office, but it would be up to his successor to protect against future election attacks. Soon after Trump took office, a team of cyber experts who worked in the Obama White House met with a group of Trump aides including Joshua Stein-

READERS' POLL

Do you think we'll be able to cut greenhouse gas emissions in half by 2030 to avoid climate catastrophe?

Yes

No

Go to Rolling Stone.com for next issue's poll.

THE LONG VIEW: RUSSIAN ELECTION INTERFERENCE

AUG. 2013

FEB. 2016

MARCH

JUNE



SEEKING TROLLS

The newly formed Internet Research Agency - bankrolled by Russian oligarch Yevgeniy Viktorovich Prigozhin - posts an ad seeking "internet operators," or trolls.



TENSIONS RISE

Russia invades Ukraine and annexes Crimea, dramatically escalating tensions with the United States. Six years later, the conflict still rages.



LICENSE TO CONSPIRE

farm launches Project Lakhta, which a DOJ indictment will later call a "conspiracy to interfere in the U.S. political system."

The nascent troll



USA FIELD TRIP Two IRA employees

visit nine states including the electoral battlegrounds of Michigan, Colorado, and Nevada to "gather intelligence" on American politics.



TARGET: CLINTON The IRA seeks "any

opportunity to criticize Hillary." Posing as Christian activists, antiimmigration zealots, and civil-rights radicals, their posts reach 126 million.



DNC HACK

Fancy Bear, a hacker group associated with the GRU, Russian military intelligence, spear-phish John Podesta's account and steal 50,000 emails.



DATA BREACH

GRU hackers break into the Illinois State Board of Elections, gaining access to 200,000 voters' registration data - the first of a series of attacks across all 50 states. man, a cybersecurity aide to the new national security adviser, Lt. Gen. Michael Flynn. (Steinman is now the cybersecurity adviser to the president.) According to people familiar with the meeting, when the Obama staffers told Steinman they wanted to talk about Russian interference, they were met with a blank stare.

Nothing happened, was Steinman's reply: Russia didn't interfere in the election.

The Obama team was stunned. Inside the Trump White House, the election security issue "was taboo," says Andy Grotto, an Obama-era holdover who wrote Trump's cybersecurity executive order. Grotto got calls from intelli-

gence agencies asking if they were still allowed to work with their European counterparts on interference issues. (The Trump White House declined to comment for this story.) Ferrante had seen enough. Three months into Trump's presidency, he handed in his resignation.

OUR YEARS AGO, for an embarrassingly modest price, Russia pulled off one of the more audacious acts of election interference in modern history. The Internet Research Agency, the team of Kremlin-backed online propagandists, spent \$15 million to \$20 million and wreaked havoc on the psyche of the American voter, creating the impression that behind every Twitter avatar or Facebook profile was a Russian troll. Russian intelligence agents carried out the digital version of Watergate, infiltrating the Democratic Party and the Clinton campaign, stealing tens of thousands of emails, and weaponizing them in the days and weeks before the election. Russian-based hackers tested election websites



OBAMA'S CYBER EXPERT

Anthony Ferrante worked from the White House to try to secure the 2016 election. Afterward, he briefed the Trump team on the threat but they refused to admit Russian meddling. Ferrante was told there's no "there" there.

in all 50 states for weak spots, like burglars casing a would-be target. "The Russians were testing whether our windows were open, rattling our doors to see whether they were locked, and found the windows and doors wide open," says Sen. Mark Warner (D-Va.), the top Democrat on the Intelligence Committee. "The fact that they didn't interject themselves more dramatically into our election was, I think, almost luck."

Did Russia's hack-and-leak operation and disinformation blitz tip the election to Trump? Kathleen Hall Jamieson, a communications professor at the University of Pennsylvania, argues in her book Cyberwar that Russia helped Trump win, but the debate over that question rages on to this day. What's not in doubt, however, is how unprepared and vulnerable the U.S. was.

We can't say we weren't warned. European allies raised the alarm for years about Russian aggression and cyberattacks in Estonia and Ukraine on internet infrastructure, electionreporting systems, and the power grid. In the spring of 2015, a panel of experts testified before Congress about "Confronting Russia's Weaponization of Information." One of the witnesses was Peter Pomerantsev, a propaganda expert who experienced President Vladimir Putin's war on truth and reality from the inside as a Russian TV producer. In the post-Soviet global order, Pomerantsev explained, Russia's leaders knew they couldn't compete militarily or economically with the West, so they needed "revolutionary powers and asymmetric responses," as one Kremlin official put it. Russia's mastery of propaganda dated back to Stalin, but under Putin's leadership, the country adapted these tactics for the digital era. It would wage an information war on Western democracies. "We always ask, 'What does Putin want?" Pomerantsev testified. "He sees the 21st century that is going to be like this - endless subversion, disinformation, economic manipulation – and he might be right." He went on, "This is permanent war."

Any member of Congress who heeded Pomerantsev's warning would have seen Russia's 2016 interference coming. But only five or six out of 44 lawmakers attended the hearing. C-SPAN didn't bother to show it.

We were, in other words, caught with our pants down. Four years later, other foreign nations, including Iran, North Korea, Saudi Arabia, and China, are getting in on the act. They'll be joined, analysts say, by domestic actors -American consultants and candidates and click merchants borrowing and adapting Russia's tactics to influence an election or make a quick buck. "The most important piece that I tell everybody," Ferrante says, "is now that it's been done once, everybody can do it."

Are we prepared going into the 2020 election? After seven months of reporting, interviewing more than 40 experts as well as current and former government officials and reviewing thousands of pages of records, the reality is this: We've made progress since the last election - but we're much less secure than we should be. To use Sen. Warner's analogy, the

AUG. OCT. NOV. **JULY 2019**



WIKILEAKS Days before the Democratic Con-

vention, WikiLeaks posts a trove of 20,000 DNC

emails that suggest the party prefers Clinton over rival Bernie Sanders.



HELPING TRUMP Russians, posing

as Americans, coordinate with the Trump campaign to organize a yuge pro-Trump flash mob across Florida. Thirteen IRA execs are later indicted.



MALWARE IN OUR VOTER ROLLS

Posing as election officials, GRU hackers successfully spear-phish VR Systems, a software company that manages voter rolls, and install malware in its system.



COUNTER ATTACK

WikiLeaks posts Podesta's emails, distracting from Trump's bragging about grabbing women "by the pussy" - and an Obama warning on Russian meddling.



MORE DNC DATA LEAKED

Two days before the presidential election, WikiLeaks releases another trove of 8,000 emails stolen by Russians from the DNC.



STIRRING HATE Even after the

election, the Russians continue to foment dissent, staging two competing New York rallies supporting and opposing President-elect Trump.



MUELLER WARNS AMERICA

Robert Mueller tells Congress Russia is working to influence the 2020 election "as we sit here" - and "many more countries" are following their lead.

National Affairs

windows and doors are no longer wide open, but the burglars are more sophisticated, and there are a lot more of them than there were four years ago. They may try to break into our voting systems; they may push online propaganda to merely create the impression of an attack as a way to undermine our faith in the electoral process. "The target is the minds of the American people," says Joshua Geltzer, a former counterterrorism director on the National Security Council. "In some ways, we're less vulnerable than we were in 2016. In other ways, it's more."

Nearly every expert agrees on this: The worst-case scenario, the one we need to prepare for, is a situation that causes Americans to question the bedrock of our democracy free and fair elections. If such a catastrophe occurred and the integrity of a national election came into doubt, Michael Daniel, the former cybersecurity coordinator in the Obama White House who now runs the Cyber Threat Alliance, isn't sure the country would ever be the same. "How do we deal with that?" he asks. "How do we recover from that?"

ACH MORNING, Kammi Foote gets in her car and begins her 40-minute commute to the front line of an invisible war. Foote lives and works in Inyo County, a vast expanse of eastern California snug along the Nevada border, home to the lowest point in the continental U.S. and the highest, with the hottest recorded temperature in the nation and some of the coldest. There are as many square miles - 10,000 - as there are voters.

In a small county like Foote's, local public officials tend to wear many hats. As Inyo County's clerk-recorder and registrar of voters, Foote issues birth and death certificates, officiates 50 or so weddings a year, and oversees elections. Voting is like a religion in her family. As soon as she turned 18, she got her voter registration card and volunteered as a poll worker. Her parents used to call her every Election Day to make sure she'd voted; when she got elected in 2010, her family couldn't have been prouder. Running the election was now her job.

She realized that her job was about to change in a dramatic way when an FBI agent contacted her in the fall of 2016. The agent asked Foote if she'd seen anything suspicious related to the upcoming election. Was something about to happen, she wondered. Were her local elections under attack? When she asked for more details, the agent wouldn't confirm anything. Even if there were an issue, he said, he couldn't share that information because it was classified. Foote's first call with the FBI left her more confused than ever.

Inyo County is one of roughly 8,000 jurisdictions in the country that administer elections. The distributive and localized design of the American system has long been seen as an asset: There is no central database or voting system to attack, no uniform set of voting software or polling-place equipment. Someone planning a widespread attack on U.S. elec-



tion infrastructure would, in theory, have their work cut out for them.

The 2016 election flipped that logic on its head. The possible compromise of a few counties in a razor-thin race was enough to create doubt, if not inflict real damage, on voters' perception of the election - and in the age of social media and the instantaneous flow of information, perception was reality. Classified documents leaked by NSA whistleblower Reality Winner revealed that Russian hackers tried to do just that, targeting a voting software company called VR Systems and local government offices right before the election. Today, thousands of county and state election offices are prime targets that need protection. "People will say the way we vote is so distributed and diverse and that makes it more resilient," says Ferrante, the former FBI cybersecurity expert. "But it also introduces a lot of risk and creates a much larger attack surface."

What makes things complicated is that the federal government traditionally leaves the running of elections to states and municipalities. When the Obama administration proposed designating voting equipment as critical infrastructure, like power plants, dams, and highways, in the fall of 2016, a small but vocal group of state and local election officials saw a federal takeover in the works and resisted. A few months later, Brian Kemp, a Trump ally who was then Georgia's secretary of state and governor-elect, accused DHS of trying to hack into his state's voter registration database. (This was false.) Not until January 2017, in the final days of Obama's presidency and after the intelligence community published its conclusion that Russia interfered in the 2016 election, did state officials agree to a critical infrastructure designation. Congress soon passed a bill to create the Cybersecurity and Infrastructure Security Agency at DHS to help county clerks and sec-

DEMOCRACY IN DANGER

The worst-case scenario, according to experts, is one that causes Americans to question the bedrock of our democracy. "The target is the minds of the American people," says a former counterterrorism head of the NSA.

retaries of state protect election infrastructure. "We went from an environment in 2017 and the beginning of 2018 where quite literally states are accusing the Department of Homeland Security of trying to hack them to having relationships with all 50 states," says Matt Masterson, a DHS cybersecurity adviser.

Experts who study election systems in the U.S. say many flaws remain. Some counties and states still use outdated voting equipment and insecure election software: At the 2018 DEF-CON hacker conference, an 11-year-old hacked into a copycat version of Florida's state election website and changed vote totals in less than 10 minutes. Only three states conduct mandatory, scientifically rigorous post-election audits to ensure the final vote count is accurate. "We're still in a situation going into 2020 where there are significant gaps left in the security of election infrastructure," says J. Alex Halderman, a University of Michigan computer science professor who studies voting equipment. "Until we ensure that all of the doors are locked, there will be ample opportunity for foreign adversaries to disrupt or, in the worst-case scenario, change the outcome of close elections."

And the federal government is in no hurry to fill those gaps. As Halderman likes to say, there are more federal guidelines and requirements on whiskey and plastic bottles than voting equipment. While Congress has funded nearly \$900 million in election security in the past two years, it let states spend the money however they pleased. "We would never say to our power grid companies, 'We're not going to have any rules of the road at all - you just self-regulate," Sen. Warner says. "Money without some requisites means states could print bigger 'I Voted' stickers instead of actually improving their systems. That's a huge error."

Local election officials like Kammi Foote find themselves thrust into a global battle without borders, clear enemies, or rules of engagement, a daily struggle to protect the integrity of elections and to reassure Americans their democracy is safe. Foote's relationship with the feds has dramatically improved since the FBI first called in late 2016. Inyo County is now part of an information-sharing network backed by DHS that pushes out technical alerts. Foote says she and her team receive intel about new threats almost every day. Twenty-four hours after a U.S. drone strike killed Iran's top military general in early January, DHS briefed election officials on potential retaliatory cyberattacks by Iran. Another DHS tool, called an Albert sensor, alerts her IT team to malware attacks. Foote knows who to call at the FBI or DHS if an attack happens.

Foote says she's never felt more prepared for protecting her small slice of the vote next November. But she also recognizes there's only so much she can do. The number of personnel in her office hasn't grown since the mid-Nineties, and the local board of supervisors recently denied her request for an additional election staffer dedicated to cybersecurity. She worries about ransomware, a form of attack employed by hackers to infiltrate a network and lock out users from their computers or phones until they pay to regain access. A December 2019 confidential alert by the FBI said reports of an especially vicious type of ransomware attacking municipalities, called Ryuk, had recently spiked by 400 percent. Foote says she's troubled about what would happen if a ransomware attack happened during an election and interfered with her ability to do her job.

"I'm the person who's supposed to be defending against these nation-state actors," she says. "It's not that we're not up to the task. But there are certain things we are unable to defend against. When someone has unlimited resources, they have unlimited power to try to find vulnerabilities in the system."

N THE EVE of the 2018 midterm elections, a strange website appeared out of nowhere with an ominous message. Claiming to be the American division of the Internet Research Agency, the Kremlin-backed disinformation factory, the site said the IRA had thousands of Facebook, Twitter, and Reddit accounts pushing propaganda as well as "allies and spoilers" embedded in various campaigns. The website then posted a list of all Senate races and said the outcome was already decided well before all votes had been cast. It also published a spreadsheet that listed dozens of social media accounts that were supposedly part of the IRA's campaign to disrupt the midterms. There were obvious errors in the list of "rigged" elections - Sen. Jeff Flake (R-Ariz.), who had announced his retirement, was listed as winning – but the social media accounts looked real, from Jordan Peterson fan pages to Instagram accounts named "Redneck Army" and "Proud to Be Black."

The point of all this, it seemed, was to cast fresh doubt on the midterms. "We control the voting and counting systems," the supposed IRA statement read. "We are choosing for you."

Only it didn't work. By the time the list of social media accounts was released, most of the accounts were inactive. Acting on a tip from the FBI a few days before the election, Facebook had investigated and removed the suspicious accounts.

Heading into the 2016 election, the major tech companies either pretended the disinformation problem didn't exist or that there was nothing they could do about it. Foreign influence operations ran wild. An infamous example was the IRA-run Twitter account @TEN GOP, which was apparently registered to a Russian cellphone number. "It was the Wild West," says Ben Nimmo, director of investigations at Graphika, a social media analysis firm. "Across the major platforms, they had very broad lati-



FRONT LINES Inyo County Clerk Kammi Foote has been on guard: "It's not that we're not up to the task. But there are certain things we are unable to defend against. When someone has unlimited resources, they have unlimited power to try to find vulnerabilities in the system."

ON THE

tude to get away with stuff." Mark Zuckerberg denied Facebook had a Russian interference problem even after the election – until his company did its due diligence and Zuckerberg was hauled before Congress and apologized.

"In 2016, we missed the threat and weren't ready," Nathaniel Gleicher, Facebook's director of cybersecurity policy, tells me during an hourlong interview at the company's sprawling D.C. office. Gleicher joined Facebook in early 2018 and built a team to combat disinformation that numbers several dozen people worldwide. Facebook's new rules have led to a dramatic increase in the number of takedowns - from one in 2017 to more than 50 in 2019. By the midterms, the three biggest social media platforms Facebook, Twitter, and Google, which owns YouTube - had created internal teams devoted to rooting out disinformation and influence operations. Gleicher mentions the "IRA in the USA" takedown as an example of the level of cooperation between government and tech companies that didn't exist four years ago. "That is

a really good sign of how things have changed,"

Yet in the ways they've chosen to police their platforms, the tech companies have left plenty of openings for disinformation to spread. In Facebook's case, Gleicher says the company has chosen to root out bad actors - whether they're Russian trolls, e-criminals from Iran, or clickbait profiteers here in the U.S. - not by the content they post but the behavior of the people running the accounts. The company looks for what it calls "inauthentic behavior," which includes creating fake accounts, masking the true identity of the person or group operating a Facebook page, and using a network of pages in close coordination to game Facebook's algorithm and reach a larger audience. "We have

> articulated a set of behaviors that are deceptive, that mislead users, and that violate our policies," Gleicher says. "At its core, it doesn't matter who's doing it. It doesn't matter what content they're sharing. It doesn't matter what they believe or don't believe."

> But that position relieves Facebook from any obligation to police much of the content that appears on its platform. (The company has strict policies for hate speech, terrorist propaganda, and other dangerous material.) And Congress has yet to act, despite lawmakers offering a slew of proposals to regulate social media companies to rein in disinformation, foreign and domestic. One proposed solution is treating social media companies like TV stations, with the same rigorous transparency rules. Right now, Facebook is under no such obligation to remove a misleading ad or meme if it doesn't violate the company's behavior-centric guidelines.

> Facebook's critics call this a cop-out, and the company's announcement last year that it would not fact-check ads by elected officials and political candidates even if they contained blatant lies only

fueled that criticism. These critics say the company is afraid of angering conservatives who are quick to cry censorship (despite no evidence to back them up) while putting the billions to be made in political advertising over protecting truth in civil discourse. "It's very commercially convenient to take the position that Mark Zuckerberg took," says Dipayan Ghosh, a former privacy and public-policy adviser at Facebook who assisted the Obama White House with tech policy. "It allows him to keep conservatives on his side, and he gets a lot of money from digital advertising. They're going to do everything they can to claim that."

N DECEMBER 19TH, @TrumpWar-Room, a rapid-response account run by President Trump's re-election campaign, sent an explosive tweet. According to @TrumpWarRoom, James Clyburn of South Carolina, the third-ranking Democrat in the House, had called for hanging the president on live TV. The pro- [Cont. on 92] **CAMPAIGN TRAIL**

Mayor Pete's Middle Path

He's taking hits from the left and trying to win over black voters, but Buttigieg makes the case that a pragmatist can win

By STEPHEN RODRICK

ETE BUTTIGIEG has returned to the scene of the crime. He is back at Stevens High School in Claremont, New Hampshire, on a desultory Saturday in January. The ancient gym walls were bathed in red, white, and blue spotlights the last time he was here for a Fox News Town Hall with Chris Wallace last May. That night was seen by most as an overwhelming success, a breakthrough on the path of a 38-year-old gay mayor of Indiana's fourth-largest city becoming a plausible presidential candidate.

The progressive wing of the Democratic Party saw it differently. To them, Buttigieg had not only granted an interview to Hannity Enterprises, but espoused a litany of milquetoast half measures that revealed he was a centrist at best and, according to the more conspiratorially minded, some kind of Republican sleeper agent.

The left has balked at Buttigieg both on policy and biography. His work for McKinsey and
Co., a global consulting firm, has
been cast as nefarious toiling for
a corporation concerned more
about the bottom line than people. His lack of support from African Americans has provided
detractors with evidence that he
couldn't put together the broad
coalition needed to defeat Donald
Trump in November.

Buttigieg's awkwardly named Medicare for All Who Want It, allowing Americans the choice to keep their private insurance, has outraged Bernie Sanders and Elizabeth Warren patriots pushing for Medicare for All. Some of the left's vitriol has come across as somewhat nutty, including a Jacobin magazine writer's tweet that Buttigieg's service in Afghanistan



was a mere "photo op." When Buttigieg was the last candidate to respond to the assassination of Qasem Soleimani, a Twitterite responded, "He is waiting for a callback from his handler."

Buttigieg has often said that he is immune to the type of taunts that Donald Trump dishes out, saying that someone who grew up gay in Indiana is not susceptible to the president's particularly juvenile brand of bullying. But when I asked about the criticisms from within his party, he admitted the attacks bug him. "It can be more frustrating when it's folks I'm 80 or 90 percent aligned with," the candidate tells me while sitting in the gym's tiny office.

Buttigieg's political approach seems driven by what is obtainable rather than what is ideal. He has pitched the idea of free or reduced college for the bottom 90 percent while letting the top 10 percent fend for themselves, an idea that the left finds strangely offensive. His health care option is less likely to scare off affluent independents than Warren and Sanders' all-or-nothing approach, perhaps giving it a better chance to pass in a divided Congress. Whether measured change will appeal to Democratic voters in these kill-or-be-killed times is uncertain.

Buttigieg sat down with ROLLING STONE a day after Trump said the mayor adopted his faith two weeks ago and Buttigieg answered with, "I'm pretty sure I've been a believer longer than he's been a Republican."

Slings and arrows have been coming your way from the progressive side of the party, suggesting everything from you're a calculating résumé builder to "a Republican plant." What would you say to those who have a visceral reaction against you?

I mean, the first message is to remind folks that I would be the most progressive president we've had in the last half-century and that we share the same values THE NATURAL
Buttigieg on
the trail in New
Hampshire:
"My positions
are more
progressive than
Bernie held just
a few years ago."

and, in many ways, the same objectives. A lot of this is the heat of competition. It's not based on substance. After all, even on the substance, some of the areas where I'm most differentiated from the candidates to my left – the idea of more choice in health care coverage, the idea of targeting free college where it'll make the biggest difference – [are] actually positions more progressive than Bernie held just a few years ago.

Sen. Warren is now attacking you for your fundraising strategy. You've talked about an amendment to repeal Citizens United. Do you feel that you are just taking advantage of the rules as they are laid out today? First of all, I'm not a fan of the rules as they're laid out today, which is why I proposed reform, but also, I don't think anybody would have guessed that they would benefit me much. I mean the office of mayor of South Bend is not an establishment fundraising powerhouse. We had to get

Editors note:
This interview
has been
condensed for
space. A longer
version appears
on Rolling
Stone.com

out there and work to build this campaign, and it's individuals, not corporate PACs. It's everything from people chipping in a few bucks online to house parties and events that are also an important part of the strategy.

So I wish we were in a different system, and I'll work to bring about that system. We need to make sure we're strategic before we issue these purity tests, first of all building the organization that's going to beat Trump, and also being sure that we're clear on why we're doing this.

Do you see the differentiation between you and other candidates on health care and college as a difference between what is possible and what's utopia?

I also think it's a better policy. What I think makes our health care approach better is that it cooks in some humility to the policy because, basically, if you're saying that we're going to throw a switch and put everybody on the public plan, or even if you're saying that we're going to wait, but on a certain date, we're going to throw everybody on that plan, you're assuming a lot about your ability to decide what's going to work for people. It's precisely because I believe that a public plan can probably be the right answer for everybody that I'm willing to put it out there and let folks decide for themselves. On college, I think my view is more progressive. It's more progressive to offer the dollars where they'd make the biggest difference.

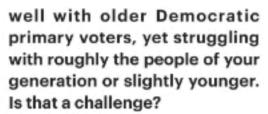
What was your primary reason for working at McKinsey?

First of all, I'm not out to trick anybody. It paid well. That was helpful. To this day, I don't think I've ever made that much money. But the main thing was I felt like there were areas of my education and understanding of the world that were missing. I understood politics, a little, from working on campaigns. I understood, as much as you could familiarize yourself with academically about history, literature, philosophy, and economics. But having any professional responsibilities related to understanding a balance sheet or how money and goods move around the world – I didn't have that. That felt like a gap.

You've talked about McKinsey recommending job cuts at Blue Cross Blue Shield two years after you left. You've also said

as mayor you could only do so much with the police.

I try to be very clear about what I was responsible for. Look, at the end of the day, when you're the mayor, you're responsible for the city. I held myself responsible even for trying to at least be helpful in areas where I had no formal control, like the schools. With McKinsey, the idea that I took down Blue Cross Blue Shield in my first few weeks? Right. I thought it was meaningful that I worked at a firm responsible for providing good analysis. But it's been a little fanciful to see what people are extrapolating from that.



We've always found that older voters are more likely to respond to me as a younger candidate. Even in South Bend we found that, and I don't know all the reasons for it. One of them, I think, is that age and experience may be a little demystified when you're older. There may be more impatience with one generation holding an office for a long period of time. That impatience is greatest, actually, among those who were from

viously climate, racial, and economic inequality, perhaps behind it all, democracy.

That's why I'm further forward than a lot of my competitors on Democratic reform issues because it's the issue of how we deal with every other issue. But part of why we're getting the resonance that we are is this search for belonging that's on people's minds.

The first time we talked was this spring, after people started pointing out your lack of support among African Americans. Do you see progress?

Yeah, of course. We've succeeded to some extent in demonstrating that "working class" should not be a code for "white working class." When people hear rural, they often think white. One of the things you see in the South is that the rural South, the problems of rural economic development, for example, in the South are often problems mainly impacting black folks. In order to have conversations with more diverse voters, we needed to create smaller conversations that were more twoway, and we did. They went very well. But we had to do that. So especially in the past couple of months, with the Southern swing and other things we've done, it's focused on that.

Are you seeing results?

Yeah, for sure. But you can also feel that we've got a lot of work to do. The good news is, if you look at the numbers that are out there, there's no higher level of unfavorable views on me among voters of color. There are just way fewer folks saying they've got a strong opinion, period. So I recognized that responsibility to get to know people that some of my competitors have had a few decades to do.

You talk about saying to soonto-be former Republican voters "We need as many hands as we can get." Is there any worry that this is going to piss off the Sanders and Warren voters?

Look, the point for me is that we don't define this campaign based on who we reject. I'll go toe-to-toe with anybody on how progressive my plans are. Sure, some folks want to take it to extremes, but I don't think it makes sense. This is plenty progressive. The whole point is that I can be clear about my values and bold in my policies and still connect with people from across the aisle. @



YOUTH VOTE

"I want to make sure that young progressives, or any progressives, hear the message that I would be the most progressive president in their lifetimes."

How do you respond to criticism that anything you did in your career was with this idea that 10 years from now, whether it's for president or senator, "I'm building toward something."

Like anybody else, I think about the future. But if you're plotting every move perfectly in order to go on to become president and you're a Democrat, you don't move home to Indiana. I'm optimistic, but not delusional. Not that it hadn't crossed my mind that I'd run for office, but I wound up running for office on an extremely uphill path, because I cared about the issues at stake in state treasuries. After getting clobbered in that race [for state treasurer], I ran for office in South Bend because I saw that I could make myself useful. So this idea, if you're plotting your every move, I probably would've plotted myself into a different state.

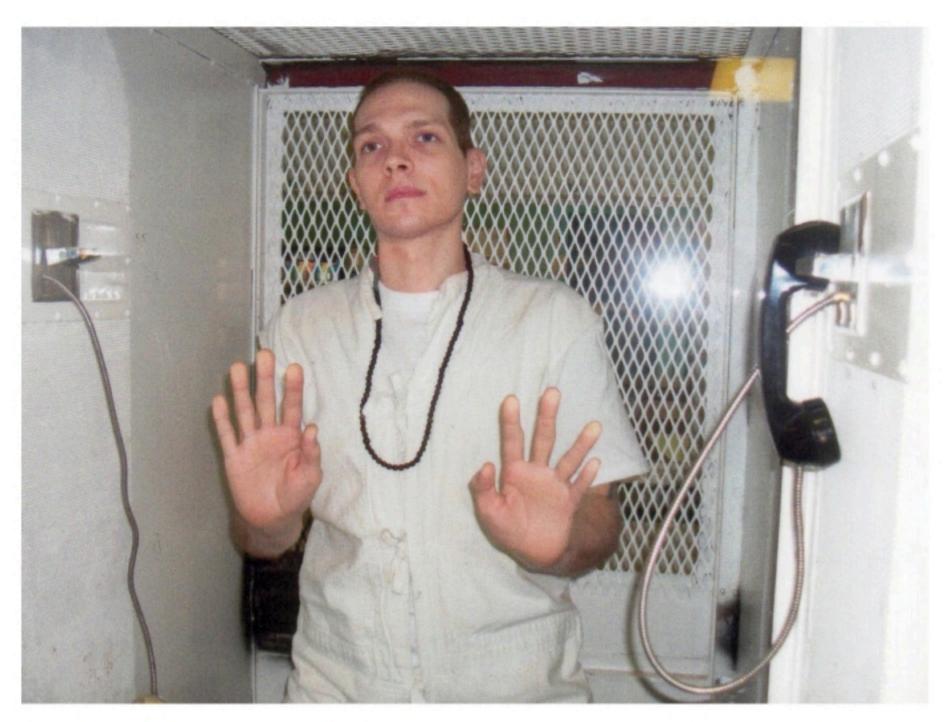
The polling on this is not precise, but there's at least the idea that you are doing quite

that generation, and they're ready to watch their kids and grandkids pick up the ball and run with it. Part of it may be ideology, although I want to make sure that young progressives or any progressives hear the message that I would be the most progressive president in their lifetimes.

What is the most important issue facing the country?

The big picture that I'm concerned with is belonging. It's unity, and when I say unity, I don't mean everybody agreeing on policy. I mean transcending every political disagreement. I don't necessarily mean shooting the middle ideologically, either. What I'm talking about is just a sense that, even when you don't agree with a president, you still view that president as belonging to the same country. There is a way to have the courage of our convictions and also try to understand people who view the world differently. So are there issues that I think are central? Of course. Ob-





Will Texas Execute an Innocent Man?

For two decades, Rob Will has been on death row for the murder of a cop. But activists say there is enough additional evidence to save him

By ERIK HEDEGAARD

OLLING ALONG on Farm Road 350 outside Livingston, Texas, past the billboard advertising Aqua Plumbing (FOR ALL YOUR PLUMBING NEEDS), and the plain white cross casting halfhearted shadows over the East Tempe Baptist Church, and the sign announcing "Grocery" where only broken-down nothingness and weeds currently exist, and the desultory sadness of the Lake Area Mobile Home Park, you eventually come upon the flattened, sandy-colored expanse of concrete buildings known as the

Texas Department of Criminal Justice's Allan B. Polunsky Unit. Five gun towers, officially called pickets, help make sure its roughly 3,000 inmates stay put, including all 209 prisoners currently marking time on death row, though that number is constantly changing, primarily because Texas has the most active death chamber in the country, praise be to its stockpile of the sedative pentobarbital. About 21 five-gram doses are currently in stock, according to one unofficial calculation, more than enough for the eight upcoming scheduled executions - a number that does not, at this time, include a death-row inmate named Robert Gene Will, 41, who was convicted of murdering a police officer in 2002. Lots of folks think Will isn't guilty and that his appeals were big-time botches; he is slated to be featured on an upcoming episode of Dr. Phil (much like fellow Texas death-row inmate Rodney Reed recently was,

which helped Reed get an indefinite stay of execution). As for Will himself, he says he spends his days painting, reading, writing, meditating, practicing yoga, and trying not to let the babblings of the nearby "schizophrenic" get to him. The friendly, wisecracking guard at Polunsky's front gate knows all about Will from his years on the floor and has nothing but good things to say.

"Near as I can recall," he says, "he's been no trouble at all."

And then, with a smile, he sends you on your way, toward where Will has spent the past 18 years.

In fact, everyone here seems pretty friendly. Inside, a guard holds up a visitor's baggie filled with Altoids, frowns, well aware that candy of any sort isn't allowed inside, and says, "What the hell are those? Oh. Sure. Why not?" And overseeing visits today is a stout gentleman named Robert Hurst, also friendly, who has been shuttling folks

like Dr. Phil through four locked steel doors to see inmates like Rodney Reed for the past six years, who has stood witness at more than 50 executions, and who seems to have hardly been changed by the experience.

He sits you in a booth and sends for Will. You'll be on one side of a bulletproof, soundproof glass window, the condemned on the other, the two of you connected by a phone with a crappy ancient-era connection. Will's case has gotten a good bit of attention over the years, with a 2012 write-up in The New York Times detailing just how suspect the original verdict and subsequent appeals were; more recently, his plight has been championed by Jason Flom, a social-justice activist who hosts the Wrongful Conviction podcast and, as the music-industry CEO of Lava Records, has launched the careers of, among others, Katy Perry, Kid Rock, and Lorde. On Will's behalf, Flom has put together a couple of successful New York events featuring the convict's paintings, with the proceeds going to his defense fund. And it's he who got Dr. Phil fired up about Will's case.

Flom: "What's happened to Rob is about as bad as it gets. I mean, you look at the evidence and it's clear from the start he didn't kill anyone."

Dr. Phil: "Having been trained in forensic psychology and spent many years in the litigation arena, I am appalled. The mismanagement of this case and the attendant evidence is nothing short of monumental."

But that's all on the outside. Right now, inside Cage 24 on A Pod in the Polunsky Unit, Will has stripped down to be searched before he can go to the visitation area. One officer paws through his clothes, while another gets more personal, saying something along the lines of "Run your fingers through your hair. Arms out, turn around. Lift your feet one at a time. Bend over, spread your cheeks. Turn around, lift your nuts. Alright, here's your shit! Hurry up and get dressed!" A bit later, Will shuffles into view: Tall, trim, clean-shaven, bespectacled, oddly twinkle-eyed, having passed on his way an emergencyresponse team readying for SWAT deployment - nothing unusual about that - with his hands still shackled, moving through a door that's locked behind him, after which, hands freed, he picks up the phone, carefully wipes it clean of germs, and first wants to speak to Hurst.

"Hey, Mr. Hurst?" he says. Hurst says, "Yeah?"

"I sent a 15-page letter out 10 days ago and it hasn't been received."

"Not anything I have any control over."

"Oh, I know, but you're the communications director, right, so, you know." Hurst chuckles. "No. I'm not the director. I'm just the public information officer. What you're talking about, I don't have any control over."

"I mean, it's not like I'm writing anything bad about the warden, because that's what they really worry about, or at least that's my understanding," Will says.

"Yeah," Hurst says, and that's that, which is probably par for the course with these things.

"It apparently was disappeared. Pinocheted, as I like to say," Will says

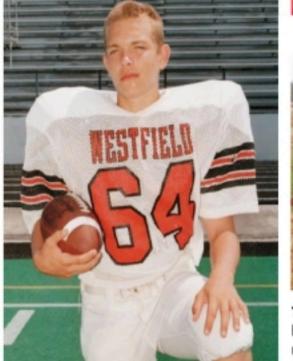
later on. Pinocheted, what an unexpected reference: all those innocents disappeared during Augusto Pinochet's reign of terror in 1970s Chile. To a large degree, though, that's Will for you, a good bit unexpected. For one thing, he'd just as soon not talk about himself - where he came from, how he grew up not go into all those so-called mitigating circumstances that defense attorneys like to trot out during the sentencing phase of a trial to make the defendant seem less deserving of a harsh penalty.

"Ah, well, let me say this. I think in a very holistic, all-

encompassing manner. So, I don't talk about myself, ever, just about ideas and concepts that are outside the individual self. I just don't think about myself. You know what I mean? And I don't ever talk about my childhood. It was really not good. Southern Baptist conservative. My dad was murdered when I was 10. And there was a lot of abuse by other family members. But here's the thing. It's like, focusing on that, what is that going to change? Why don't we do something revolutionary, man? Why don't we just talk about, like, I don't know, literature, art, life? How about that?"

So, that's where he's coming from and what he wants to do during today's time outside his cage, before he returns there in 60 minutes, to solitary confinement, 23 hours a day of it, and the bewildering circumstances of his long confinement. "At times, I've felt like I'm trapped in some type of Orwellian, Kafkaesque, Huxleyan alternate reality. I mean, how is it that a system exists that could allow my wrongful conviction? And the wrongful conviction of so many others? How did that happen?"







TEXAS TRIAL Clockwise from top: Will in court, his hand bandaged from being shot; Cathy Hill at a memorial for her husband, who was trying to arrest Will before he was killed; Will as a teenage football player

EATH BY NOOSE is how Texas began its seeming love affair with capital punishment, in 1819, with certain exceptions being made for the firing squad. Starting in 1924, the electric chair became the exit method of choice, with its debut performance signaled by the killing of five men on the same day. In all, 361 souls met their end that way, before a 1972 federal court decision shut down executions nationwide. In 1976, however, they returned, and since that time, 1,512 men and women have been executed in the country, with Texas and its lethal injections accounting for a plurality of them, 567 right now, or about 40 percent of the total, far outranking second-place Virginia, with its 113 state-sanctioned killings. It's hard to say how many innocents in Texas have been executed, but in the past 47 years, 13 individuals have walked free and clear of Polunsky's front gates due to evidence of wrongful conviction. And a 2014 study published in Proceedings of the National Academy of Sciences held that about four percent of death-row inmates are erroneously convicted, which means that out of the 215 individuals waiting to die in Texas (there are six women in addition to the 209 men), many of whom say they didn't do it, it had to be someone else, upward of 10 of them actually should be let go. That, as has often been argued, is a good enough reason to abolish the death penalty once and for all.

Will knows these statistics and, of course, lives with them at all times in A Pod, while his case churns its way through the appeals process, which seems perilously close to coming to an end once and for all.

Inside his bathroom-size cell, breakfast arrives at 3 a.m., lunch at 10:30 a.m., dinner at 4:30 p.m. Will's small desk is piled high with stacks of books including The Blues: A Visual History, The Poetry of Yoga: Light Pouring From Pens, The Oxford Handbook of Medical Ethnomusicology, Death by Design: Capital Punishment as a Social Psychological System; writings by Joseph Campbell, Carl Jung, Friedrich Nietzsche, and Fyodor Dostoevsky; and a ton of paperwork having to do with his situation. He's got a small radio that has enabled him to bring Johann Strauss into his cell, Led Zeppelin, a metal

cover of Taylor Swift's "Blank Space" ("Seriously, it is quite good"), and the news of the day from NPR. Facing him, on the wall: a 30-by-40-inch abstract painting of blues legend Lightnin' Hopkins that he recently finished. "Lightnin' Hopkins," Will says, "he just takes you into that zone, man, where it's reflective and melancholy, but enlightening and enlivening."

He listens to his music with headphones on to drown out the "nonsensical maniacal gibberish" coming from somewhere out of sight. His nearest neighbors are much more to his liking. The guy in the first cell to the left is constantly zonked on Haldol and rarely makes any noise, while the man to his right stopped talking to people years ago, allowing Will the space to think about those things that concern him most, "climate change, women's rights, LGBT rights, all of these things, racism and racial injustice in the criminal-justice system."

Even so, at night, the sounds of the others continue without end, screams and barks and clangings.

"I'm a pretty generally Zenned-out, centered person, but there's really no kind of sleeping. You know what, man? I've tried. Have you ever heard of yoga nidra? It's basically a very in-depth yoga technique where you reduce your brain activity to a point where it's kind of like REM. But, yeah, no, man, it doesn't help when we're constantly being woken up. And I've spent years and years really trying hard. People think that solitary is quiet. Not at all. It is the loudest place on Earth, man."

He pauses. "I've seen people here go completely all the way insane. Just yesterday, they had to go run a SWAT team on a guy, gas him, and drag him off to another pod."

His first four or five years on death row were, to him, nonsensical. "I was dealing with a lot of pain, trapped in a nihilistic haze, filled with disbelief, trapped in this little Orwellian world."

Was he ever suicidal? "Yeah, man, but meditation helps," he says. "I once did a five-day meditation retreat in my cage, right? I'm fidgeting everywhere, just fidgeting all around. The second day is better, but the fourth day was hard. I'm like, 'What the hell am I doing?' I'm fasting and doing all this yoga. I could barely move, my back hurt so much, but in the fifth day, man, I don't even know how to describe it. I felt an explosion inside my mind where it was like I didn't exist. I hope this doesn't sound crazy, but it was basically like a vision where I could see the sky, and the sky reaching out, and I could see the whole [Cont. on 90]

FHOTOGRAPH DAVID Lack PHOTOGRAPHS BY DAVID LaCHAPELLE She has become a new kind of pop superstar, full of relentless positivity. But it took a lot of time and a lot of heartache By BRITTANY SPANOS 46 Rolling Stone February 2020





IZZO KNOWS THAT security guard was checking her out. It's a crisp November evening in downtown Los Angeles, and she just breezed through a Sam Ash music store to see if they had a flute-studies book by Danish composer-flutist Karl Joachim Andersen; she wants to get back to practicing the instrument she started playing

"YEAH, THERE'S

HELLA WHITE

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LIZZO SAYS

"WHAT AM I

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EVERYBODY."

GONNA DO,

AWAY? MY

WITH A SMIRK.

in fifth grade. The door has barely closed behind her when Lizzo makes note of the guard's not-sosubtle glance.

"He wanted to make sure he saw that thang twice!" she says, strutting down Sunset Boulevard in faux-snakeskin boots and a short, pinkish coral dress, and running her rhinestone-studded talons through her slick, wavy black hair.

How could he not do a double take when he saw Lizzo? After a decade of hustling, 2019 was her year. Five days earlier, she was running to catch a flight in Copenhagen, having just wrapped the European leg of a tour. After making it on board, she FaceTimed her manager, who was holding his phone up to a TV blasting the Grammy nominations broadcast. She found out she had earned the most nom-

inations of any artist: eight total, including one in each of the Big Four categories. She was elated. "Then I had to sit on a plane for 10 hours," she says.

It's been that kind of year – surreal, gratifying, kind of exhausting. Last night, Lizzo played the American Music Awards, donning a fluffy purple gown and belting the slow, aching ballad "Jerome" to a sea of swaying phone lights. "I was worried the whole time that I would forget the words," Lizzo says. Singing "Jerome" is one of the

Senior writer BRITTANY SPANOS profiled Carly Rae Jepsen in May 2019.

few points in her live show when she's not twerking, fluting, or running end-to-end onstage. Her thoughts tend to drift. "I be sitting on the stool and my mind'll be like, 'So, what you gon' eat after this?" In possibly Toronto - the cities have blurred together - she had an anxiety attack midsong, but just kept singing. "I just start processing and thinking about other shit, and my mouth is just moving and the words are coming out."

She has become, at 31, a new kind of superstar: a plus-size black singer and rapper dominating the largely white and skinny pop space, all while being relentlessly uplifting and openly sexual on her own terms. Her story is just as remarkable and radical as her stardom: years of self-doubt and struggle, followed by an unorthodox but swift ascent jump-started by "Truth Hurts," a two-yearold song that wasn't even on her new album.

Last April, she released Cuz I Love You, her major-label debut. She started writing the album a year earlier, around the time her first real romance was ending; the mysterious Gemini she'd been seeing would inspire practically every song. Faced with an increasingly demanding schedule and feeling disconnected from friends and loved ones, she had an emotional breakdown while on tour in the spring of 2018, a move that lead her to start therapy. "That was really scary," she told me just prior to the album's release. "But being

> vulnerable with someone I didn't know, then learning how to be vulnerable with people that I do know, gave me the courage to be vulnerable as a vocalist."

Cuz I Love You has its moments of heartbreak and self-reflection, but ultimately, it's a celebration: Lizzo wants you - yes, you! - to love yourself the way Lizzo has learned to love Lizzo. In recent years, pop turned moody, in part to reflect the consistently grim state of the world. Cuz I Love You sliced right through all that. She made the type of songs she wanted to hear at the end of a rough day, songs that want you to feel beautiful, successful, booked and busy, because Lizzo feels all those things.

Now, all eyes are on Lizzo, including some of her heroes'. Rihanna gave Lizzo's flute solo during a BET

Awards performance a standing ovation. Beyoncé bopped along side-stage during her Made in America Festival set. In December, Lizzo made her Saturday Night Live debut, as musical guest for the episode hosted by Eddie Murphy. During his monologue, he noted his kids are huge Lizzo fans.

Along with greater opportunity, however, has come greater scrutiny. Lizzo came under fire for a testy Twitter response to a middling Pitchfork review she received; she said, "People who review albums and don't make music themselves should be unemployed." Months later, more illadvised tweets led to a libel lawsuit after she falsely accused a Postmates driver of stealing her

order, sharing the driver's name and likeness with her million-plus followers.

As a dark-skinned black woman doing the uncool (but very lucrative) thing of making uplifting pop music, insults tend to be harsh and personal. She's been called corny and an "industry plant." In a since-retracted headline, cheeky gossip site Bossip called her a "Kidz Bop Kween," suggesting that her music is watered-down imitations of more authentic pop. The most consistent, painful insult, though, is that she makes music for white people, that she's merely shuckin' and jivin' for an audience of yas kween-era white feminists. "Yeah, there's hella white people at my shows," she asserts, with a smirk. "What am I gonna do, turn them away? My music is for everybody."

Ironically, seeing majority black women in her audiences while playing shows with SZA in 2015 was a major inspiration for the songs that are finally climbing up the charts. "Coconut Oil," in particular, was meant to be a self-care anthem for black women. "As a black woman, I make music for people, from an experience that is from a black woman," the singer says. "I'm making music that hopefully makes other people feel good and helps me discover self-love. That message I want to go directly to black women, big black women, black trans women. Period."

She's learning to check herself, living in the "real world" offline and not responding to the haters. "That was the end of that era for me," she says of her Twitter snafus. "I was fuckin' wrong. I'm big enough to admit that shit." In early January, she decided to quit the site, at least for a while, because of both the trolls and more general "negativity" toward everybody.

To some degree, she understands the critiques. "Look, I'm new," she offers. "You put two plates of food in front of people, [and] one is some fried chicken. If you like fried chicken that's great. And the other is, like, fried ostrich pussy. You not gonna want to fuck with that."

She may be "fried ostrich pussy" for some listeners, but she's not going anywhere - not after all it took to get here. "We eventually get used to everything," she says. "So people just gon' have to get used to my ass."

N DECEMBER 31ST, 2018, Lizzo decided she didn't need to make any resolutions for 2019: She had accomplished everything she wanted. She was recording songs she loved, and her shows were sold out. "I grossed a million dollars on my tour. I was able to put my friends on my payroll," she says. "I was Gucci." She was also about to experience one of pop's craziest success stories.

Lizzo always figured she would write a massive pop hit. Best friend and longtime collaborator Sophia Eris remembers how fast Lizzo would write songs for their pop-rap trio the Chalice, which they formed in 2011 in Minneapolis. After Lizzo was signed to Atlantic in 2015, Eris saw her friend fully comprehend her own creative power.



"She said, 'I'm pretty sure I know how to scientifically make a hit," Eris says. "She has the brain of a chemist. She knows the equation. Lizzo could write a hit in her sleep."

Lizzo's pop ear made both her and her label impatient for a hit. Her 2016 EP, Coconut Oil, was buzzy but fell flat. "There was a sense of frustration at times because we knew how amazing she was, and we saw the potential," says Atlantic A&R executive Brandon Davis, who signed Lizzo to pop producer Rick Reed's imprint, Nice Life, in December 2015.

In 2017, she dropped "Truth Hurts." Halfrapped, half-sung, it was both a breakup kiss-off and an empowerment anthem, balancing cheeky humor, a touch of pain, and a whole lot of confidence. "It was the first song that was like, 'Oh, this is a cool song," she continues. "Most of my rap songs were so lyrical spherical, you know? [On 'Truth Hurts'] I'm doing that rap-singing thing and the beat was lit. I was proud of it. I could play it for my friends back home in Houston." Not long after Lizzo wrote "Truth Hurts," she visited a psychic, who began quoting lines from the song. "I was like, 'What the hell?' And she was like, 'You should just get married to yourself." Lizzo does just that in the song's video.

"Truth Hurts" was ingenious, catchy as hell, and a total flop. When it seemed to disappear, Lizzo wondered if she should too. She considered quitting music altogether. Her team talked her out of it. "Truth Hurts" would remain a centerpiece of her live show, but she moved on, focusing her attention on Cuz I Love You.

On October 20th, 2018, Lizzo posted a video from a show in Iowa City, Iowa, on Instagram. It was of her playing flute while covering Kendrick Lamar's "Big Shot." Lizzo and her backup-dancing Big Grrrls hit the shoot dance in the middle of the song before she resumes her flute-playing. "I think that was another reason why I was so satisfied," she continues. "Because I was known as a flute player now. Secret's out: I am a band nerd."

In less than 30 seconds, Lizzo had hit something in the often-confusing viral-content zeitgeist, and her #FluteAndShootChallenge became a phenomenon. She served up more viral content - specifically, videos of her coolly saying "Hi bitch" and "Bye bitch" on golf carts, escalators, and other in-motion settings - and became her own meme-generating machine. She was growing an audience.

Lizzo released Cuz I Love You in April 2019. Critics liked it, and it racked up good, if not outstanding, streaming numbers. Then something strange happened. Someone Great, a breakup dramedy starring Gina Rodriguez and Lakeith Stanfield, dropped on Netflix the same day as Cuz I Love You. The film happened to feature "Truth Hurts," soundtracking a memorable scene of Rodriguez's broken-hearted character day-drinking, dancing and shouting along to the track in her underwear. "It was always my intention for this moment to be able to live outside the film as a stand-alone clip," says the film's director and writer, Jennifer Kaytin Robinson, who first heard Lizzo in 2016. She was





inspired by the "Tiny Dancer" scene in Almost Famous, and "Truth Hurts" was her first choice.

Someone Great changed everything. "Waking up the next morning, we tangibly felt things were different," Davis recalls. "Truth Hurts" began climbing up Shazam's and iTunes' charts as it rocketed around on social media. Younger listeners were simultaneously discovering the song through "DNA test" memes on TikTok.

Suddenly, Lizzo's two-year-old song, a song not even featured on her new album, was a smash, topping the ROLLING STONE 100 songs chart. Then, after performing a medley of "Truth Hurts" and 2016's "Good as Hell" at the MTV Video Music Awards, the latter song became Lizzo's second sleeper hit.

Meanwhile, songwriters Justin and Jeremiah Raisen accused her of lifting the opening line of "Truth Hurts" ("I just took a DNA test, turns out I'm 100% that bitch") from a demo they worked on together. The line had been inspired by an Instagram meme Lizzo had seen, originating from a tweet by singer Mina Lioness. Lizzo responded with a lawsuit alleging harassment and offering an official writing credit to Lioness. "The creator of the tweet is the person I am sharing my success with. Not these men," she wrote in a statement.

Lizzo is diplomatic about her weird career trajectory. No one can exactly plan for multiple old

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singles to suddenly pop after releasing an album full of new material. "When we were making it we knew it was ahead of its time," she says. "Now we have the proof that these songs are timeless. They will connect when they need to connect."

WHEN I BROUGHT a friend to see Lizzo perform at Brooklyn Steel this past May, she cried. We're both roughly the same size as the pop star, wide and curvy, with leg dimples and arm flab and round bellies.

She cried because she has never been able to say that about a person she saw performing onstage before, let alone a plus-size performer belting, rapping, and dancing instead of standing still with her body covered. In a world where we were told to believe that slightly curvier-

than-average features on the slim figures of Jennifer Lopez, Beyoncé, or Kim Kardashian are somehow extraordinary, it felt radical.

"It's completely life-changing," plus-size fashion designer and influencer Gabi Gregg says, giving credit to Beth Ditto and Missy Elliott for helping pave that way. "When you get to see her, it's so impactful and almost brings tears to your eyes because [you think], 'I knew that was missing my whole life but I had no idea how much it would mean to actually see it."

Gregg first became a fan of Lizzo when the pop star dropped the video for 2015's "My Skin," a raw ballad about learning to love yourself, that

featured a more natural look than her usual glam. "I wrote 'My Skin' when I was 26, so at that point I had already gotten to a place where I'm confronting myself and I'm happy with it," Lizzo explains.

Her late teens and early twenties were marred by low self-esteem worsened by a toxic lover's desire for a thin girlfriend. "My Skin" reflects years of work she had done to unlearn the ways society had told her to hate herself. "I've come to terms with body dysmorphia and evolved," she says. "The body-positive movement is doing the same thing. We're growing together, and it's growing pains, but I'm just glad that I'm attached to something so organic and alive."

Soon after "My Skin," Lizzo's team reached out to Gregg for advice. The singer was beginning to change up her game from the flannel and Duck boots she swore by in Minnesota. Gregg helped Lizzo's stylist find brands that catered to plussize bodies, and later appeared in the video for "Scuse Me." "I was thinking about how meaningful this moment in time is for plus-size women," Gregg reflects. "Things are really changing."

There's change, but the progress isn't always so clear. In December, Lizzo's body became fodder for more debates when she dared to twerk at a Lakers game in a dress that exposed her thong-wearing ass. Peeved Lakers fans accused

her of violating the "family friendly" event and compared her body and outfit to that of a professional wrestler; Twitter users fixated on faces of players and attendees that showed mild, and quite possibly unrelated, disgust.

Lizzo seems a touch exhausted talking about her body, which is fair. She wants to be celebrated for her music - and not seen as "brave" for doing so. "I'm so much more than that. Because I actually present that, I have a whole career," she says. "It's not a trend."

MELISSA JEFFERSON WAS never sure she could be a solo star, so for most of her life she joined groups. The first was her family church's choir in Detroit. She wasn't known as "the singer," and that was OK: She was the "smart one," with dreams

of being an astronaut. In her spare time, she wrote fantasy stories about strong women she one day hoped to emulate, and began a lifelong love for anime like Sailor Moon.

When she was nine years old, her parents moved Melissa and her two older siblings to Houston. Shari and Michael Jefferson owned a real estate business, and Texas offered lucrative opportunities. "I was like, 'Wait, what the hell?' " Lizzo recalls. "I didn't even get to really process leaving, and I was like, 'Now we about to be around all these horses and cowboys."

Down South, she found something she was best at: the flute. Her instrument was chosen for her in a mandatory band class, and it felt like fate. "I was just so good at flute," she explains. "[I thought], 'This is it for me. I'm going to college for this shit.' I knew back then." Outside of band, Lizzo was made fun of in class for know-it-all habits: "I would always raise my hand, and they be like, 'Damn, how many questions you gonna answer, nerd?""

She was "private" but still outgoing enough to audition friends for a Destiny's Child-inspired girl group. The first song she wrote for the group was called "Broken Households" - about children, unlike herself, who grew up in broken homes. Lizzo still didn't feel like she could sing, so she directed the other members to belt out the sad tune. Eventually, she formed Cornrow Clique, her first proper band. The lineup featured three friends who went by Nino, Lexo, and Zeo. Melissa became "Lisso."

By high school, she had transitioned from nerd to class clown. It came from the same place as her know-it-all tendencies: "a desire to be listened to," she says. She enrolled at the University of Houston to study music, but college was a struggle: "Math. Walking on campus, that bigass school. Money." The pressure mounted, and she dropped out when she was 20. Leaving college meant abandoning the dreams of becoming a professional flutist.

She continued rapping with a friend from the since-disbanded Cornrow Clique, but self-doubt began to creep in: The friend she continued to perform with seemed better-suited for success. "I always thought she was the more special one 'cause she was thinner than me, and the boys liked her and stuff. 'Let me just write the raps and support her.'"

The duo ended, along with the friendship, and Lizzo's next couple of years in Houston were peppered with guilt, fear, and embarrassment. She auditioned for a prog-rock band called Ellypseas, lying about her level of singing experience. She got the gig, but at the expense of severe nerves that she treated each night with shots of whiskey before going onstage. Fans loved her energetic, sometimes erratic stage presence, but she was still unhappy, hiding her new band from friends, who she feared wouldn't like the music.

Lizzo quit Ellypseas in 2010, a year after her dad died. She feared that giving up college and her dreams had let him down. "My dad was an advocate for my flute, and he wanted me to go back to college really badly," she says. "He was going around trying to get money from my cousins to put me back in school. And I'm like, 'I'm not going back to school.' I didn't tell him that though."

Lizzo struggled to make ends meet, living out of her Subaru for a period. In 2011, a friend and collaborator was planning a move to Minneapolis and invited Lizzo to come along. Ready for a change of scenery, she took a chance.

In Minneapolis, Lizzo was rapping again, and at the time was one of the few black women in the city doing so. She and Eris soon formed the Chalice, another Destiny's Child-inspired girl group. The group became local [Cont. on 92]



Bilie.Joe mstro

The Green Day frontman tells the stories behind his biggest classics, from punk squats in West Oakland to worldwide fame, broken hearts, and political fury

By Patrick Doyle



ILLIE JOE ARMSTRONG REMEMBERS ASKING HIS GUITAR TEACHER a question that would change his life. "I said, 'How do you write a song?" says the Green Day singer-guitarist, 47, at his studio in Oakland. "All he said was, 'It's verse, chorus, verse, chorus, bridge, verse, chorus - mix it up any way you want." Pretty soon, that

was all Armstrong could think about. His three-chord anthems about growing up with all the loneliness, anxiety, drug use, and masturbation that can come along the way - resonated with a generation on 1994's diamond-certified Dookie and beyond. Whether he's writing punk songs or a politically powered rock opera, Armstrong has the same rules: "It's so important to try and be as honest as you possibly can with your audience," he says. "When people find a deep connection, it's because you're trying to find your own connection inside of yourself. I think that that's the thing that actually ends up transcending." Some hits have come to him in five minutes, others take longer. He recently finished a song he's been tinkering with since 1993.



Billie Joe Armstrong

And this month, 30 years into their career, Green Day will unveil an exciting new sound on their 13th album, Father of All... Armstrong says it comes from going on a soul kick - Motown, Prince, Amy Winehouse, and others - and "putting it through the Green Day filter." On the title track, he sings in falsetto while drummer Tré Cool pounds out a wild, Mitch Mitchell-style beat that Armstrong calls "one of the most insane things he's ever played."

"Billie was pushing himself to get to a newer place," bassist Mike Dirnt says. "And we had to chase that down. Which is par for the course, because nobody digs deeper than Billie."

In conversation, Armstrong is friendly, but also a little reserved, taking long pauses between answers about his process. "I don't want to sound like a baboon," he says, stopping himself at one point. Cool, his bandmate and friend of three decades, once described him as "gifted and tormented. Billie's brain is like 18 tape recorders playing simultaneously in a circle. Then he tries to have a conversation...and he'll be looking you in the eye going, 'Huh?'"

"Fuck him!" Armstrong says now, with a laugh, after hearing that quote. "What does he know?" But Armstrong admits that he's not quite sure how his brain works when it comes to songwriting. As many songs as he's written, he still gets anxious when he hasn't written one in a while. "You feel like, 'Oh, my God, am I ever going to write another song again?' Then, all of a sudden, something pops up and you go from feeling like a loser to king of the world."

409 in Your Coffeemaker

SLAPPY EP, 1990

I'd just dropped out of high school, and I was feeling really lost - like a daydreamer who was being left behind. I didn't know what life was going to be. I think that's when I'm at my most honest as a songwriter, when I'm feeling lost. So I took this sad feeling and turned it into something that felt more empowering: "My interests are longing to break through these chains/These chains that control my future's aims." My songs were about infatuation up until that point. This one felt like a different version of who I am. I remember when we first started playing it, people were really receptive to it, especially the punks that were on the scene at the time. We had put out our first album and an EP, but this is where I felt like I had really found my rhythm as a songwriter. I was 18 years old.

2000 Light Years Away

KERPLUNK, 1992

The first tour that Green Day ever went on, I met my wife, Adrienne, at a house party in Minneapolis. She asked for an address because we had run out of our vinyl. Then we started corresponding and kind of became pen pals, and having these long talks, running up phone bills.

Then Green Day booked this mini-tour. We drove from California all the way out to Minnesota. Nobody really knew why we were driving all the way to Wisconsin and Minnesota to just play, like, four shows, but I was really just going back to see her. On the way

Senior music editor PATRICK DOYLE interviewed Lana Del Rey and Elton John in November.

back, I wrote "2000 Light Years Away." The song just wrote itself. I put it down on an acoustic guitar and sent her a cassette of it. When you write a song for a person that you're falling for, you don't know what the response is going to be. The last thing you want is for someone to go, "Oh, you're a stalker!" But it's been a staple in our set ever since, and it led into many, many, many songs I've been writing about her for the next almost 30 years.

Welcome to Paradise

KERPLUNK, 1992; DOOKIE, 1994

I had moved out of my house in the suburbs to West Oakland, into a warehouse that was rat-infested and in a really fucked-up neighborhood, with a lot of crazy punks and friends. I was paying \$50 a month for rent, which was great, because, being in a band, you got paid a couple hundred bucks here and there so it was easy to pay for rent, eat Top Ramen, and

It was an eye-opening experience. Suddenly, I was on my own, smack out in one of the gnarliest neighborhoods in Oakland. You look around and you see cracked streets and broken homes and ghetto neighborhoods, and you're in the middle of it. You're scared, thinking, "How do I get out of here?" Then suddenly it starts to feel like home. There is a sort of empathy that you have for your surroundings when you're around junkies and homelessness and gang warfare. "A gunshot rings out at the station/Another urchin snaps and left dead on his own" - I was describing exactly what my surroundings were. There's not a part of that song that isn't true. It's a great live song to crank into. I think the musicality of the [bridge] is a foreshadowing of what things were to come for us in the future, whether we knew it or not.

She

DOOKIE, 1994

I had a girlfriend named Amanda, this Cal student. I learned a lot about feminism through her. She gave me an education that I think was very timely for me. I was just a dumb kid, high school

dropout. She was telling me about the way women have been objectified for so many years, and I was just listening. I wrote this as a love song to her, but it was also about learning about her activism. When it says "Scream at me until my ears bleed," I was kind of going, "I'm here to listen." With any kind of activism, the first thing you need to do is be a good listener. The song becomes about an understanding. That song just feels so good to sing. I'm really proud of it; it's very stripped down, simple, three chords. It's kind of a cult hero. It's one of those songs that wasn't a single, but it had a life of its own. Those are the special kinds of songs.

Longview

DOOKIE, 1994

I really loved the song by the Pretenders called "Message of Love," and wanted to write a song like that, but we needed a bass line. We are all living in this house in Richmond, California, and I think I went to a movie. Everybody back at the house had dropped acid. So I came home and Mike is sitting on the floor in the kitchen tripping balls, and he had his bass on, and he goes, "I figured it out, man! I figured it out." He played the bass line for me for the first time right there. I didn't know what to think about it, because I was like, "Well, he's on acid, so I can't tell if he's even going to remember it." Then we ended up playing it the next day, and it just stuck. The lyrics to it are about feeling like a loser, watching television, jerking off, and feeling lonely. I was pretty frightened at the time. I was in limbo. I didn't have a girlfriend it took, like, four years for me and Adrienne to get together, from like '90 until '94. We had signed to a major label, and there was a backlash at the time because we had been this underground band. Things felt out of my control, and it felt like a make-or-break deal. It's such a unique-sounding song, when you really look at it. Nobody was playing rhythms that swing, or that kind of power in the choruses. Grunge had turned into something that was bastardized by lameness, and I think we were coming from a place that felt a little harder and more upbeat. And it was super-danceable and got people to go crazy.

Brain Stew

INSOMNIAC, 1995

This song is such a dark horse. I had just gotten some recording equipment, and I came up with the riff when I was experimenting with it for the first time: "Oh, this is cool. It almost sounds like a harder Beatles song, like 'While My Guitar Gently Weeps.' " The song is about methamphetamine, not being able to sleep, and staying up all night. It was something that was creeping into our punk scene at the time, and I definitely did my experimenting with it. It's just such an evil drug.





Things were getting really scary. I'm such a dedicated songwriter and musician, and when *Dookie* got so big – it was on par with becoming one of the biggest pop records of all time – I really wanted to be like, "I'm a rocker. I'm a punk rocker. That's what matters to me more than being some kind of pop star." That sort of fueled that record.

Everything was happening. I got married, I had a kid, I was 23 years old, and people were climbing in my trees to look inside my house. It was the scary side of becoming a rock star, or whatever. You can't control the outcome of your life. I wanted to show the uglier side of what Green Day was capable of.

Good Riddance (Time of Your Life)

NIMROD, 1997

I wrote this back when I was writing for *Dookie*. It was for a girlfriend who was moving to Ecuador. I went to this house party in Berkeley, where all these college students were passing an acoustic guitar around and singing songs — a "weird dudes with ponytails and an acoustic guitar" kind of moment. I remember going, "Oh, man, I should try doing an acoustic song," so I wrote that song about her and the end of our relationship. "Tattoos of memories and dead skin on trial" — I had tattooed her name on me, and then I had to get it covered up, that's all that was.

It's about trying to be cool, accepting that, in life, people go in different directions. This was a wildly different direction: I was getting ready to go on tour and promote *Dookie*, and had a single on the radio, and everything was starting to happen. She was moving to Ecuador to continue her studies and live with a family there. People come into your life and it's won-

66 You feel, 'Oh, my God, am I ever going to write another song again?' And then something pops up and you go from feeling like a loser to king of the world. 99

derful, but they seem to go out of your life as quickly as they came in. That's what the song's about.

So I wrote it in '93 – the whole song was done – but I didn't think it was going to be for Green Day at all. Then when we were doing *Insomniac*, I did a demo for it, but it wasn't right for that album, either. I didn't really know what to do. When we made *Nimrod*, I was just like, "Let's see what happens." We put this little string quartet on it, which was going way outside what Green Day was known for. And it was amazing. It opened up a brand-new world: "Oh, fuck, we can do so much more."

It took on a life of its own. I was definitely not thinking about weddings and graduations when I wrote it. A girl just sent me a message on my Instagram [saying] she had a brother that just passed away, and that became the song her family would listen to that they related to their experience. It's really beautiful when you think about it.

Minority

WARNING, 2000

After "Time of Your Life," I started getting into playing more acoustic guitar, and I really wanted to have more for Warning. And there was also a lot of kind of bad pop punk that was starting to happen, and I wanted to go against that genre. This felt like the next step. I had been getting into listening to more of the Kinks and the Who, who found a lot of power in an acoustic song, and used the guitar almost like a drum. "Pinball Wizard" is so percussive. I wrote this right before the election between George Bush and Al Gore. I started feeling the political wheels starting to turn toward conservatism a little bit. I think that song is sort of about declaring that you're stepping out of the line, you're not part of the sheep, and trying to find your own individualism. It felt like we were diving into something that was more conceptual for sure.

I'd like to go back and rerecord that album. It was right when Pro Tools started happening. I want to go back and just do everything more live, because I think "Minority" live is a lot better than it came out on the album. But that's just one of those things that you think about too much.

Jesus of Suburbia

AMERICAN IDIOT, 2004

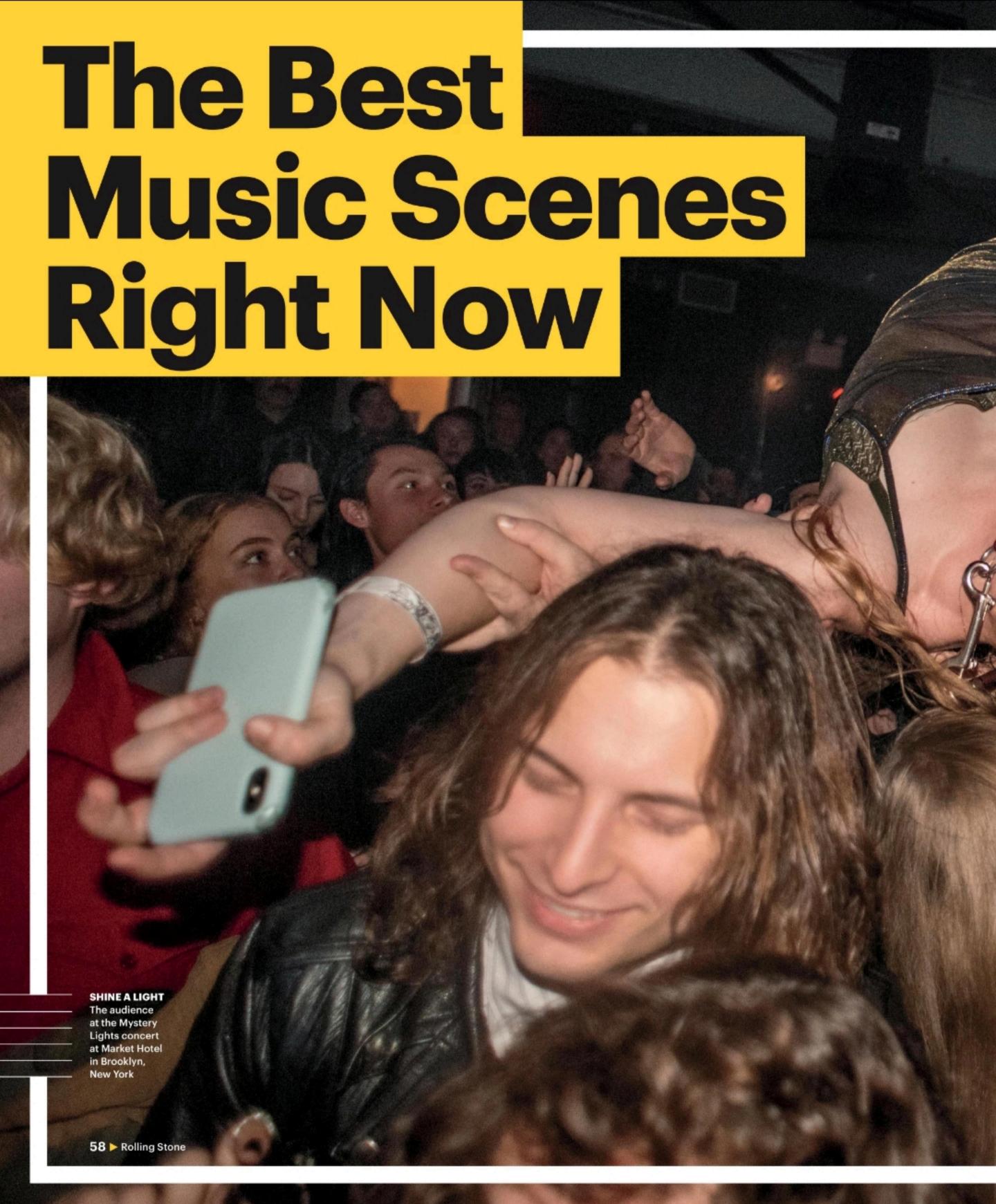
I loved "A Quick One" by the Who, and I decided I'd love to write a song that felt like a mini-opera. We had a studio that we could work everything out at and experiment, and Mike, Tré, and I had been coming up with little 30-second vignettes and trying to connect them in the studio.

After I wrote "American Idiot," I was like, "Who is this character?" Then the ideas started firing at me: "I'm the son of rage and love/The Jesus of Suburbia/The Bible of none of the above." It felt like I was in uncharted territory, really for the first time. I'd taken my songwriting to another level. It starts almost doo-woppy, and then it ends up almost going into this sort of Black Sabbath direction. It's kind of around-the-world-in-eight-minutes or something. And Jesus of Suburbia ended up becoming the character that ran throughout the entire album.

Holiday

AMERICAN IDIOT, 2004

That was a time when our country was moving into a war for fictitious reasons. A lot of it had to do with politics and oil. It felt like the country was beginning to come apart. I think the catalyst of where we're at now, really, is with George W. Bush. So this song was just about trying to find your own voice and your own individuality and questioning everything that you see on television, in politics, school, family, and religion. I was jumping into character a little bit. I wanted something that sounded very nasty. I definitely wanted to do something that was provocative. So I was like, "Sieg Heil to the president Gasman," invoking old Nazi Germany propaganda films, contrasted with the American branches of government. I was just kind of messing around and using the English language against itself. With the riff, I was messing around with chords in a different way [Cont. on 93]





The Mile High City has exploded in the past decade, thanks to jam-band fanatics, a wild shape-shifting venue, and decriminalized magic mushrooms







ERHAPS NO PERFORMER has embodied Denver's past decade more than native Nathaniel Rateliff; at its start, he was playing in a basement bar to 25 people; by its end, he had sold out multi-night stints at Red Rocks. "The music community here is always supportive as artists grow and change," says Rateliff. "They're here to listen."

Denver is in the midst of a huge live-music boom. By some counts, it now has more venues than Austin; one recent study found residents bought more secondary-market tickets than anywhere else. The city's growing reputation as the "Amsterdam of the West" adds to the festive vibe; recreational cannabis has been legal since 2014, while psilocybin mushrooms were decriminalized last year. "A lot has changed Denver," says record-store owner Paul Epstein. "The music scene is just a microcosm of the growth and change here."

MUSIC'S NATURAL WONDER

Red Rocks is not only Colorado's greatest venue, it's one of the best in the world. Twin 300-foot sandstone monoliths (once part of the ocean's floor) create an unparalleled natural amphitheater 15 miles from the city.

RED ROCKERS

Clockwise from left: Rateliff at the Mission Ballroom; the Grateful Deadthemed Sancho's Broken Arrow; Joe Russo's Almost Dead fans at Red Rocks The Beatles famously played to a not-soldout-crowd in 1964; Jimi Hendrix and the Dead followed. Red Rocks wasn't widely known until 1983, when Bono and U2 leveraged fog and rain for the live, high-drama *Under a Blood* Red Sky LP. "That put Red Rocks on the map — and U2 on the map, too," says promoter Don Strasburg. The city-owned, open-air venue is experiencing a boom in demand: In 2010, there were 73 concerts on the books; in 2019, there were more than 170.

MISSION IMPOSSIBLE

The Mission Ballroom, which opened last year, is full of innovations. With a seating plan inspired by Red Rocks, it has a stage that moves on tracks and it's able to change its floor size depending on how big a show is. Jeff Tweedy recently praised the Mission: "Red Rocks is pretty and everything, but...we played in a snowstorm there one time. Fuck that shit!"

ROCKY MOUNTAIN HIGH

The Kind Love dispensary is open late, seven days a week. It's known for its friendly "bud-

tenders" and an extensive menu of edibles. Try a pre-rolled Alien Rock Candy joint (\$10), an indica strain with a THC level around 30 percent. One puff might be enough.

A DIVE FOR DEADHEADS

Sancho's Broken Arrow is a Steal Your Face-bedecked saloon. Bring your best John Mayer-vs.-Jerry Garcia take and debate it with similarly lost minds over local brews.

LABOR DAY WITH TREY

Every year since 2011, Phish have closed out the summer with a multi-night run far from home,

at Dick's Sporting Goods Park. "Denver has become such a hub to see human creativity in action," says bassist Mike Gordon. JESSE WILL

Best Record Store

TWIST & SHOUT

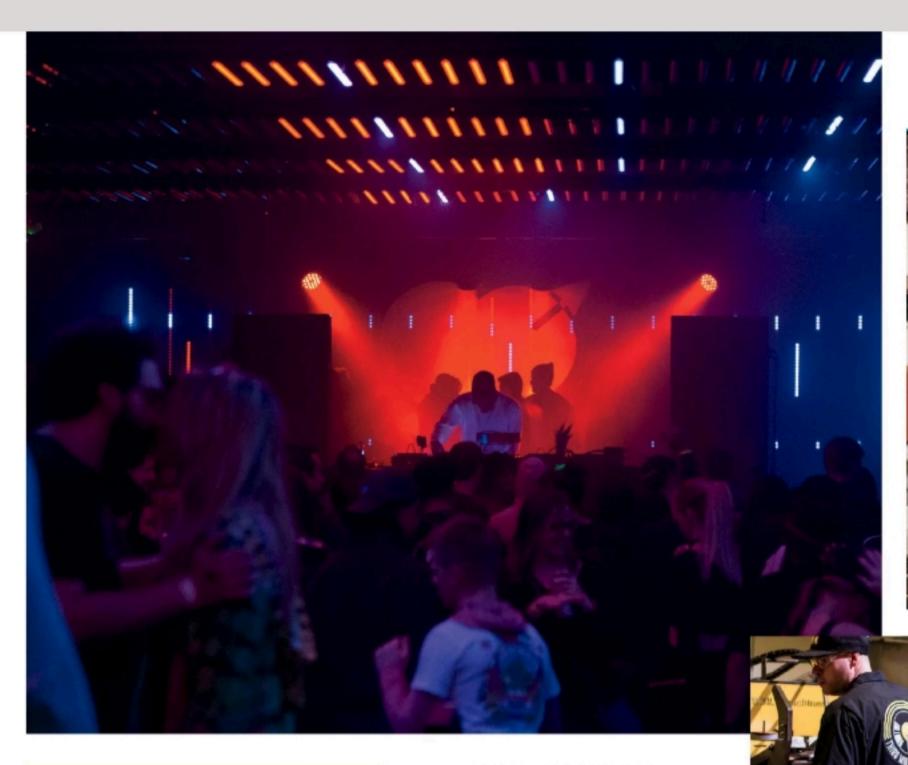
This throwback vinyl spot is full of rarities like the Beatles "Butcher" LP, old-school listening stations, and short-notice performances from big names like Elvis Costello and local heroes the Lumineers.



TELLURIDE, COLORADO

The formerly sleepy ski town has become the surprise music-festival capital of the U.S. with bluegrass, jazz, and classic-rock blowouts

N TELLURIDE, THE AIR IS CRISP, the views are as mind-altering as the nearly 9,000-foot altitude, and you're far removed from everywhere. (Denver, for example, is six hours away.) And that's the point. The San Juan Mountain town (population 2,400) has become an unlikely music-festival destination, with huge events all summer that include June's Telluride Bluegrass Festival (Kacey Musgraves and Janelle Monáe recently headlined) and August's Telluride Blues & Brews Festival (Robert Plant, Willie Nelson, and Sharon Jones have played in the sweeping alpine setting). If you don't want to camp, try for one of the 26 rooms at the historic New Sheridan Hotel. Twist & Shout's Paul Epstein has an idea why Telluride has taken off: "You're in this pristine box canyon, and it's just the most amazing place to see music." J.w.



Detroit, Michigan

A huge Third Man pressing plant, a studio churning out future stars, and cool garage-rock clubs are reinvigorating the Rust Belt capital

ETROIT IS OUR own universe," says underground-rap hero Danny Brown. "Diverse artists — not necessarily what's popular on the radio or YouTube, or what's cracking in the rest of the world. We have our own world." The city that has given us a staggering 30 Rock & Roll Hall of Fame inductees is an insane breeding ground of musical cross-pollination; just stop by one of pioneering DJ Carl Craig's Detroit Love showcases, or head to Assemble Sound, a former church that's been recently repurposed into a 24/7 recording studio and "artist development campus" that encourages artists to drop by and collaborate; it's launched alt-pop favorite Jax Anderson (formerly Flint Eastwood) and Interscope Records up-andcomer Yoshi Flower. Garage rock, soul, and jazz each have their own strong communities and "it all bleeds into one another," says Don Was, Grammy-winning producer and Blue Notes Records chief. "It's really that kind of melting pot."

HISTORIC HITS

The Motown Museum is in the early stages of a \$50 million expansion, but the original Hitsville USA HQ on West Grand Boulevard is already a gem, with plenty of artifacts and a re-creation of founder Berry Gordy Jr.'s original upstairs apartment. Best of all: the

preserved Studio A "Snake Pit," where you can feel the ghosts of the Funk Brothers in the room. Just a few blocks away, Gordy's former mansion in the Boston Edison District, with a swimming pool and bowling alleys, merits a visit if you've got time.

HOT WAX

Jack White's Third Man Records pressing plant, in Detroit's Cass Corridor, is a musichead's dream, with a vinyl manufacturing operation humming along not far from a busy performance space. The 10,000-square-foot pressing plant's eight Newbilt machines were the first for a U.S. facility in 35 years, and the machinery - including hydraulic generators and a closed-loop water-recycling system is both state of the art and environmentally friendly. "We wanted to be a label that had its own pressing plant," White said of the space, which employs a lot of college kids. "It's been a long time since Capitol and Columbia and all those labels had their own pressing plants."

KICK OUT THE JAMS

Saint Andrew's Hall/the Shelter and the multivenue Majestic Complex are fixtures on the touring circuit, as well as ideal showcases for locals. The latter's Magic Stick joins the nearby Marble Bar and TV Lounge as reliable sites

D-LIGHTFUL

Clockwise from top left: Craig, who helped take Detroit techno to the world in the 1990s, is still throwing down; outsider-rap auteur Brown at his Detroit studio: employees at Jack White's Third Man Pressing Plant

for next-gen EDM, and the Marble's monthly Motor City Soul Club caters to the old-school crowd. Cliff Bell's, with its shiny wood finishes and speakeasy ambience, is the spot to hear a steady stream of high-level jazz.

MOVE YOUR BODY

Detroit has made a place for itself on the crowded U.S. festival calendar. It starts with the Movement Electronic Music Festival, which brings scores of acts (many of them homegrown) and tens of thousands of fans in their best Day-Glo every Memorial Day weekend to dance along the Detroit River. Three months later, on Labor Day weekend, the Detroit Jazz Festival is the world's largest costfree jazz gathering, with recent headliners including Pat Metheny, Ron Carter, Terence Blanchard, and others. GARY GRAFF

Detroit Eats

LAFAYETTE CONEY ISLAND

Patti Smith met future husband Fred Smith of the MC5 at this eatery.

CADIEUX CAFE

The Belgian sport of feather bowling is maintained at this northeast-quadrant spot, which boasts a full mussels menu.



PRAISE YOU Clockwise from top: Chance the Rapper; Post Animal's Jake Hirshland and Twin Peaks' Cadien Lake James (right) at a favorite Lake Michigan swim spot; a Red Hot Ranch burger; Twin Peaks at Thalia Hall





The Windy City is currently home to the most innovative hip-hop scene in America — and jazz is being reinvented in wildly psychedelic new ways

Chicago, Illinois

HICAGO HAS ALWAYS been a city for musical risk-taking. It's where the Chess brothers helped introduce electric blues to the world and Kanye West changed rap 50 years later. Today, it's home to one of the most adventurous, experimental scenes in the country. Just take a visit to the Silver Room Sound System Block Party, where veteran house DJs share billing with outré hip-hop and jazz ensembles. Fueled by strong indie labels like International Anthem and FPE, the city is experiencing a major jazz renaissance; Makaya McCraven, Angel Bat Dawid, and Nicole Mitchell are connecting Chicago's long history of avant-garde innovation with inspirations ranging from

exciting new hip-hop sound has emerged too, thanks to up-and-comers like Calboy, Polo G, and Lil Zay Osama, who have softened some of drill's hard edges, pairing deeply honest lyrics with delicate melodies over lilting beats. "It's the launching pad," says Merk Murphy, co-founder of the city's Complex 2010 studios (an epicenter of drill music) and co-manager of key export Chief Keef. "It's like a treasure hunt of sorts — by the time you find out about them, they're already almost gone."

STREET SOUL

Calboy, 20, became a surprise national success in 2019 with his melancholy ballad "Envy Me," which helped win him a deal with Meek Mill's Dream Chasers Records. But as he steps onto the national stage, Calboy remains focused on repping his hometown, even while trying to push hip-hop in new directions. "I feel like we're just gonna move a little different, a little smarter," he says. "We're drifting away from the streets, staying out of that life."

GARAGE HEROES

Twin Peaks, with their approachable garagepop sound and sunny psychedelic vibe, are pillars of the local indie scene. (Start with their 2014 breakthrough LP, Wild Onion, then head next to 2019's Lookout Low.) Among their fans: indie-rock elder statesman Stephen Malkmus, who pronounced Twin Peaks "fuckin' rad" in 2015.

SECRET RAP SHOWS

New rap artists can often be found performing at strip clubs in the city's southern suburbs, like Red Diamond (Megan Thee Stallion performed there last year). Elsewhere, 606 Open Mic Hip Hop has taken over Subterranean - one of the few nightclubs that routinely books rappers - regularly for the past two decades. And Jam Night, led by Stix, a drummer who has worked with Chance the Rapper, among others, is a monthly hip-hop and R&B party with a live band that rotates from venue to venue. Chance has been known to stop by. "I wanted to create a space where musicians can go create and be vulnerable," says Stix. "One night can be more rock, one can be more R&B — it's an actual jam, where whoever's in the room creates the vibe."

THE FUTURE OF JAZZ

Dorian's Through the Record Shop is a speakeasy located, as the name suggests, in the back of a record store. There's a casual atmosphere, but never a dearth of great music — recent performers include up-and-coming saxophonist Isaiah Collier and local-legend guitarist George Freeman, who is 92 years old. "It's not the kind of jazz club where you feel like you can't talk," says International Anthem co-founder Scott McNiece. "More of a good time — the kind of place you can invite your friends."

FAR-OUT SOUNDS

On the South Side, the AACM Great Black
Music Ensemble perform on the first Sunday
of every month at the Stony Island Arts Bank.
The group, connected to a long-running collective devoted to experimental takes on black
music, finds ways to push reggae and African
sounds forward each week. On the North Side,
try the Green Mill, particularly its Sunday-night
sets with the Joel Paterson organ trio. "It's
one of my favorite clubs in the city," says
McCraven of the century-old spot where Al
Capone was once a regular. NATALIE WEINER

After-Show Stops

RED HOT RANCH

The hot dogs at this local chain, a popular spot for musicians, are a must.

FREEHAND CHICAGO

This hotel is worth a stay for its top-notch selection of lobby DJs.



HOT DESTINATION

SAN JUAN, PUERTO RICO

In the past five

Daddy Yankee

years, Bad Bunny, Luis Fonsi, and

have helped make Latin music the fastest-growing genre in the world. They all have something in common: They all have roots in San Juan, which, despite its small size and economic struggles after Hurricane Maria, has become a world-shaping music scene, with forward-looking salsa, reggaeton, bomba, Latin trap, and more. "It can compete head-tohead with other Latin American or European cities because of its diversity," says Bárbara Abadia-Rexach, a University of Puerto Rico anthropology professor. To get a picture of the rich scene, head to La Placita, a marketplace that turns into a giant musical bash at night, with more than 15 bars. At the hip La Respuesta, you can pay \$10 and see anyone from local indie-pop heroes Los Wálters to jazz trailblazer Miguel Zenón. One of the scene's biggest moments will happen in May, when Bad Bunny returns for a two-night stadium blowout, which may break Metallica's ticket sales record. ADRIANA DE JESUS-SALAMAN

hip-hop beats to Nineties post-rock. An





PORTLAND, MAINE

The smaller Portland is being flooded with exciting venues and artists taking big risks — "They might not be killing it financially," says one venue manager. "You live here because you love it"

VERY NOVEMBER, more than a dozen top musicians from Portland, Maine, take over the local State Theatre for an ambitious trip back in time: They play a Beatles album in full. This year, it was the White Album; bandleader Spencer Albee sang "Martha My Dear," backed by precise orchestration, and even invited friends and crew to act out "Revolution 9." "It's a love fest," says Albee, a songwriter who started the event in a bar 17 years ago. This year, they packed the 1,700-capacity theater for three nights and employed almost 40 people. "I can't tell you how many people have had their first concert experience with us," Albee says. "We've even had people propose at our shows."

Beatles Night is just one example of how seriously Portland takes its music. "I've never lived in a city with this much talent," says Lauren Wayne, general manager of the

company that owns the State. "I get friggin' emotional about it." When Wayne moved to Portland in 2001, the scene was "way smaller." But now, more than a dozen venues have opened in the past decade (not to mention restaurants: Bon Appétit named it the top food scene in the country in 2018). The industry is paying attention - NYC promoters Bowery Presents chose Portland as its first city outside of New York to operate venues in.

BEST GIG WITH A VIEW

Thompson's Point was an abandoned railroad yard overlooking Portland harbor that the State Theatre turned into a gorgeous outdoor spot; Maggie Rogers sold it out twice. "It's the best place to see the sunset in Portland," says Wayne, adding that artists love playing there for the free lobster rolls and oysters.

HOMETOWN HEROES

Rustic Overtones, the ambitious punk-soul crew - led by gravel-voiced frontman Dave Gutter - have a catalog that locals know by heart. The band was signed to Arista in the late Nineties and even recorded with David Bowie (stream the great "Sector Z"). But after two major-label deals fell apart, they broke up ("It's a comedy of errors," says Gutter). Rustic reunited in 2007 and still play; check out their excellent, career-spanning Mood Box.

BEST AFTER-SHOW HANG

Portland's Old Port is full of exciting places to drink, like Novare Res, which has a 300-beer menu. For real local flavor, head to Howie's Pub, a low-key neighborhood bar with darts

Best Small Clubs

the State

ONE LONGFELLOW SQUARE

Psych artist Jeff Beam books forgotten rock legends.

PORT CITY BLUE

The vibe-y room hosts jazz jams that can run for hours.

and jalapeño poppers. PATRICK DOYLE

HOT DESTINATION

KYIV, UKRAINE

Trump's impeachment has pushed Ukraine into the spotlight. What's unreported: The country's capital, Kyiv - formerly Kiev has become one of the most-exciting musical scenes in

the world. "It's a cultural explosion," says indie filmmaker Phil Strongman, who just released the doc Kiev Unbroken. Kyiv's cultural resurgence is a reaction to the uprising of 2014, when Ukrainians ousted

pro-Russian President Viktor Yanukovych; Putin responded by funding a war in east Ukraine that's killed 13,000. Since then, once-dominant Russian artists have fallen out of favor, leading Ukrainians to create their own scene. Local promoter Slava Lepsheev started Cxema, illegal raves that happen

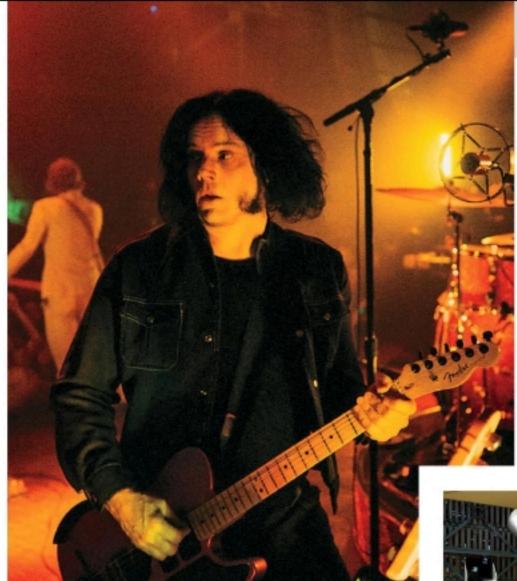
under bridges and in abandoned warehouses. The art club Closer started throwing parties at an old ribbon factory in the hills, forming a techno scene that birthed world-renowned DJs like Nastia. Kyiv's music is marked by "ethnic moods, dark techno, and female vocals," says Vika Prudnyk,

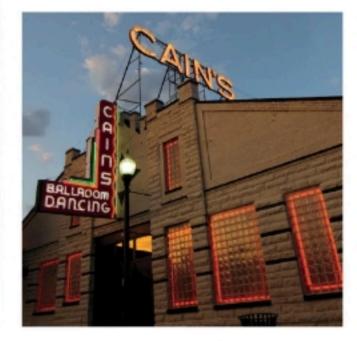
who works with the Jäger Music Awards, a local awards show.

The scene draws from tradition: Dakha-Brakha uses ancient language and chants, and electronic duo Onuka teamed up with the 80-piece folk orchestra Naomi for a haunting live album. And it's increasingly diverse: Fo Sho is Ukraine's

first black hip-hop act; the female group Panivalkova famously opened gigs in full traditional garb — headgear, long skirts - losing layers through their set until they were nearly naked. "It's a way of giving part of ourselves to the audience," explains the trio's Ira Luzina. Rock is growing,

too. Brunettes Shoot Blondes make catchy indie rock that's gaining buzz in Europe, while Latexfauna play psychedelically blissful sets at Atlas Club. Some places are even inspired by Ukraine's dark past: Kyiv's hottest jazz club, Barman Dictat, is a candlelit basement that feels like a dungeon, MELISSA ROSSI







TULSA, OKLAHOMA

The oil town is experiencing a resurgence, thanks to rappers, folk singers, and a billionaire who wants to make it the next Austin

ACK WHITE REMEMBERS the first time he stepped inside Cain's Ballroom, a 1920s Tulsa dance hall where Bob Wills and the Texas Playboys once broadcast their weekly radio shows. "I basically almost fired my booking agent the moment I walked into that room," White said recently. "Why do I not know about this place? I was really upset that nobody had ever told me about Tulsa."

White fell in love with the rest of the city including its art-deco architecture, and rich history in film (Francis Ford Coppola shot The Outsiders there) and music (Woody Guthrie and Leon Russell are Okie legends) - and bought a house in Tulsa. As the city grows and develops, its musical scene has exploded again; while Cain's was booking about an act a month back in 2002, it now books 120. The city is also a major destination for music historians, with the recent additions of the Woody Guthrie Center and Bob Dylan Archive. Those buildings were both funded by George Kaiser, a businessman-turned-philanthropist who wants to make Tulsa a major destination. Here's why he might be right.

HONKY-TONK HEROES

In the early Seventies, J.J. Cale brought Tulsa's country-soaked rock nationwide. His spirit is alive at Paul Benjamin's Sunday Nite Thing. Benjamin, a grizzled guitar slinger, welcomes a rotating cast of talented local heroes like John Fullbright, whose piano-based heartland

folk songs made him a hero in Nashville and beyond. "A different guest each week keeps it fresh," says Benjamin. "It ties together a bunch of different styles, from honky-tonk to R&B."

REVOLUTION ROCK

While folkies like Fullbright and John Moreland are channeling Guthrie's spirit, a new group of rappers are making music described as "politically conscious, subliminal street," says Steph Simon, who just released a concept album about the city's 1921 race riot and massacre. "Tulsa is much more diverse than it was 15 years ago," says R&B singer Branjae.

DYLAN'S GOLD MINE

The Bob Dylan Archive, which opens in 2021, is already home to 6,000 artifacts from Dylan's personal collection. They include his leather jacket from Newport and the "Visions of Johanna" lyrics. A public museum will feature highlights. "As this stuff becomes older, you want it to be more organized for generations," says a source close to the Dylan camp.

BEST DAYTIME HANG

The Gathering Place, a new 66-acre park full of trippy sculptures, is largely the result of hundreds of millions in donations by Kaiser, the billionaire behind the Guthrie and Dylan centers. JONATHAN BERNSTEIN

RAISIN' CAIN

Clockwise from left: White onstage during the Raconteurs' three-night stand at Cain's (pictured) last year; the Gathering Place, a 66-acre park that opened last year

Hidden History

CHURCH STUDIOS

Take a tour of Leon Russell's old Shelter Records studio.

GREENWOOD CULTURAL CENTER

The spot where Count Basie discovered jazz is now a museum.

ASBURY PARK, NEW JERSEY

Once a city of ruins, the beach town is thriving again, with sleek new hotels and multiple festivals

N DECEMBER 2000, Bruce Springsteen stood onstage at the Convention Hall in Asbury Park, New Jersey, and debuted "My City of Ruins." It was an elegy for his adopted hometown, where he learned to perform by playing nightly near the oceanfront boardwalk and saw acts like the Who and Janis Joplin as a teenager. But in the decades following the city's race riots of 1970, Asbury Park had become a shell of itself due to neglect and political corruption. "Young men on the corner like scattered leaves," Springsteen sang, "The boarded up windows, the empty streets."

Two decades later, Asbury Park has staged an incredible comeback, reclaiming its longstanding status as a go-to resort town with a musical heart. Joining classic Springsteen haunts like the Stone Pony and Wonder Bar are a host of sleek new spaces like House of Independents and the Asbury Hotel, located next to Asbury Lanes, which was a key punk venue in the 1980s that now hosts bands like Black Lips and Jukebox Criminals. "I think the most rapid growth period in Asbury Park has maybe happened over the past five years," says Asbury Lanes-Asbury Hotel proprietor David Bowd, one of the key investors in the revitalized town.

Music festivals are springing up, too. The Asbury Park Music + Film Fest, which benefits underserved kids in the area, featured separate screenings of unseen material from the Springsteen and Dylan vaults last year (both of those events will be reprised in 2020, and there will be a new retrospective celebrating Sopranos creator David Chase). There's also the epic Sea. Hear. Now, one of the most successful U.S. fests to spring up in recent years. The event — which Dave Matthews Band and the Lumineers played last year - is co-produced by veteran music photographer Danny Clinch, who opened a gallery of his work in Asbury Park in 2016. Clinch, who grew up in nearby Toms River, spent his teenage years seeing shows at the Stone Pony. "I used to come to Asbury Park and think to myself, 'How could a place like this, right on the seashore with such beautiful architecture, not come back?" says Clinch. "It was this diamond in the rough. I've heard that now there are more music venues per square mile than any town in the country, even Nashville. It's incredible." ANDY GREENE



BROOKLYN, NEW YORK

The East Village, Williamsburg, and Harlem have left their mark on music.

These days, most great dives, record shops, and indie bands are all in Bushwick

HEN SELENA GOMEZ was spotted last year in the crowd at Alphaville — a dive bar and live music venue deep in Bushwick, Brooklyn — the neighborhood went from being an open hipster secret to a must-see New York destination. Bushwick's graffitied streets and formerly empty warehouses are home to tons of venues, thrift stores, and coffee shops that have sprung up in the past decade, rapidly gentrifying the area. You can find exceptional restaurants, like Faro, a Michelin-starred Italian spot, and El Cortez, a Tex-Mex nightclub that serves

tacos and tiki drinks with 1970s glam. And there's no shortage of killer music, with bands of all kinds regularly filling sweaty hot spots like Market Hotel, a cozy all-ages club that's located directly next to an elevated subway track on Myrtle Avenue so fans can enjoy watching national acts like Car Seat Headrest and Swearin' do their best to drown out the noise of the J, M, and Z lines rumbling by a few feet away. Market Hotel is right at home in Bushwick, which is the latest in a long line to Charli XCX to proto-punk legends Television. Located in an old warehouse near the Jefferson Street L-train station since 2017, it has areas that function as a nightclub, art gallery, bar, and cafe, among others. "The experience of Elsewhere is one that is fundamentally social," says co-owner Jake Rosenthal. "It's more than just a box for music."

CRATE-DIGGING HEAVEN

Appropriately decorated with dangling mannequin heads, a rooster clock, and an

WILDSIDE

Clockwise from top: Mystery Lights bassist Alex Amini performing at the Market Hotel; Sunflower Bean's Julia Cumming performing at Elsewhere; tacos at El Cortez



HOT DESTINATION

PORT ANTONIO, Jamaica

Even though he grew up in Kingston, Shaggy had never been to Port Antonio, the town on the northeast coast of Jamaica, until 1999, when his wife suggested a trip to the remote town. "I had to chop through bushes to get to this beach, and I didn't even know how to swim," the reggae star says. "I was like, 'I don't wanna go to no damn beach!' But it was so pristine - I ended up spending the whole day there."

Shaggy is one of many musicians who have discovered the lush, enticing, and secluded charms of Port Antonio, not far from the birthplace of jerk cooking. Diplo, Santigold, and Shaggy (who bought 10 acres of beachfront land) have property in the area. Geejam, a hilltop boutique hotel run by former record executive Jon Baker, features a very private studio where Drake, Harry Styles, Florence and the Machine, and recently rising British singer-songwriter Jorja Smith have worked, some blocking it out for months at a time. (Drake took over Geejam's upscale Bushbar for a 24-hour bash, inviting local artists.) At songwriting

camps on the property, producers and writers have converged to write material for Dua Lipa and Alicia Keys. "Any hotel with a studio can put the most high-tech room together," says Baker. "But the reality is that you can't put in the Caribbean and the Blue Mountains as your decor."

Port Antonio is a two-hour drive from the capital of Kingston, with none of the usual tourist resorts and golf clubs. Fly into Kingston, stay at the Terra Nova or Spanish Court, stop by the new Kaya Herb House, where you can get a license on the spot for the highest-quality local ganja, and catch live reggae at the **Kingston Dub Club** in the hills outside of town.

In Port Antonio, musicians and vacationers pop into rum bars to hear ska singles. Check out the weekly Roadblock street party at the Cristal Nightclub, and grab an authentic Jamaican dinner at the funky backyard spot Soldier Camp. Shaggy himself has partaken of river tours on bamboo rafts before getting to work. "You get the creative juices flowing in that relaxed mode," he Says. DAVID BROWNE





of New York locales to welcome musicians (and their fans) — and which continues to welcome more, even as some beloved venues of a few years earlier have disappeared due to rising rents. "You're much more likely to find talented people who are your peers in music if you move here versus moving to Des Moines," says one longtime local show promoter. "Maybe it's not the heyday. It's not 1977, it's not 1965 — and it's not even 2009. But it's still got more shit going on here than anywhere else, so the appeal remains."

IN THE CLUB

Another of Bushwick's most popular livemusic venues is Elsewhere, a multiroom complex that's hosted everyone from Mitski



assortment of other campy knickknacks,
Human Head Records specializes in Latin
music, soul, and jazz — but it's got a little of
everything for you to browse through in its
racks. Owners Travis Klein and Steve Smith
opened the shop in a former police-uniform
store in 2013. If you're looking for a deep
selection of reasonably priced vintage and
new vinyl, friendly staff, and a goofy poster of
Seventies-era John Travolta, Human Head is
the place. ANGIE MARTOCCIO







Forget about the touristy **Broadway district: See Vince Gill** play in a great Western swing band every week for just \$20,

watch Margo Price crash a dive-

bar stage, or eat meatloaf with

John Prine. A true music lover's

guide to Music City

Nashville, Tennessee

FTER MARGO PRICE wrapped her three-night stand at the historic Ryman Auditorium in Nashville, she celebrated by making the 20-minute drive northeast to Dee's Country Cocktail Lounge, a kitschy spot behind an adult bookstore in Madison. Price is a regular at Dee's, where she often jumps onstage with her band the Price Tags, who recently played a residency, or just tends the bar. "You can order whatever you want, but I'm just going to give you tequila," Price says.

As Nashville's population explodes (almost 100 new people move there every day), under-the-radar spots like Dee's have become hidden hangouts for Nashville's working musicians and fans of old-school country, a refuge from the drunken tourists and cover bands in the city's Broadway entertainment district. ["They're] the anti-Broadway," says Tyler Mahan Coe, host of the country-music podcast Cocaine & Rhinestones. "If I lived in another country and someone described Nashville to me, and I went to Broadway, I would be pissed."

COUNTRY-MUSIC TIME MACHINE

The American Legion Post 82 in East Nashville is ground zero for traditional country. Brendan Malone and his well-dressed band, the Cowpokes, play songs by Ernest Tubb, George Jones, and other legends at Honky Tonk Tuesday Night, a weekly showcase where Kacey Musgraves, Jack White, and Emmylou Harris have stopped by. "It's like walking into a time machine and you're stepping straight back into the 1950s," says Malone, who books the lineup. "[But] you have all walks of life. Punk rockers, the hardcore country & western kids, the hipsters, and even hip-hop kids." One tip: Show up early to take free dance lessons.

BEST OPEN SECRET

When he's not on tour with the Eagles or as a solo act, Vince Gill plays weekly with the Western swing band the Time Jumpers. The group featuring a three-fiddle attack led by Kenny Sears (who played with Faron Young, Mel Tillis, and Ray Price) — works through classics



MEMPHIS

If you visit the state's other great city, go on a Sunday and hit Graceland and the nearby Rev. Al Green's Full Gospel Tabernacle church, which has raucous gospel music and freewheeling sermons. "If God gives me this audience, I'll preach the Word," Green said.

by Bob Wills and others, giving new life to a mostly extinct genre. The show happens every Monday at 3rd & Lindsley for just \$20. It's the best deal in town: Elvis Costello, Sheryl Crow, and James Taylor, among others, have sat in. "I bring a lot of attention to the band because I'm in it, and I can't help that," Gill said. "But I work really hard at helping people to grasp I'm just one of the guitar players."

WHERE PUNKS ARE BORN

The all-ages club Drkmttr in East Nashville has become the center of the city's growing indie, punk, and hardcore scenes. Philly's Mannequin Pussy have played their ferociously catchy power punk in the tiny room, while Nashville's hometown favorites Shell of a Shell push the boundaries of experimental rock. "We don't book things based on whether or

> not it's going to be financially successful," says Kathryn Edwards, Drkmttr's co-owner and promoter, "We book it because we like the music."

LEGENDS & MEATLOAF

Arnold's Country Kitchen is a big, communal lunch spot where construction workers, politicians, and legendary musicians all eat together. On Tuesdays, meatloaf day, there's a good chance you'll see John Prine in line with his meal tray.

OUTLAW GHOSTS

Honky

Tuesday

Tonk

Night

The Country Music Hall of Fame and Museum's "Outlaws

& Armadillos: Country's Roaring '70s" is an exceptional exhibit tracing how hippies and rednecks gave birth to one the genre's greatest revolutions (Kris Kristofferson's Army shirt and Willie Nelson's sneakers are among the highlights). But there are tons of legendary spots hiding in plain sight, like Waylon Jennings' old office on 17th Avenue South, where his flying "W" logo is still visible above a stained-glass window. You can also drive out to Hank Williams' "Country Palace," a house he bought in 1949; Tammy Wynette also lived there until her death in 1998.

THE ROCK & ROLL HOTEL

In less than a year, the Dive Motel and Swim Club has become one of the hottest spots in town to stay overnight or just dance at. A rundown roadside motel dating back to 1956, it's been restored to its wood-paneled glory, with a 60-foot pool and 23 rooms. All of them have a "Party Switch" that toggles between music and moods for "Sex," "Drugs," "Rock & Roll," and "Sleep." JOSEPH HUDAK

Best Record Stores

GRIMEY'S NEW AND PRELOVED MUSIC

This all-time great shop is packed with rare vinyl and hosts small free gigs by Wilco, Kelsey Waldon, and others.

VINYL TAP

Key for music and beer nerds: Along with LPs, there's a great draft selection.

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Left: Local heroes Sex Police at Cat's Cradle in 2018. Below: The Green Light, a speakeasy hidden behind a bookcase, in Raleigh.



RALEIGH, NORTH CAROLINA

The Raleigh/Durham/Chapel Hill triangle has become a hotbed of independent music, and the rest of the industry is taking note

UST A FEW MONTHS after they moved to Durham in 2013, Nick Sanborn and Amelia Meath of the electro-pop duo Sylvan Esso played their first-ever proper show there, at the Pinhook. "I thought maybe 30 friends would show up," says Sanborn. But one of the Raleigh/Durham/Chapel Hill area's influential college radio stations had started playing the group's "Hey Mami," so when Sylvan Esso took the stage, they looked out at a sold-out crowd of 250. "It was my first moment of 'I can't believe how cool this place is," Sanborn says. The Triangle, as it's called, has become a hotbed of independent music, with artists from all over the country flocking to the area, driven by its cheap rents and ample service jobs, transforming a relatively insular scene into a thriving musical renaissance, from dance music in Chapel Hill to hip-hop and Americana in Raleigh to indie rock in Durham. "Fifteen years ago, there were, like, six people here," says singer-songwriter Tift Merritt. "Now, there's a whole community." "A lot of the same drivers of the music scene are still the same: great college radio, great record stores, college students," adds Superchunk's

Mac McCaughan, who runs the Durham-based Merge Records. "[Now] the thing is, there are just so many great bands."

NEW ROOTS

Rootsy groups like Chapel Hill's Mandolin Orange and Raleigh's American Aquarium are long-standing local draws. But country and folk no longer run the game: The area is now a wellspring of hip-hop talent, from Rapsody to Lord Fess to Young Bull.

FESTIVAL EXPRESS

Visit the area in September, during Raleigh's Hopscotch Music Festival, which features a mix of prominent local talent and major national acts such as Big Boi and St. Vincent. Then, stick around a week for the International Bluegrass Music Association's yearly conference. JONATHAN BERNSTEIN

Killer Venue

THE CAT'S CRADLE

This small, divey two-floor spot is beloved among road vets: "We've played, like, 15 times at the Cradle alone," says Wye Oak's Andy Stack.

blues. She wound up living there for three years, and the fadoinspired "Crave" popped up on her Madame X album. "In Alfama, you'll hear people singing and playing fado music everywhere," she said, calling the sound "glorious and inspiring." If you follow her to Alfama, the trick is avoiding the touristy spots. "If everything is directed at you, like, 'Come in,' it's not an interesting fado house," says

new-generation fado

singer Carminho.

"But if you go to

a fado house and

don't understand

in a good one." At

play along. What-

ever you do, don't

clap; in respect to

preferred method

similarly intimate

also recommends

more upscale fado haunts like Mesa De

Frades, a converted

in the building,

HOT DESTINATION

When Madonna

through the old-

visited Lisbon, she

made sure to swing

school Alfama dis-

trict to catch some

for "fate") - the impassioned acoustic

ballads known as the

Lisbon version of the

fado (Portuguese

LISBON, PORTUGAL

everything, you are the intimate, homey Tejo Bar (a Madonna fave), be prepared to stand wherever you find space and even grab one of its available instruments to the older residents rubbing hands is the of applause. (If you can't get in, try the and authentic Tasca do Chico.) Carminho

chapel with first-rate Portuguese dishes, and the larger O Faia restaurant. But fado is only part of what Lisbon has to offer. In search of indie rock?

Check out Incógnito, where Win Butler recently spun a DJ set. The cozy Musicbox devotes entire nights to live hip-hop. The annual NOS Alive festival, Lisbon's answer to Bonnaroo, will feature Taylor Swift, Billie Eilish, Khalid, and others this July. And in an example of the ways the country has caught up with modern culture since its 1974 revolution, Lisbon's decades-old dance-music scene is finally flourishing. "People here dance more than in a lot of other cities," says DJ, producer, and label owner Branko. "They start dancing and they don't stop until it's time to leave the club." At spots like the funky warehouse B.Leza and the roomier, multilevel Lux Frágil, partiers are sometimes treated to an Afro-Portuguese EDM blend that reflects the city's mingling communities, courtesy of local stars like Nidia. "The drum patterns are more complicated - it's a polyrhythmic approach to dance," says Branko. "You don't have that steady four-to-the-floor pattern. It's about importing ancestral patterns, rhythms, and melodies, and jamming all that into a club sound." In one of the city's most exciting developments, acts like Pedro Mafama and Madonna favorite Dino d'Santiago are mixing EDM and hiphop with fado. "The concept of fado is about to change," says Branko. "Now the fun begins." DAVID BROWNE

Small Cities, Big Scenes

Northampton, MA

The college town is home to a major underground rock revival, thanks in part to Carinae, a Velvetsinfluenced psych band with three lead singers giving off big harmonies, and huge, winding riffs.

Santa Fe, NM

Long an artist hideout, the city is home to one of the coolest venues in the country: Meow Wolf, a mind-bending space inside a huge immersive art house funded by a local, George R.R. Martin.

Boise, ID

This once-sleepy Western capital has become a big stop for rock bands. "I'm not sure people give it the respect it deserves," says Dennis Brennan, head of touring at Q Prime, which reps Metallica and others.

Madison, WI

Both Paul McCartney and Lizzo played here in 2019, which promoters saw as a sign of its rising status. It's home to punk rock with a political edge and fun, laid-back music clubs like the High Noon Saloon.

Inside Atlanta's Trap Music Boom Rappers like 21 Savage and Young Thug have made their city one of the world's most-exciting places to hear new music HE LOUD, SLEEK HIP-HOP sound known as trap music burst into the pop mainstream in the 2000s thanks to newly minted Atlanta stars like T.I., Young Jeezy, and Gucci Mane. It's grown vastly more popular in the years since, and today, elements of trap - especially the boomingbut-unhurried bass lines and the skittering, rapid-fire drum programming - pervade nearly every kind of music, from R&B to EDM to country to gospel to Top 40 pop. "Trap music has become this international phenomenon," says photographer Raymond McCrea Jones. "Everybody knows Migos, knows 21 Savage, and knows they're from Atlanta." Jones moved from New York to Atlanta at the end of 2011 and quickly became enamored with the city's music scene. Trap reminded him of the punk he loved years earlier as a teen in North Carolina - both genres were adamant about "not playing by the rules, being loud, trying to raise a little hell all the time. A few years later, Jones started documenting the scene through the photos in this essay. "There's a huge machine churning out hits the producers, the guys in the studio all the time, the strip clubs," he says. "Where did that come from? My goal wasn't just to go to shows and photograph performances - it's more [to explore] the culture that has developed around the music. I want to tell the story of trap music as this thriving organism. How often does a new subgenre erupt like this?" PHOTOGRAPHS BY RAYMOND MCCREA JONES 68 ► Rolling Stone ► February 2020



ATLANTA

▼ SAVAGE MODE

After several popular mixtapes full of laconic couplets, 21 Savage broke out in 2017 with his quadrupleplatinum single "Bank Account." "He's another of the heroes of Atlanta," says Jones, who photographed him that year. The photo captures him "in a very quiet, raw moment."

▶ UP IN SMOKE

The rapper Skooly, who's collaborated several times with Atlanta veteran 2 Chainz, is almost hidden in the haze at a release party for his single "Lil Boy Shit." "He's been around in Atlanta making music for a long time," Jones says. "He hasn't blown up like 21, but he's well-respected."





"Trap music has become a phenomenon. Everybody knows 21 Savage and Migos."



ARMS RACE

A room at an immersive listening experience for 21 Savage's 2018 album I Am > I Was. The rapper's team found an unused motel in Atlanta and filled it with scenes based on his songs. "In this one," says Jones, "there's an actor with all these weapons, reloading, cleaning, and fucking with people who came in."



▲ MONEY MOVES

A stripper picks up money on the stage of Magic City, a strip club that has been around since the Eighties. "There are many strip clubs in Atlanta, and several are proving grounds for new music," Jones says. "Magic City is the most famous."

◀ IN FLIGHT

Strippers do an intricate high-flying routine at Magic City, where DJs often test unreleased music. "The response from the audience and the dancers can really launch a song," Jones explains. "It's just one step, but if it doesn't fly in the strip clubs, it's probably not gonna fly on the radio, either."





****■GODFATHER

Young Thug at the release show for Lil Keed, whom he helped mentor before signing the rapper to his label, YSL Records. "Thug is like a god here in Atlanta," Jones says. "Having him on your side is a big deal."

▲ LIGHT OF DAY

The exterior of Magic City. "This is a place that's very sensitive to photography, so it took me a long time to get into," Jones says. "There's a whole book to be written just about the history of Magic City."





DOLLARS TALK

An employee at another club flashes cash. "This is not a strip club," Jones notes. "The women who work here are wearing clothes, just not a lot."

V SUPER FREAK

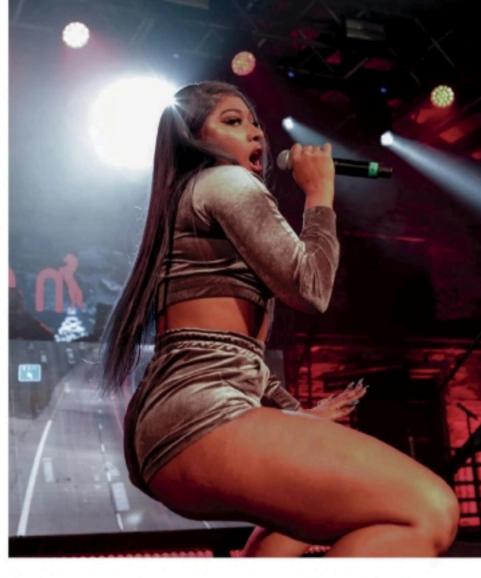
The Houston rapper Megan Thee Stallion performs her breakout hit "Big Ole Freak" at a ROLLING STONE Super Bowl party in Atlanta last year.

◀ FACE TIME

Rising rapper Yung
Mal checks his phone
on a quiet day in
East Atlanta. After
releasing Blessed Lil
Bastards, a 2017 mixtape with Lil Quill, the
rapper signed a deal
with Gucci Mane, one
of trap's originators.
His necklace pays
tribute to Mane's
label, 1017 Records.

THINK PINK

A room at the Trap
Music Museum,
which T.I. started last
year as a pop-up to
acknowledge how
important trap was
to Atlanta's culture.
It's since remained
open, attracting
around 6,000 visitors
every weekend. This
room is a tribute
to 2 Chainz.





AMERICA'S SECRET PHOTOGRAPHS BY GEORGE ETHEREDGE

Oil-and-gas wells produce nearly a trillion gallons of toxic waste a year. An investigation shows how it could be making workers sick and contaminating communities across America



IN 2014, A MUSCULAR, MIDDLE-AGED OHIO MAN NAMED PETER TOOK A JOB TRUCKING WASTE FOR THE OIL-AND-GAS INDUSTRY.

The hours were long - he was out the door by 3 a.m. every morning and not home until well after dark - but the steady \$16-an-hour pay was appealing, says Peter, who asked to use a pseudonym. "This is a poverty area," he says of his home in the state's rural southeast corner. "Throw a little money at us and by God we'll jump and take it."

In a squat rig fitted with a 5,000-gallon tank, Peter crisscrosses the expanse of farms and woods near the Ohio/West Virginia/Pennsylvania border, the heart of a region that produces close to one-third of America's natural gas. He hauls a salty substance called "brine," a naturally occurring waste product that gushes out of America's oil-and-gas wells to the tune of nearly 1 trillion gallons a year, enough to flood Manhattan, almost shin-high, every single day. At most wells, far more brine is produced than oil or gas, as much as 10 times more. It collects in tanks, and like an oil-andgas garbage man, Peter picks it up and hauls it off to treatment plants or injection wells, where it's disposed of by being shot back into the earth.

One day in 2017, Peter pulled up to an injection well in Cambridge, Ohio. A worker walked around his truck with a hand-held radiation detector, he says, and told him he was carrying one of the "hottest loads" he'd ever seen. It was the first time Peter had heard any mention of the brine being radioactive.

The Earth's crust is in fact peppered with radioactive elements that concentrate deep underground in oil-and-gas-bearing layers. This radioactivity is often pulled to the surface when oil and gas is extracted carried largely in the brine.

In the popular imagination, radioactivity conjures images of nuclear meltdowns, but radiation is emitted from many common natural substances, usually presenting a fairly minor risk. Many industry representatives like to say the radioactivity in brine is so insignificant as to be on par with what would be found in a banana or a granite countertop, so when Peter demanded his supervisor tell him what he was being exposed to, his concerns were brushed off; the liquid in his truck was no more radioactive than "any room of your home," he was told. But Peter wasn't so sure.

Reporter JUSTIN NOBEL is writing a book about oiland-gas radioactivity for Simon & Schuster. This story was supported by the journalism nonprofit Economic Hardship Reporting Project.

"A lot of guys are coming up with cancer, or sores and skin lesions that take months to heal," he says. Peter experiences regular headaches and nausea, numbness in his fingertips and face, and "joint pain like fire."

He says he wasn't given any safety instructions on radioactivity, and while he is required to wear steeltoe boots, safety glasses, a hard hat, and clothes with a flash-resistant coating, he isn't required to wear a respirator or a dosimeter to measure his radioactivity exposure – and the rest of the uniform hardly offers protection from brine. "It's all over your hands, and inside your boots, and on the cuticles of your toes, and any cuts you have - you're soaked," he says.

So Peter started quietly taking samples of the brine he hauled, filling up old antifreeze containers or soda bottles. Eventually, he packed a shed in his backyard with more than 40 samples. He worried about further contamination but says, for him, "the damage

is already done." He wanted answers. "I cover my ass," he says. "Ten or 15 years down the road, if I get sick, I want to be able to prove this."

Through a grassroots network of Ohio activists, Peter was able to transfer 11 samples of brine to the Center for Environmental Research and Education at Duquesne University, which had them tested in a lab at the University of Pittsburgh. The results were striking.

Radium, typically the most abundant radionuclide in brine, is often measured in picocuries per liter of substance and is so dangerous it's subject to tight restrictions even at hazardous-waste sites. The most common isotopes are radium-226 and radium-228, and the

Nuclear Regulatory Commission requires industrial discharges to remain below 60 for each. Four of Peter's samples registered combined radium levels above 3,500, and one was more than 8,500.

"It's ridiculous that these drivers are not being told what's in their trucks," says John Stolz, Duquesne's environmental-center director. "And this stuff is on

every corner - it is in neighborhoods. Truckers don't know they're being exposed to radioactive waste, nor are they being provided with protective clothing.

"Breathing in this stuff and ingesting it are the worst types of exposure," Stolz continues. "You are irradiating your tissues from the inside out." The radioactive particles fired off by radium can be blocked by the skin, but radium readily attaches to dust, making it easy to accidentally inhale or ingest. Once inside the body, its insidious effects accumulate with each exposure. It is known as a "bone seeker" because it can be incorporated into the skeleton and cause bone cancers called sarcomas. It also decays into a series of other radioactive elements, called "daughters." The first one for radium-226 is radon, a radioactive gas and the second-leading cause of lung cancer in the U.S. Radon has also been linked to chronic lymphocytic leukemia. "Every exposure results in an increased risk," says Ian Fairlie, a British radiation biologist. "Think of it like these guys have been given negative lottery tickets, and somewhere down the line their number will come up and they will die."

Peter's samples are just a drop in the bucket. Oil fields across the country – from the Bakken in North Dakota to the Permian in Texas - have been found to produce brine that is highly radioactive. "All oil-field workers," says Fairlie, "are radiation workers." But they don't necessarily know it.

Tanks, filters, pumps, pipes, hoses, and trucks that brine touches can all become contaminated, with the radium building up into hardened "scale," concentrating to as high as 400,000 picocuries per gram. With fracking – which involves sending pressurized fluid deep underground to break up layers of shale - there is dirt and shattered rock, called drill cuttings, that can also be radioactive. But brine can be radioactive whether it comes from a fracked or conventional well; the levels vary depending on the geological formation, not drilling method. Colorado and Wyoming seem to have lower radioactive signatures, while the Marcellus shale, underlying

> Ohio, Pennsylvania, West Virginia, and New York, has tested the highest. Radium in its brine can average around 9,300 picocuries per liter, but has been recorded as high as 28,500. "If I had a beaker of that on my desk and accidentally dropped it on the floor, they would shut the place down," says Yuri Gorby, a microbiologist who spent 15 years studying radioactivity with the Department of Energy. "And if I dumped it down the sink, I could go to jail."

> The advent of the fracking boom in the early 2000s expanded the danger, saddling the industry with an even larger tidal wave of waste to dispose of, and creating new exposure risks as drilling moved into people's backyards. "In the old days, wells weren't re-

ally close to population centers. Now, there is no separation," says City University of New York public-health expert Elizabeth Geltman. In the eastern U.S. "we are seeing astronomically more wells going up," she says, "and we can drill closer to populations because regulations allow it." As of 2016, fracking accounted for more than two-thirds of all new U.S.





wells, according to the Energy Information Administration. There are about 1 million active oil-andgas wells, across 33 states, with some of the biggest growth happening in the most radioactive formation the Marcellus. And some regulations have only gotten weaker. "Legislators have laid out a careful set of exemptions that allow this industry to exist," says Teresa Mills of the Buckeye Environmental Network, an Ohio community-organizing group. "There is no protection for citizens at all – nothing."

In an investigation involving hundreds of interviews with scientists, environmentalists, regulators, and workers, ROLLING STONE found a sweeping arc of contamination - oil-and-gas waste spilled, spread, and dumped across America, posing understudied risks to the environment, the public, and especially the industry's own employees. There is little public awareness of this enormous waste stream, the disposal of which could present dangers at every step - from being transported along America's highways in unmarked trucks; handled by workers who are often misinformed and underprotected; leaked into waterways; and stored in dumps that are not equipped to contain the toxicity. Brine has even been used in commercial products sold at hardware stores and is spread on local roads as a de-icer.

"Essentially what you are doing is taking an underground radioactive reservoir and bringing it to the surface where it can interact with people and the environment," says Marco Kaltofen, a nuclear-foren-

IN PLAIN SIGHT Brine storage tanks at an injection well near Belpre, Ohio. The state is home to 225 injection wells. Felicia Mettler, a resident of Torch, Ohio, started a volunteer group that monitors brine trucks. One injection well sees more than 100 trucks a day, she says.

sics scientist at Worcester Polytechnic Institute. "Us bringing this stuff to the surface is like letting out the devil," says Fairlie. "It is just madness."

The extent of any health impacts are unknown, mostly because there hasn't been enough testing. Many doctors just aren't aware of the risks. For a time, in Pennsylvania, doctors were even banned from discussing some toxic fracking exposures with patients - the controversial "medical gag rule" was struck down by the state's Supreme Court in 2016. Also, cancer from radiation often emerges years after exposure, making it hard to pinpoint a cause. "It's very difficult," says Geltman, "to say the exposure is from the oil industry and not other things You smoke too much, drink too much' – and the oil-and-gas industry is a master of saying, 'You did this to yourself."

But a set of recent legal cases argues a direct connection to occupational exposure can be made. Expert testimony in lawsuits by dozens of Louisiana oiland-gas industry workers going back decades and settled in 2016 show that pipe cleaners, welders, roughnecks, roustabouts, derrickmen, and truck drivers hauling dirty pipes and sludge all were exposed to radioactivity without their knowledge and suffered a litany of lethal cancers. An analysis program developed by the Centers for Disease Control and Prevention determined with up to 99 percent certainty that the cancers came from exposure to radioactivity on the job, including inhaling dust and radioactivity accumulated on the workplace floor, known as "groundshine." Their own clothes, and even licking their lips or eating lunch, added exposure. Marvin Resnikoff, a nuclear physicist and radioactive-waste specialist who served as an expert witness, says that in every case the workers won or the industry settled. "I can tell you this industry has tremendous resources and hired the best people they could, and they were not successful," he says. "Once you have the information, it is indisputable."

ADIOACTIVITY WAS FIRST discovered in crude oil, from a well in Ontario, as early as 1904, and radioactivity in brine was reported as early as the 1930s. By the 1960s, U.S. government geologists had found uranium in oil-bearing layers in Michigan, Tennessee, Oklahoma, and Texas. In the early 1970s, Exxon learned radioactivity was building up in pumps and compressors at most of its gas plants. "Almost all materials of interest and use to the petroleum industry contain measurable quantities of radionuclides," states a never-publicly released 1982 report by the American Petroleum Institute, the industry's principal trade group, passed to ROLLING STONE by a former state regulator.

ROLLING STONE discovered a handful of other industry reports and articles that raised concerns about liability for workers' health. A 1950 document from Shell Oil warned of a potential connection between radioactive substances and cancer of the "bone and bone marrow." In a 1991 paper, scientists with Chevron said, "Issues such as risk to workers or the general public... must be addressed."

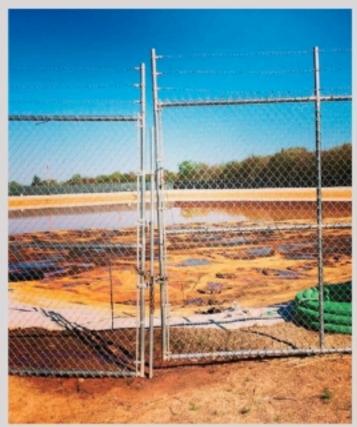
"They've known about this since the development of the gamma-ray log back in the 1930s," says Stuart Smith, referencing a method of measuring gamma radiation. A New Orleans-based lawyer, Smith has But the radioactivity in oil-and-gas waste receives little federal oversight. "They swept this up and forgot about it on the federal side," says Smith, the attorney. When asked about rules guarding oil-and-gas workers from contamination, the Department of Labor's Occupational Safety and Health Administration pointed to a set of sparse letters and guidance documents, some more than 30 years old. OSHA conducted "measurements of external radiation doses to workers in the oil-and-gas industry," a representative says. "The agency's experience is that radiation doses" are "well below the dose limits" that would require the agency's regulation.

"The Nuclear Regulatory Commission does not have statutory authority to regulate naturally octent, and easy for the industry to avoid. Of 21 significant oil-and-gas-producing states, only five have provisions addressing workers, and just three include protections for the public, according to research by Geltman, the public-health expert. Much of the legislation that does exist seems hardly sufficient. For example, in Texas, the nation's largest oil-andgas producer, Department of State Health Services spokeswoman Lara Anton says the agency "does not monitor oil-field workers for radiation doses," nor are workers, including brine haulers, required to wear protective equipment like Tyvek suits or respirators.

The first state to enact any protections at all was Louisiana, in the late 1980s. "It was the only environmental issue in Louisiana anyone ever sprang on me I

DISPOSAL PROBLEMS

From left: Oil-and-gas waste pits like this one in Lycoming County, Pennsylvania, vent radioactive radon gas, the second-leading cause of lung cancer in the U.S. - two recent studies show elevated levels of radon in homes near fracking operations; brine-spreading is used to suppress dust on dirt roads, but "there appears to be a complete lack of data indicating the practice is effective," a 2018 study found; a brine-truck crash near Carrollton, Ohio.







been trying cases pertaining to oil-and-gas radioactivity for 30 years and is the author of the 2015 book *Crude Justice*. In Smith's first case, in 1986, a six-month-pregnant Mississippi woman was sitting on the edge of her bathtub and her hip cracked in half. Tests showed the soil in her vegetable garden had become contaminated with radium from oil-field pipes her husband had cleaned in their yard. "They know," Smith says. "All of the big majors have done tests to determine exactly what risks workers are exposed to."

"Protecting workers, individuals, and the community who are near oil and natural-gas operations is of paramount importance to the industry," says Cornelia Horner, a spokeswoman with the American Petroleum Institute. But the organization did not reply to specific questions about workers' exposure to radioactivity. ExxonMobil and Chevron recommended ROLLING STONE direct its questions to the American Petroleum Institute.

Curtis Smith, a spokesman with Shell, says, "This subject is the focus of litigation that at least one Shell expert recently testified to as part of a formal deposition.... Our top priorities remain the safety of our employees and the environment. While the risk of exposure to radioactive elements in some phases of our operations is low, Shell has strict, well-developed safety procedures in place to monitor for radioactivity as well as a comprehensive list of safety protocols should radioactivity be detected."

curring radioactive material," says NRC spokesman David McIntyre. The agency has authority over "materials stemming from the nuclear fuel cycle," he says, adding, "My understanding is that the Environmental Protection Agency is the federal regulator for...oil-and-gas wastes."

"There is no one federal agency that specifically regulates the radioactivity brought to the surface by oil-and-gas development," an EPA representative says. In fact, thanks to a single exemption the industry received from the EPA in 1980, the streams of waste generated at oil-and-gas wells – all of which could be radioactive and hazardous to humans – are not required to be handled as hazardous waste.

In 1988, the EPA assessed the exemption — called the Bentsen and Bevill amendments, part of the Resource Conservation and Recovery Act — and claimed that "potential risk to human health and the environment were small," even though the agency found concerning levels of lead, arsenic, barium, and uranium, and admitted that it did not assess many of the major potential risks. Instead, the report focused on the financial and regulatory burdens, determining that formally labeling the "billions of barrels of waste" as hazardous would "cause a severe economic impact on the industry." Effectively, the EPA determined that in order for oil-and-gas to flourish, its hazardous waste should not be defined as hazardous.

So responsibility has been largely left to the states

– a patchwork of laws that are outdated, inconsis-

didn't know anything about," says chemical physicist Paul Templet, who as the state's lead environmental regulator at the time ordered a study on oil-and-gas radioactivity. The results horrified him.

The levels of radium in Louisiana oil pipes had registered as much as 20,000 times the limits set by the EPA for topsoil at uranium-mill waste sites. Templet found that workers who were cleaning oil-field piping were being coated in radioactive dust and breathing it in. One man they tested had radioactivity all over his clothes, his car, his front steps, and even on his newborn baby. The industry was also spewing waste into coastal waterways, and radioactivity was shown to accumulate in oysters. Pipes still laden with radioactivity were donated by the industry and reused to build community playgrounds. Templet sent inspectors with Geiger counters across southern Louisiana. One witnessed a kid sitting on a fence made from piping so radioactive they were set to receive a full year's radiation dose in an hour. "People thought getting these pipes for free from the oil industry was such a great deal," says Templet, "but essentially the oil companies were just getting rid of their waste."

Templet introduced regulations protecting waterways and setting stricter standards for worker safety. The news reverberated across the industry, and The New York Times ran a front-page story in 1990 headlined RADIATION DANGER FOUND IN OIL FIELDS ACROSS THE NATION. Another Times story that year reported that the radiation measured in oil-and-gas

equipment "exposes people to levels that are equal to and at times greater than workers receive in nuclear power plants," and that pending lawsuits "may ultimately decide whether oil companies can be held responsible for billions of dollars in expenses associated with cleaning up and disposing radioactive wastes at thousands of oil-and-gas sites around the nation."

But the issue soon faded from the news. Discussion around it has remained mostly in the confines of arcane reports by regulators. Even in academia, it is an obscure topic. "There's no course that teaches this," says Julie Weatherington-Rice, an Ohio scientist with the environmental-consulting firm Bennett & Williams who has tracked oil-and-gas waste for 40 years. "You literally have to apprentice yourself to the people who do the work." The lack of research and specialization has made it hard to reach a consensus on the risks and has facilitated the spread of misinformation. There is a perception that because the radioactivity is naturally occurring it's less harmful (the industry and regulators almost exclusively call oil-and-gas waste NORM - naturally occurring radioactive material, or TENORM for the "technologically enhanced" concentrations of radioactivity that accumulate in equipment like pipes and trucks). But the radioactivity experts ROLLING STONE spoke to dismiss the "naturally occurring" excuse. "It makes no sense," says Kaltofen, the nuclear-forensics scientist. "Arsenic is completely natural, but you probably wouldn't let me put arsenic in your school lunch."

As for the "banana red herring," as Kaltofen calls it - the idea that there's no more radioactivity in oiland-gas waste than in a banana - "I call bullshit," he says. They emit two different types of radiation. The potassium-40 in bananas predominantly emits beta particles that barely interact with your body; radium emits alpha particles, which are thousands of times more impactful and can swiftly mutate cells. He compares them this way: "If I pick up a .45-caliber bullet and throw it at you, or if I put the same bullet in a .45-caliber pistol and fire it at you, only one of these things will cause you serious harm."

An oft-cited 2015 study by Pennsylvania's Department of Environmental Protection determined there are "potential radiological environmental impacts," but concluded there was "limited potential for radiation exposure to workers and the public." But Resnikoff, the nuclear physicist, wrote a scathing critique of the report, saying it downplayed the radioactive gas radon, misinterpreted information on radium, and ignored the well-documented risks posed by the inhalation or ingestion of radioactive dust.

And this past summer, Bemnet Alemayehu, a radiation health physicist with the Natural Resources Defense Council, toured oil fields in Ohio, West Virginia, and Pennsylvania with ROLLING STONE, taking samples, including some of Peter's brine. Alemayehu's report is due out later this year, but he says, "The data I am seeing is that some oil-and-gas workers" - including maintenance workers and haulers like Peter "should be treated as radiation workers."

RINE HAULERS ARE a ghost fleet. No federal or state agency appears to know how many drivers like Peter are out there, how long they've been working, how much radioactivity their bodies have accumulated, or where this itinerant workforce might be living. But the Department of Transportation does have jurisdiction over the roads, and there are rules on

THE INDUSTRY'S **WASTE PROBLEM**

Oil-and-gas production generates an enormous stream of waste, much of it radioactive, but its disposal gets little federal oversight

Approximate gallons of liquid waste, or "brine," produced by the oil-and-gas industry each year

Estimated number of brine trucks on the road in Ohio, Pennsylvania, and West Virginia, according to FracTracker Alliance

Year the Environmental Protection Agency gave the industry an exemption, effectively determining that its hazardous waste was not hazardous.

Approximate number of active oil-andgas wells in the U.S., across 33 states

Tons of scale produced by a single well annually. Scale is a hardened mineral deposit that forms inside oil-andgas equipment, and is often highly radioactive.

How many times higher the radioactivity in scale has measured than the EPA's limit for topsoil at Superfund sites

11 MILLION

Gallons of brine that were spread on Pennsylvania's roads in 2016 alone, used as a de-icer and dust suppressant



Number of states where spreading brine on roads is legal

How many times more expensive it is for the industry to dump its solid waste at a low-level nuclear-waste facility, as opposed to a municipal dump, according to a 2013 report by a nuclear-waste specialist

hazardous materials. Any truck with a load that contains more than 270,000 total picocuries of radium-226 must be placarded with a radioactivity symbol, meet strict requirements for the container carrying the radioactive substance, uphold hazmat-training requirements for drivers, and travel only on approved routes. "That would generally mean not driving near a waterway or source of drinking water, or on routes through areas that may be more populated, or a school," says a DOT spokesman. Resnikoff, who assessed the DOT rule in 2015, said the standard brine truck in Pennsylvania would be "1,000 times above DOT limits." Which would mean they're breaking the law. "There isn't anything specifically preventing them from doing that," says the DOT spokesman. Testing, he said, is the responsibility of the operator at the wellhead who dispatches the brine to the hauler, and so the system mostly relies on self-reporting.

Ted Auch, an analyst with the watchdog group FracTracker Alliance, estimates there are at least 12,000 brine trucks operating in Ohio, Pennsylvania, and West Virginia. He says he has never seen one with a radioactivity placard. "There are all sorts of examples for how often these things crash," says Auch. In 2016, a brine truck overturned on a bad curve in Barnesville, Ohio, dumping 5,000 gallons of waste. The brine water flowed across a livestock field, entering a stream and then a city reservoir, forcing the town to temporarily shut it down. In a 2014 crash in Lawrence Township, Ohio, a brine truck traveling south on Bear Run Road flipped over a guardrail and rolled down a steep bank, striking a home.

In the tiny town of Torch, Ohio, elementary school archery instructor Felicia Mettler founded Torch CAN DO, a volunteer group that monitors for spills and crashes of brine trucks. One injection well they track in the area sees more than 100 brine trucks a day, about one every 14 minutes. "This is why it's so important we document everything," she says. "I don't think we're gonna stop it today, I don't think we're gonna stop it five years from now, but someday it's gonna help."

Even without crashing, the trucks are a potential hazard. Haulers often congregate at local restaurants and truck stops where half a dozen or more brine trucks may be lined up in the parking lot, says Randy Moyer, a former brine hauler in Pennsylvania who says he quit the job when burning rashes and odd swelling broke out across his body after only four months. "I warn waitresses who serve guys getting out of these waste trucks," says Gorby, the former DOE engineer - a driver sloshed with brine could be shedding dust particles with radium. "The consensus of the international scientific community is that there is no safe threshold for radiation," says Resnikoff. "Each additional exposure, no matter how small, increases a person's risk of cancer."

In Pennsylvania, regulators revealed in 2012 that for at least six years one hauling company had been dumping brine into abandoned mine shafts. In 2014, Benedict Lupo, owner of a Youngstown, Ohio, company that hauled fracking waste, was sentenced to 28 months in prison for directing his employees to dump tens of thousands of gallons of brine into a storm drain that emptied into a creek that feeds into the Mahoning River. While large bodies of water like lakes and rivers can dilute radium, Penn State researchers have shown that in streams and creeks, radium can build up in sediment to levels that are hun-

dreds of times more radioactive than the limit for topsoil at Superfund sites. Texas-based researcher Zac Hildenbrand has shown that brine also contains volatile organics such as the carcinogen benzene, heavy metals, and toxic levels of salt, while fracked brine contains a host of additional hazardous chemicals. "It is one of the most complex mixtures on the planet," he says.

Officials found the creek in the Lupo incident to be "void of life" after the contamination, prosecutors said. But downstream, no one notified water authorities or tested water supplies for possible radioactivity, says Silverio Caggiano, a near 40-year veteran of the Youngstown fire department and a hazardous-materials specialist with the Ohio Hazmat Weapons of Mass Destruction Advisory Committee. "If we caught some ISIS terrorist cells dumping this into our waterways, they would be tried for terrorism and the use of a WMD on U.S. citizens," says Caggiano. "However, the frac industry is given a pass on all of this."

In Ohio, laws that enabled local communities to enforce zoning of oil-and-gas activities were systematically stripped during the 2000s and 2010s. Language snuck into one 2001 Ohio budget bill exempted the oil-and-gas industry from having to disclose safety information to fire departments and first responders. "A truck carrying brine for injection is the worst of the worst," says Caggiano. "And it is going through your freeways, through your neighborhoods, through your streets, past your homes, past your schools, and the drivers are not trained in how to handle hazardous waste and don't have to have a single piece of paper telling a fire chief like me what the hell they are carrying - it scares the fuck out of me."

N THE SUMMER of 2017, Siri Lawson noticed a group of Amish girls walking down the side of a dirt road near the horse farm where she lives with her husband in Farmington Township, Pennsylvania. The girls, dressed in aprons and blue bonnets, had taken off their shoes and were walking barefoot. Lawson was horrified. She knew the road had been freshly laced with brine.

Radioactive oil-and-gas waste is purposely spread on roadways around the country. The industry pawns off brine - offering it for free - on rural townships that use the salty solution as a winter de-icer and, in the summertime, as a dust tamper on unpaved roads.

Brine-spreading is legal in 13 states, including the Dakotas, Colorado, much of the Upper Midwest, northern Appalachia, and New York. In 2016 alone, 11 million gallons of oil-field brine were spread on roads in Pennsylvania, and 96 percent was spread in townships in the state's remote northwestern corner, where Lawson lives. Much of the brine is spread for dust control in summer, when contractors pick up the waste directly at the wellhead, says Lawson, then head to Farmington to douse roads. On a single day in August 2017, 15,300 gallons of brine were reportedly spread.

"After Lindell Road got brined, I had a violent response," reads Lawson's comments in a 2017 lawsuit she brought against the state. "For nearly 10 days, especially when I got near the road, I reacted with excruciating eye, nose, and lung burning. My tongue swelled to the point my teeth left indentations. My sinus reacted with a profound overgrowth of polyps, actually preventing nose breathing."

The oil-and-gas industry has "found a legal way to dispose of waste," says Lawson, 65, who worked as a horse trainer but is no longer able to ride professionally because of her illnesses. Sitting in her dining room, surrounded by pictures she has taken to document the contamination - brine running down the side of a road, an Amish woman lifting her dress to avoid being sprayed - she tells me the brine is spread regularly on roads that abut cornfields, cow pastures, and trees tapped for maple syrup sold at a local farmer's market.

"There is nothing to remediate it with," says Avner Vengosh, a Duke University geochemist. "The high radioactivity in the soil at some of these sites will stay forever." Radium-226 has a half-life of 1,600 years. The level of uptake into agricultural crops grown in contaminated soil is unknown because it hasn't been adequately studied.

"Not much research has been done on this," says Bill Burgos, an environmental engineer at Penn State who co-authored a bombshell 2018 paper in Environmental Science & Technology that examined the health effects of applying oil-field brine to roads. Regulators defend the practice by pointing out that only brine from conventional wells is spread on roads, as opposed to fracked wells. But conventional-well brine can be every bit as radioactive, and Burgos' paper found it contained not just radium, but cadmium, benzene, and arsenic, all known human carcinogens, along with lead, which can cause kidney and brain damage.

And because it attaches to dust, the radium "can be resuspended by car movement and be inhaled by the public," Resnikoff wrote in a 2015 report. Research also shows that using brine to suppress dust is not only dangerous but pointless. "There appears to be a complete lack of data indicating the practice is effective," reads a 2018 paper published in the European Scientific Journal. In fact, it notes, the practice is "likely counterproductive for dust control." As Lawson puts it, "It is a complete fucking myth that this works. After brine, the roads

are dustier." But the new buzzword in the oil-and-gas industry is "beneficial use" - transforming oil-and-gas waste into commercial products, like pool salts and home de-icers. In June 2017, an official with the Ohio Department of Natural Resources entered a Lowe's Home Center in Akron and purchased a turquoise jug of a liquid de-icer called AquaSalina, which is made with brine from conventional wells. Used for home patios, sidewalks, and driveways - SAFE FOR ENVIRONMENT & PETS, the label touts - AquaSalina was found by a state lab to contain radium at levels as high as 2,491 picocuries per liter. Stolz, the Duquesne scientist, also had the product test-

ed and found radium levels registered about 1,140 picocuries per liter.

"AquaSalina is 400-million-year-old ancient seawater from the Silurian Age" that "contains a perfect natural balance of chlorides uniquely suited for snow and ice management," Dave Mansbery, owner of Duck Creek Energy, the Ohio-based company that produces AquaSalina, tells ROLLING STONE. "We recycle and repurpose this natural water to a higher purpose." He told regional news station WKRC that he soaked his sore feet in AquaSalina.

Mansbery said that he tested for heavy metals and saw "no red flags." Asked if he tested for radioactive elements, he stated, "We test as required by the state law and regulatory agencies."

"Every time you put this solution onto your front steps you are basically causing a small radioactive spill," says Vengosh, the geochemist, who has examined AquaSalina. "If you use it in the same place again and again, eventually you will have a buildup of radioactivity in the sediment and soil and create an ecological dead zone." But Ohio's Department of Health concluded AquaSalina poses a "negligible radiological health and safety risk."

"Reading their study shows it's about equal to eating a banana a week," says Mansbery. "Sorry, Aqua-Salina does not fit the narrative sought by many haters of the oil-and-gas industry."

CPI Road Solutions, an Indianapolis-based snowand ice-management company, sells hundreds of thousands of gallons of AquaSalina each winter to the Pennsylvania Turnpike Commission and Ohio Department of Transportation, says Jay Wallerstein, a company VP. Supporters tout that the product has been approved by Pacific Northwest Snowfighters, the nation's most-respected organization for evaluating de-icing products. But Snowfighters official Jay Wells says, "PNS has not tested AquaSalina for radioactive elements" and that "radium-226 is not a standard test for de-icing products."

Meanwhile, Ohio is pushing forward with legislation to protect the practice of brine-spreading. State Senate Bill 165 would slash environmental safeguards and make it easier for products like AquaSalina to be developed. In Pennsylvania, Lawson's case had led the state's DEP to acknowledge brine-spreading violated environmental laws, and the practice was halted last year. But Pennsylvania House Bill

> 1635 and Senate Bill 790 would greenlight brine-spreading again, and even restrict the DEP's ability to test products. In October, the state Senate passed the bill without any debate.

> ON A SUNNY day in September 2018, I meet with Kerri Bond and her sister, Jodi, at an injection well next to a shopping plaza in Guernsey County, Ohio. As people dine on fast food and shop for the latest iPhone, trucks unload brine into giant tanks where it will wait to be shot back into the earth. The sisters, both nurses, had grown up wandering the region's woods and creeks. "We thought it was Shangri-la," says Kerri. In 2012, a leasing company held a meeting at a church in town, she recalls.

"They told everyone they were going to be millionaires. People were high-fiving." Residents signed documents enabling the Denver-based energy company Antero Resources to begin fracking on their land. As with many people who live near fracking operations, which involve storing and mixing toxic chemicals plus a torrent of carcinogenic emissions when drilling begins, Kerri and Jodi quickly started to notice problems.

Animals on Kerri's farm dropped dead - two cats, six chickens, and a rooster. A sheep birthed babies with the heads fused together. Trees were dying. One evening Kerri was watching a show about Chernobyl's radioactive forests, and she felt like she recognized Ohio. She bought a hand-held radiation detector on Amazon and recorded radiation three to seven times the normal level for southeastern Ohio in her backyard, she says. In 2016, an Ohio Department of Health official visited and said not to worry as long as people weren't exposed to these levels on a regular basis, she recalls. "Hey, dude," Bond told him, "we are living here."

In 2014, at a now-defunct Ohio company operating under Chief's Order, EnviroClean Services, inspectors discovered a staff clueless of basic radiation safety, operating without protective gear, with no records or documentation for the waste they were receiving, and no instrument to measure it except a pocket Geiger counter that appeared to have never been used. One entry on the form documenting the inspection asks for an "Evaluation of individuals' understanding of radiation safety procedures." The inspector noted: "Unable to evaluate - no radiation safety procedures being used."

Last April, I met with an oil-and-gas waste-treatment-plant operator at a restaurant beside a dusty truck stop in the panhandle of West Virginia. Cody

contaminating their family as well. This is how this stuff works."

I ask Salisbury if he and the workers have to wear radiation protective gear, and he shakes his head: "There's not enough radioactivity in it - I ain't never seen anyone wearing a respirator." When asked if he is concerned about radon, he says he has never heard anything about it. "There's more radioactivity coming off a cigarette, a banana, a granite countertop," he says.

Even at facilities touted to be the best of the best, there still could be risks. Peter, the Ohio brine hauler, tells me about the Clearwater plant in West Virginia, a \$300 million fracking-waste treatment facility completed in 2018 and run by a partnership between An-

EXPOSURE PATH

From left: Siri Lawson became ill after brine was spread on the road near her home in rural Pennsylvania; "A truck carrying brine for injection is the worst," says Ohio fire chief Silverio Caggiano. "Drivers don't have to have a single piece of paper telling me what they are carrying. It scares the f- out of me"; Pennsylvania resident Jack Kruell kept a Geiger counter on his spice rack to monitor the radioactivity from a dump near his home outside Pittsburgh.







Ohio, because of its geology, favorable regulations, and nearness to drilling hot spots in the Marcellus, has become a preferred location for injection wells. Pennsylvania has about a dozen wells; West Virginia has just over 50. Ohio has 225. About 95 percent of brine was disposed of through injection as of 2014. Government scientists have increasingly linked the practice to earthquakes, and the public has become more and more suspicious of the sites. Still, the relentless waste stream means new permits are issued all the time, and the industry is also hauling brine to treatment plants that attempt to remove the toxic and radioactive elements so the liquid can be used to frack new wells.

In Ohio, no public meetings precede the construction of these treatment facilities, many locals remain unaware they exist, and the Ohio Department of Health does not regularly monitor them. They are under the exclusive oversight of the Ohio Department of Natural Resources.

To store radioactive waste, or recycle, treat, process, or dispose of brine and drill cuttings, companies simply submit an application that is reviewed by the chief of the ODNR. They're called "Chief's Order" facilities, and Ohio has authorized 46 of them. Companies have to submit a radiation protection plan as part of the application, and ODNR spokesman Steve Irwin says all facilities are inspected regularly. But worker protections and knowledge of the risks still seem to be lacking.

Salisbury left Las Vegas as a teenager and bartended his way across the country before ending up in the Texas oil fields, he says, chowing down barbecue wings as we talk in a quiet corner booth, his phone buzzing repeatedly. "It comes as a sludge, a nasty mess, and we separate the solids, the oil, and the water," says Salisbury, not divulging other treatment details but alluding to a secret sauce. He is upgrading a waste plant and has helped build two others in Ohio. The opening of one, just a few hundred feet from a nursing home, was attended by Ohio Sen. Rob Portman, who applauded the "regulatory relief" that made it possible.

Salisbury and all of the workers at his plants wear dosimeter badges, which measure external radiation exposure, and they've always registered low numbers, he says. Most oil-and-gas waste facilities in Ohio issue dosimeters to their workers, says an ODNR representative, and they haven't observed anyone that's exceeded the annual occupational-exposure limit. But dosimeters, says Kaltofen, the nuclear-forensics scientist, don't register alpha particles - the type of radiation emitted by radium - and aren't able to track what a person may have inhaled or ingested. So they aren't providing insight into the key exposures these workers are likely incurring.

"These guys are so proud of their jobs," says Weatherington-Rice, the Ohio-based scientist, "and they're working with this stuff and they go home and they've got this on their clothes - they can end up

tero and the French water- and waste-management company Veolia. Kevin Ellis, an Antero vice president, described the facility as the "best project like this in the world. Bar none. Period."

The plant was abruptly "idled" in September after less than two years of operation because of a steep drop in gas prices. One day last year, before it closed, Peter and I drove out toward the hulking facility. As we approached, I saw thick plumes of whitish-gray steam rising out of a series of cooling towers. An engineering report the plant filed with the state showed emissions from treatment tanks were being vented to the atmosphere, after first being routed to a thermal oxidizer, a piece of equipment that can destroy hazardous pollutants - but not radon, says Resnikoff.

Neither Veolia nor Antero replied to questions on whether they were testing the steam for radioactivity. When asked if the agency was monitoring for such things, West Virginia Department of Environmental Protection official Casey Korbini said, "The WVDEP permits are in accordance with federal and state air-quality statutes, and radionuclides are not a regulated pollutant under these statutes." He added, "This does not mean that radionuclides are prohibited; they are simply not regulated."

"SON OF A BITCH, he's loaded," says Jack Kruell on a rainy evening this past spring. Kruell, a 59-year-old contractor, is watching a dump truck headed toward Pennsylvania's Westmoreland Sanitary [Cont. on 94]



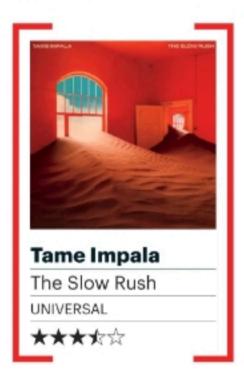
REVIEWS

Music

TAME IMPALA TAKE US EVEN HIGHER

Psychedelic-pop conjurer Kevin Parker opens up his massive bag of sonic tricks

By JON DOLAN



EVIN PARKER is a prog-rock wiz with a heart of pop gold, spooling out resplendent psychedelic symphonies in Tame Impala, a studio project that's blossomed into a band big enough to headline Coachella. With his long hair and spacey jams, he can recall a bygone era of art-rock conjurer, those Seventies studio druids holed up in sound caves, subsisting on psilocybin tea and holding philosophical discourses with their beard fleas. But Parker's a modern guy, and his music works because he balances pie-eyed grandeur with sugary sleekness; it's part of the reason Rihanna covered one of his songs, and why he's been tapped to work with Lady Gaga, Kanye West, and other stars. ->

ILLUSTRATION BY
Janelle Barone



TAME IMPALA

The Slow Rush is Tame Impala's first album since their 2015 breakout, Currents. Parker still sings like a Bee Gee with the soul of Bowie's Major Tom, floating above his thick disco, funk, and trip-hop beats, beautifully manicured synth textures and easeful yachtsoul melodies. Even when songs wander off into diffuse eddies, or when he crams several distinct micro-movements into the same tune, everything seems obsessively considered, as if he spends more time perfecting the hi-hat clicks than most artists take making their whole record. If someone told you an army of musicians had contributed to The Slow Rush, you wouldn't be surprised, but the credits read simply, "All music written, performed, and mixed by Kevin Parker."

He does his Brian Wilson thing in a dozen different directions. Album opener "One More Year" comes on expansive and polished, like a space cruiser that just rolled off the assembly line; glitchy Daft Punk-gone-doo-wop vocoder crooning fades into swirling disco drums, a subtle bass rumble, and splashes of Chic-y guitar as Parker sings about a perfect future just over the horizon. "Tomorrow's Dust" is a hazy shade of hippie-folk splendor, all spindly acoustic filigree, forlorn fuzzbox jive, sensitive bongo taps, laser-beam synths, and gently sung lyrics that evoke pillowy alienation.

Parker isn't afraid to wear his musical passions on his sleeve; "Glimmer" highlights his deep devotion to the Balearic blurt of classic Chicago house music and Detroit techno. On "On Track," Parker's a soft-rock poet, and the keyboards at the opening of "Might Be Time" send a clear signal that he's the kind of cat who keeps one copy of Supertramp's Breakfast in America for the house, and another for the beach house.

What does all this gilded majesty add up to? Probably not a ton. A whole album of Parker's distracted, reverb-laden falsetto can get a little too drifty, no matter how dazzling the musical experience. Focus too deeply, and it feels less like a collection of songs and more like a showplace for his sonic finery. As mood music, though, it's a sweet trip. "Let's drink this magic potion of love and emotion," he offers on the radiantly sunny "Instant Destiny." So sit back, relax, and have a swig it'll take the edge off. @

KESHA'S WILD & CRAZY SANITY

The singer splits the difference between getting deep and rocking out by ROB SHEFFIELD

F ANY ARTIST has encapsulated the past decade of pop, it's Kesha. Her journey through the 2010s was a long, hard road, but she always reflects the times, from "TiK ToK" to TikTok. On the excellent High Road, she fuses all of her passions together - the road she's



Kesha High Road



traveling in the title is a spiritual path, but it's also "high" in the earthier sense. She sets the tone for the whole album in "My Own Dance," when she boasts, "Woke up this morning feeling myself/Hung over as hell, like 2012." This woman has earned her hangover.

Ten years ago, she was Ke\$ha, the new party-monster queen on the block, brushing her teeth with a bottle of Jack. But then she began a long fight to start over, going silent for five years while accusing her producer Dr. Luke of emotional and sexual abuse. She sang

out her struggles on her 2017 comeback, Rainbow; she had a whole lot of serious to get out of her system.

On her fourth album, High Road, Kesha wants to have it both ways - she sings about her therapist and her aura, but she's also back to clubbing with a vengeance. "Tonight" begins as an earnest hymn, but then she starts to rap: "I don't give a fuck 'cause I am so high/Me and all my girls are looking so fly." Damn, it's good to have this Kesha back.

"My Own Dance" sums up where Kesha's head is at right now, when she looks in the mirror and gives herself a pep talk: "I get it that you been through a lot of shit/ But life's a bitch, so come and shake your tits." She gets serious in the candid family confessions of "Father Daughter Dance," where she mourns growing up without a dad, and "Chasing Thunder," a blessing to the kid she isn't sure whether she wants to have. But she's also down for a chance to dance out of the darkness, whether that means boning in a car ("Kinky") or tripping in the desert ("Shadow").

For a longtime Kesha fan, the sentimental fave has to be "Cowboy Blues," a fantastic acoustic singalong that fuses the Lady Gaga of Joanne with the Taylor Swift of Speak Now, yet sounds exactly like Kesha. She asks the spiritual question of whether it's possible to encounter the meaning of life while doing whiskey shots at a dive bar with a hot stranger in a Nudie suit. (Spoiler: This is a Kesha song, so yes.) She fits the biggest question into one gulp of breath: "Do you ever lie in bed with your three cats and get obsessed with some boy you met one time three years ago in Nashville, and you can't remember his last name?" On High Road, Kesha has never sounded saner – or crazier.

BREAKING

Beach Bunny's Power-Pop Pity Party

THE THRILLING DEBUT album by this Chicago power-pop band is driven by singerguitarist Lili Trifilio, a young songwriter who is already an ace at turning her turgid anxiety into extremely catchy guitar pop. Beach Bunny started building buzz a couple of years ago, eventually racking up 35 million Spotify streams for their great self-doubting anthem "Prom Queen." Honeymoon will be an immediate hit with fans of Charly Bliss and Soccer Mommy, from the brash aloneness of "Cuffing Season," to the jealous charge of "Ms. California," to "Dream Boy," where romantic tension explodes into Weezer-size glory. JON DOLAN

Quick Hits

Ten new albums you need to know about now





HOPPED UP The ace debut solo LP from the singer-guitarist in Philly indie rockers Hop Along can be folky or synth-y, full of tunes and lyrics that follow a strange logic toward rich epiphanies.



Torres **Silver Tongue**



GREAT GOTH Mackenzie Scott's fourth album is a rewarding collection of expertly crafted, darkly emotive electro-folk rockers; she can turn the simple act of falling hard for a new lover into brooding magic.



Destroyer **Have We Met**



STEELY DAN New Pornographers' wild card Dan Bejar's New Wave-steeped songs can seem as familiar as old MTV faves, and his wry lyrics ("You're looking good in spite of the light") add an uncanny whimsy.







WHIGGED OUT "Desolation, come and get it," the former Afghan Whigs singer offers. His first solo work in more than a decade reminds us why he was one of the alt-rock era's most compelling tortured romantics.







HOT WIRE More than 40 years after perfecting punk minimalism on Pink Flag, the U.K. lifers are punk maximalists, creating hypnotic, quavering drones as they sing about Russian oligarchs and fascism.



Drive-By Truckers The Unraveling



ROOTS REBELS The Southern country rockers have evolved into great political truth tellers, as evidenced by mournful songs like "Rosemary With a Bible and a Gun" and "Thoughts and Prayers."



Pet Shop Boys Hotspot



SYNTH-POP SWEETS There are moments of pop bliss on the Petties' latest to rival their Eighties hits, and the wistful beauty, grace, and gravity of their music only gets deeper as the decades pass.



Louis Tomlinson





SAME DIRECTION The One Direction member tries some Oasis-inspired rock moves, but the songs never quite take off. Elsewhere, he gets stuck with so-so versions of boy-band formula.



Alex Ebert I vs I

Community Music



STRANGE SOUL The Edward Sharpe and the Magnetic Zeros guy creates a screwy soul opus, complete with stoner beats, zonked rap-singing, and an uncomfortable cover of John Lennon's "Jealous Guy."



Stone Temple Pilots Perdida





PILOTS CRASH An unfortunate acoustic album with former X Factor contestant Jeff Gutt replacing the late Scott Weiland evokes Jethro Tull and Andrew Lloyd Weber more than Nineties grunge.

Drive-By Truckers' Patterson Hood (left) and Mike

UPDATE

COUNTRY YOUNG GUNS

Promising artists grow up inside Nashville's broad middle ground

ARLY PEARCE delivered 2017's most indelible country single with "Every Little Thing," a penetrating ballad that meditated on memory. Three years later, she's back with her self-titled follow-up, which finds Pearce teaming up with the finest writers on Music Row (Natalie Hemby, Shane McAnally) for stately midtempo musings on growing up ("It Won't Always



Carly Pearce Carly Pearce ***



Dustin Lynch Tullahoma ****

Be Like This") and the relentlessness of heartbreak ("Love Has No Heart"). Meanwhile, another young hitmaker, Dustin Lynch, has stepped up his ambition for a concept LP about his southern Tennessee hometown. Alongside typical dirt-road homages and backyard come-ons (see "Red Dirt, Blue Eyes") are unexpected moments of tension from this down-the-center traditionalist. "I'd burn this whole town down," he sings early on, "if it wasn't for my momma's house." JONATHAN BERNSTEIN

ROM TOP, LEFT TO RIGHT, PAUL R GIUNTA/INVISION/AP IMAGES/SHUTTERSTOCK; BURAK CING!/ REPERNS/GETTY IMAGES; MATT BARON/SHUTTERSTOCK; STEPHEN J. COHEN/GETTY IMAGES; OHN D SHEARER/SHUTTERSTOCK; RICK DIAMOND/GETTY IMAGES

CONTRIBUTORS: JONATHAN BERNSTEIN, JON DOLAN, BRENNA EHRLICH, KORY GROW





'HIGH FIDELITY' PLAYS THE HITS

Hulu's new series based on the Nick Hornby novel (and 2000 movie) is a loving cover, neatly updated for today



OB, THE record-storeowning hero of Nick Hornby's classic novel High Fidelity, has strong opinions on many musical subjects, particularly the making and deployment of a great mixtape. He has rules about what kinds of songs to use, in what order, and believes that structuring the playlist just the right way says more about who he is and what he cares about than anything he could

In the 25 years since the book was published, Hornby's words have been used and reinterpreted plenty. There was the 2000 High Fidelity film, co-written by and starring John Cusack, then a 2006 Broadway musical. Now, a new Hulu series casts Zoë Kravitz as Rob. This Rob (née Robin) is a biracial, bisexual woman, but, like her male forebears, she still runs a record shop (in Brooklyn), still compulsively makes topfive lists, and is still a disaster romantically. Oh, and she has strong opinions about playlists, telling us, "Like so many things in life, it's hard to do."

This High Fidelity adapted by Sarah Kucserka and Veronica West - deftly straddles the line between faithful cover song and radical reinterpretation. The 10-episode season frequently

paraphrases memorable scenes from the book and/or the film, updating the references for the times. Instead of scolding a customer for trying to buy "I Just Called to Say I Love You," Rob and employees Simon (David H. Holmes) and Cherise (Da'Vine Joy Randolph) debate whether to sell someone a copy of Michael Jackson's Off the Wall, in light of all the allegations against the late King of Pop. (Rob wonders if they'd be unjustly punishing Quincy Jones' brilliant horn charts in the process.)

Some of the broad strokes are the same, particularly Rob flailing in the aftermath of her number-one heartbreak, courtesy of ex-fiance Mac (Kingsley Ben-Adir), but many are tweaked. Simon is another of Rob's top-five exes – he came out of the closet while they were dating – and while she's still drawn to Mac, the show presents an alternate path in the form of nice guy Clyde (Jake Lacy), with whom she can't stop sabotaging

February 14th

Da'Vine Joy Randolph

Kingsley Ben-Adir Rainbow Francks

Zoë Kravitz David H. Holmes

Jake Lacy

AIR DATE

had to cut one of the book's most entertaining passages a vengeful wife offers to sell Rob her cheating husband's priceless record collection for a pittance - while here it's a whole episode (with a marvelous Parker Posey as the wife) that doubles as a spotlight on Rob and Clyde's connection. The series takes pleasure in diversions like that, and the chemistry among Kravitz, Holmes, and Randolph makes the record store an inviting hang. As the child of a rock star,

Kravitz is a natural fit for this world (though it's a bit distracting when she hooks up with the male equivalent of her real-life mom Lisa Bonet's character from the High Fidelity film). This is the best, richest role she's had, and she's every bit as magnetic and funny and messy as the part requires. Rob is arguably the quintessential John Cusack role, but Kravitz winningly steps into those shoes.

That said, Hornby was writing about a very specific and insufferable flavor of male arrested development and the ways obsessive fandom can become a debilitating crutch for such an overgrown adolescent. Kucserka and West give their Rob different self-destructive hang-ups emotionally (and with her quick asides to the camera), she resembles Fleabag more than Cusack - but she doesn't seem as fundamentally connected to her love of music as prior Robs. Her encyclopedic knowledge is believable, but thematically, she could just as easily own a restaurant as a record shop.

Even if this TV mixtape of High Fidelity misses some fundamental ideas behind

> it's still a delight. Is it a top-five show that was previously a book and a movie? It's not hard to imagine Rob, Simon, or Cherise making a passionate, entertaining case

> > for its inclusion. @



say with his own words.

WATCH LIST



ADULTING

Awkwafina Is Nora From Queens

Comedy Central
ays, 10:30 p.m.

The Farewell star goes autobiographical for this comedy, in which she plays an aimless young woman desperate to stop living with her dad (B.D. Wong) by any means necessary, whether that means working as a cam girl or helping a smug Silicon Valley cousin develop an app to scrub embarrassing pics off the internet. Nora often feels like a version of Broad City where Abbi and Ilana have been combined into one emotionally inconsistent person, and the wilder parts of Nora's persona — like an episode where her "melancholic flutelike queefing" becomes part of a SoundCloud sensation - tend to suit Awkwafina better. Lori Tan Chinn is hilarious and warm as Nora's grandmother, a Chinese immigrant who dislikes her Korean peers but is addicted to Korean TV dramas. A promising show that just needs to figure out exactly who its leading lady is playing.

GAME OVER

Mythic Quest: Raven's Banquet

NETWORK	Apple TV+
AIR DATE	February 7th

For most of its 14 seasons and counting, It's Always Sunny in Philadelphia has been a comedy that out-Seinfelds Seinfeld in its aversion to hugging and learning. Now and then, though, it offers a moment of catharsis so strong, you wonder how the creative team might do with more consistently sincere material. Mythic Quest, created by Rob McElhenney, Charlie Day, and Megan Ganz, answers that question. It's a more straightforward workplace comedy, set behind the scenes of a popular World of Warcraft-esque online video game, with McElhenney as



the narcissistic creative director, Charlotte Nicdao as the frustrated chief engineer, David Hornsby as their emasculated go-between, F. Murray Abraham as the grandiose head writer, and Danny Pudi as the smug head of monetization. Most of it is petty beefs and silly crises - the game is overrun by Nazi players; an unstable assistant (Jessie Ennis) wages emotional warfare against the 14-year-old streamer who helps keep the game popular - but the characters are frequently given moments of genuine vulnerability. And that's when Mythic Quest is strongest. The wonderful fifth episode — a dramatic short story starring Jake Johnson and Cristin Milioti as a couple trying to launch their own game in the Nineties - feels like the show McElhenney and the others really wanted to make. If so, watch out for when they finally play things entirely seriously.

CALIFORNIA LOVE

Gentefied

NETWORK	Netflix
AIR DATE	February 21st
****	7,

When the TV landscape was much smaller and lily-white, any series that centered on minorities shouldered an unfair burden of representing that entire group. In the bigger and more inclusive world of Peak TV, there's more room to just tell a specific story. This dramedy about a Mexican American family battling gentrification as they run a taco shop in East L.A. isn't the only show currently covering this sociological territory. (See Starz's excellent Vida.) And even its four main characters - a gruff but wise grandfather (Joaquín Cosío); a tough-talking cousin (J.J. Soria) who's happiest at the library; an artist (Karrie Martin) torn between her family and her activist girlfriend; and an assimilated chef-in-



training (Carlos Santos) forced to pass a "Mexican test" to appease his fellow kitchen staffers - represent very different points of view in this corner of the world. Smart, surprising, alternately clever and sad, it's a very welcoming place to spend 10 episodes. a.s.

SECOND ACTS

TV's Best **Spinoffs**

As Breaking Bad byproduct Better Call Saul, one of TV's top spinoffs, returns for Season Five (February 23rd on AMC), we salute four all-time-great examples of the form.

DARIA

MTV, 1997-2001



Technically, The Simpsons is TV's number-one spinoff. But while Homer and Bart never

interacted with the rest of the Tracey Ullman Show, it's amazing what a rich character frustrated Beavis & Butt-head classmate Daria (Tracy Grandstaff) turned out to be away from the boys' slack-jawed sniggering. Rivals My So-Called Life as TV's definitive teen-girl portrait.

XENA: WARRIOR PRINCESS

Syndicated, 1995-2001



Hercules: The Legendary Journeys was the exact right amount of warm cheese

that viewers expected from the Nineties' first-run syndicated action boom. Its spinoff about reformed villain Xena (Lucy Lawless) and her sidekick and, let's be honest, girlfriend -Gabrielle (Renée O'Connor) was smarter, crazier, and just more fun all-around. Yiyiyiyiyi!

FRASIER

NBC, 1993-2004



Cheers is about as perfect as a live-action sitcom gets. Frasier at its best was just

as good, swapping the bar's romantic-comedy intrigue and quippy insults for more highbrow references and farcical structure in the Seattle hometown environs of Dr. Crane (Kelsey Grammer) and his family.

THE JEFFERSONS

CBS, 1975-1985



All in the Family spawned three Hall of Fame spinoffs, including Maude and Good Times.

The Jeffersons — where Archie Bunker's neighbors George (Sherman Hemsley) and Weezie (Isabel Sanford) moved on up to a deluxe apartment on the East Side — was the longest-lasting and most beloved, with good reason. And of course there's that amazing theme song. A.s.



FORGET OSCAR: HERE'S TO THE REAL WINNERS

Take note, Academy – our picks for the truly groundbreaking films and performers of 2019



EBRUARY IS the month Oscar issues the final word on the year in movies. But is winning one of those neutered golden boys really a measure of creativity? The 92-year-old Academy traditionally denies its big prize to sci-fi, horror, comic-book, and foreign-language films. And, oh, yeah, Netflix. Only one woman (Kathryn Bigelow) has ever won for directing. People of color always have it tough. So screw Oscar bias and let's celebrate what really cuts it in 10 major categories.

Tour de Force: Phoenix in Joker

Best Actor

You might say that no actor in 2019 topped Joaquin Phoenix in Joker, as the virtuoso reveals the bruised psyche of a vigilante rising from a world without empathy. Still, there's a solid argument for a three-way tie, given the staggering emotional scale of Adam Driver in Marriage Story, as a theater director who nearly breaks on the bumpy road to divorce, and a soulful Antonio Banderas playing a version of his illness-plagued film mentor

Pedro Almodóvar in Pain and Glory. The year brimmed over with knockout male performances: Adam Sandler showed his dramatic chops in Uncut Gems. Eddie Murphy proved he never lost the funny in Dolemite Is My Name. Newcomer George MacKay roared with potential in 1917. And megastar Leonardo DiCaprio excelled as a fading TV actor (as if) in Once Upon a Time ... in Hollywood. Biopics brought out the best in Taron Egerton as Elton John in Rocketman, Jonathan

Banderas

Glory

in Pain and

Pryce as Pope Francis in The Two Popes, and Christian Bale as race-car driver Ken Miles in Ford v Ferrari. The age span ranged from Robert De Niro, 76, expressing the tragic lessons of a criminal lifetime in The Irishman to Roman Griffin Davis, 12, finding the redemptive pluck of a child who busts out of the Hitler Youth in Jojo Rabbit. The Academy allows only five nominees in acting categories. Why?! Nominate a dozen actors if they merit it, and only one or two in a weak year. Get real.

The Cast of Parasite: Choi Woo-shik, Kang-ho, Chang Hyae-jin, and Park So-dam (from left)

Best Actress

Despite Scarlett Johansson giving her all in Marriage

Story – ditto Saoirse Ronan in Little Woman – all the fuss is about Renée Zellweger nailing the acting and singing required to play a fluttering Judy Garland in her agonizing final days in Judy. Biopics get attention: Witness Cynthia Erivo as abolitionist Harriet Tubman in Harriet and Charlize Theron morphing into TV journalist Megyn

Kelly in Bombshell. It's rough on the indie circuit, where Awkwafina (The Farewell), Mary Kay Place (Diane), and a career-best Alfre Woodard (Clemency) must jockey to be noticed. If Oscar voters would stop turning a blind eye to horror, they'd see that the indisputable best in this category has been there since Jordan Peele opened Us in March 2019. It's there in the sheer physical and vocal artistry displayed by Lupita Nyong'o in the dual role of a wife and mother who encounters what appears to be her evil doppelgänger. Her scary-brilliant performance is the year's best. No contest.

Best Supporting Actor

It's high time for Brad Pitt to collect his first Oscar. And his part as a stuntman embroiled with the Manson gang in Once Upon a Time...in Hollywood is movie-star acting at its finest. That's the problem. Pitt, standing toe-to-toe with co-star Leo DiCaprio, isn't supporting anyone in Quentin Tarantino's love letter to 1960s Tinseltown. Minus the category fraud, Joe Pesci would win this prize in a walk as an old-school Mafioso in The Irishman. Kudos to Jamie Foxx (Just Mercy), Song Kang-ho (Parasite), Wesley Snipes (Dolemite Is My Name), and Pesci's Irishman cohort Al Pacino. But Pesci's return to film after a decade-long sabbatical defines what it means to play the hell out of a true supporting role.

Best Supporting Actress

Cheers to the deserving Laura Dern, killing it in Marriage Story as a divorce lawyer with a shark's smile and a killer defense. Florence Pugh, just 24, is revelatory in Little Women. And Margot Robbie beguiles as Sharon Tate in Once Upon a Time... in Hollywood. But let's not laugh off Jennifer Lopez, who breaks out of rom-com limbo to play a stripper hellbent on taking her objectifying Wall Street clients to the cleaners in Hustlers. Lopez potently exemplifies what it takes for women to survive in a predatory man's world.

Best Director

Tarantino rocked the house with Once Upon a Time... in Hollywood. But Martin Scorsese (The Irishman) is the man, except at the Golden Globes, where 1917 director Sam Mendes took the prize and declared, "There's not one director...that is not in the shadow of Martin Scorsese." Take that without ignoring the explosive talents



Old Master

Scorsese directs

of the Safdie brothers (Uncut Gems) or the revolutionary spark ignited by South Korea's Bong Joon-ho with the stinging satire of Parasite. And, oh, the drama of Greta Gerwig (Little Women) and Noah Baumbach (Marriage Story) – tagged by The Hollywood Reporter as "The First Couple of Film" – duking it out in two categories.

Best Screenplay

Gerwig's faithful but freewheeling version of *Little Women*, from the 1860s novel by Louisa May Alcott, sets a new gold standard for literary adaptation. And she is matched by the original screenplay that Baumbach devised for Marriage Story, a seriocomic portrait of a broken marriage that never obliterates love as an integral reason for being alive. Still, it's Tarantino's fierce and funny fantasia about life, death, and the healing power of cinema in Once Upon a

Gerwig (left) and

Ronan on the set

of Little Women

Best Cinematography

Doc Dazzle: Rolling

Time...in Hollywood

that hits the sweet

spot as peak work

who sees the world

from a firebrand

like no one else.

Thunder Revue

It's not just pretty pictures.
Behold the brutal grandeur of life in the WWI trenches that Roger Deakins achieves in 1917. Or the gritty evocation of 1960s Los Angeles that Robert Richardson attains in Once Upon a Time...in Hollywood.
Or the prowling darkness that

Rodrigo Prieto paints so vividly in *The Irishman*. But camerawork as an art is best appreciated in the play of shadow and light that Claire Mathon uses to illuminate two romantic dramas, *Portrait of a Lady on Fire* and *Atlantics*.

Best Animation

Given the rote sequelitis afflicting Toy Story 4 and Frozen II, the startling originality of I Lost My Body shines like a beacon, as a severed hand crawls across Paris to reconnect with its owner. No animation

this year can touch it.

The Spoiler: Can 1917,

with MacKay,

win big?

Best Documentary

Honeyland tinds rare wisdom in the tale of a Macedonian beekeeper. Apollo 11 uses new footage to bring vivid life to NASA's 1969 mission. American Factory watches as a Chinese company takes over a closed General Motors factory in Ohio. But what music junkie can resist Rolling Thunder Revue: A Bob Dylan Story by Martin Scorsese, a rollicking record of the masked Dylan touring the U.S. in the 1970s and fudging facts to reach a deeper truth?

Best Picture

It's war. The Golden Globes skunked Netflix - one win out of 17 film nominations indicating a larger Hollywood animus toward the streaming giant that releases its films for only a few weeks in theaters. That's bad for business. Last year, Oscar fired off a volley by denying a Best Picture prize to Netflix's Roma, preferring the bigstudio Green Book. Can the Globe-winning war film 1917, another studio product, help knock down Netflix's new pins - The Irishman, Marriage Story, Dolemite Is My Name, and The Two Popes? Hell, it's all politics, which has nothing to do with quality or the fact that The Irishman is a new Scorsese classic no matter how or where you watch it. @

LET'S HEAR IT FOR 'CRAWL'

The Gator Movie That Oscar Forgot



I ASKED Quentin Tarantino about Oscar's ritual snubbing of pulp. "Come on," said the maestro, whose 1992 debut with Reservoir Dogs was stiffed. What he'd like to see honored: Crawl. It's a B-movie about a swimmer (Kaya Scodelario) trapped in a storm-beset Florida home as gators run free. Tarantino praised Alexandre Aja's film for its "heightened tension," superior design, and rewatchability. "How many Oscar winners do you want to watch again?" asked Tarantino. Point taken. P.T.

➡ WILL TEXAS EXECUTE ROB WILL?

[Cont. from 41] Earth, too. And I could feel myself, like my individual energy reaching out to the entire Earth. I cried. I didn't understand, but I was in tears. An officer came back, this big old redneck: 'Will, what the hell you doing in there? Whatcha doing with your legs crossed up like that?' So I came out of it, and only then realized I'd been crying."

When Will speaks about these things, his Texas drawl is filled with enthusiasm, but he has lots to say and moves on quickly to talk about how "academics" rate Polunsky as a prison ("one of the top-five worst"), about the reasons for titling a recent painting "Kali Love/The Intricacies and Awesome Power of Divine Feminine Energy/Misogynists and Sexists Beware: The Righteous Wrath of the Goddess Is Upon You! (The Me Too Movement)/A New Evolution of Ancient Goddess Feminism Reborn," about healing through music ("I love music so much"), and about how he has a thing for metalcore singer Maria Brink. "You know Maria? She's pretty. Oh, man, hook me up. I'm saving myself for her. She's awesome."

One day, Will will either be set free or put in a vehicle and driven 50 minutes west to the death chamber in Huntsville, Texas, where a tie-down team will strap him to a gurney, a medic will slip IV needles into his arm, witnesses will watch from another room - including the seemingly unchanged Robert Hurst, friendly as he is - and soon the poison will flow, after which he will be pronounced dead. His last words will find their way onto a TDCJ webpage that currently contains some 500 such final statements, among them, "I am just sorry about what I did to Mr. Peters, that's all," "During my time here, I have been treated well by all TDC personnel," "I just want everyone to know that the prosecutor and Bill Scott are sorry sons of bitches," "Lord forgive them, they don't know what they're doing," "Lord, send me a chariot," "Warden, you may proceed," "I'm feeling it," "I can feel it, taste it, not bad," and "Warden, murder me."

N DECEMBER 4th, 2000, with dawn just about to break on a Houston bayou, Harris County deputy sheriffs Barrett Hill, 38, and Warren Kelly rolled up on a few guys stripping parts from cars; the thieves immediately took off on foot.

Kelly chased Michael "Rock-e" Rosario, 22, in one direction, while Hill hustled after Rob Will, 22, in another, caught up to him and radioed in to say, "I've got one in custody." Shortly thereafter, Kelly lost sight of Rosario and asked the dispatcher for backup. And then he heard shots ring out. A bit later, his partner was found dead on the ground, riddled with bullet holes, and no Will, who fled the scene, commandeered a car, and was arrested without incident 70 miles away, with the murder weapon, a .40-caliber Sig Sauer pistol, on him and blood pouring from a bullet wound on his left hand. He was charged with capital murder and convicted in 2002 inside a courtroom packed with uniformed police officers, with the lead prosecutor telling the jury, "What really we learned from September 11th is that evil exists in the world. The embodiment of evil . . . manifested itself in Robert Gene Will II."

Will has long maintained that Hill had him in handcuffs at the time of the shooting and that Rosario, the son of a Houston cop, had circled around, come upon them, and shot Hill multiple times, in the head, neck, wrist, and chest, wounding his buddy in the process. And then both took off again.

For reasons that remain unclear, the cops didn't seem to care much about Rosario, however. He was charged with and convicted of theft. (Rosario could not be reached for comment on this story; according to The New York Times, however, one of his former attorneys has said that Rosario has repeatedly denied that he murdered Deputy Hill.)

Additionally, Will's hands were tested for gunpowder residue and found to be clean. During one of the trial's most damning moments, the woman whose car Will hijacked testified that he told her he'd just shot a cop. On the day her car was stolen, however, she didn't mention that fact in any of the eight conversations she had with officers, even though she knew a cop had just been killed. She didn't remember it until the prosecutor was prepping her for the trial, 13 months later.

In court, on the day that Will received the death penalty instead of life in prison, Barrett Hill's widow, Cathy, addressed him directly: "The punishment administered to you is just and fair, according to our law. You did not give my husband the option of life; and, so, we do not give you that option, either." The next day, she stood beside a memorial for her husband erected at the murder site on the bayou and said, "This is where he met Jesus face to face. His last breath on Earth was his first breath with Jesus." Hill served in Desert Storm, with the National Guard. At the time of his death, he and Cathy had been married for just 22 days shy of 19 years and had two kids, both girls. She and her family went on to file a \$10 million lawsuit against Will, citing pain and suffering and loss of companionship and support, while also attempting to stop Will from having access to his prisoner account, which he uses to buy commissary goods and incidentals. The effort was ultimately not successful. She then began helping the surviving spouses of other murdered police officers, earned a position next to then-Texas Gov. Rick Perry at a 2008 pro-law-enforcement bill signing, and got a job as the office manager of the Harris County deputies' union. According to a 2016 story in the Houston Chronicle, "She and her two daughters also received hundreds of thousands of dollars in charity." The piece went on to say, "On Thursday, she was arrested on embezzlement charges, accused of quietly changing her payroll checks over the course of 20 months to overpay herself by \$108,000." She took a plea and got probation. It can be pretty goddamn wretched how everything works out, spilling down through time.

In the 18 years since Will's conviction, the twists and turns in his case, as raised on appeal, or messed up on appeal, have gotten ever more convoluted and disturbing, such that the whole thing has devolved into what federal Judge Keith Ellison of the Southern District of Texas has called "a procedural imbroglio."

To name a few: New jailhouse witnesses stepped forward with sworn affidavits stating that Rosario confessed the crime to them. Also, another inmate, in a sworn affidavit, said that Rosario had attempted to put a hit out on Will, presumably to silence him. Despite the new statements, Will's appeals were denied.

According to Will, his court-appointed attorneys have for the most part been bumblers, if not worse. Most appallingly, the attorney in charge of his first appeal, in 2002, which gave Will his only opportunity to raise new issues and provide new evidence, instead filed a brief that was largely the same as one he'd prepared for a different case a year earlier. It was, of course, denied. And onward, off the rails things went for inmate Will. And then when that lawyer was replaced, Will says, his new one wasn't much better, mainly because he allowed to stand, without challenge or correction, many of the state's most questionable assertions.

"There've been so many hyper-manipulative, devious, and duplicitous individuals involved with my case, it's unbelievable," Will says today. He shakes his head and groans. "I mean, one thing I've come to appreciate about Donald Trump and his administration is they are showing the world how people in positions of power can function in treacherous ways with absolute impunity. Just say anything and push the issue and create an entire alternate reality, and people accept that. In my case, regarding the timeline for the shooting, what the state has said is just absolutely absurd and beyond ridiculous. All you got to do is look at the time-stamped timeline and you'll see."

The state has always maintained that Deputy Kelly lost sight of Rosario eight seconds before the first shots rang out and that Rosario was about 470 feet away from the pair. There's no way Rosario could have run that far in eight seconds.

The shooting transcript shows the following: Twenty-three minutes before sunrise, Officer Kelly radios in to say he's chasing one suspect. Forty-three seconds later, Officer Hill radios to say, "I've got one in custody." Eighteen seconds later, Officer Kelly radios, "I got any units in route to me?" Eighteen seconds after that, he radios in, "I lost him on the bayou." And eight seconds after that, the first shot can be heard on the radio, then gasping sounds, then more shots. Hence, the state's eight-second logic.

But, as Will points out, during the trial Kelly testified that he lost sight of Rosario before asking his dispatcher about units en route, which was a full 26 seconds before the first shot and not eight seconds plenty of time for an athletic guy like Rosario to cover the distance to Hill and Will. But the state's version of events has remained unquestioned, so frustrating Will that in 2010 he took it upon himself to write Judge Ellison directly, laying out what's so clear to him in the timeline, and ending with, "Petitioner has been writing nonstop all weekend, passing out and waking back up, and writing, and doing nothing else. Petitioner is about to pass out once again and must have this motion ready to go out, sealed up in an envelope, for mail call in the morning. Petitioner will immediately begin working on part II of this June 18th, 2010, 'Petitioner's Motion for Hearing on Merits' when he awakens again after passing out. Petitioner once again respectfully requests that the court reserve judgment on this motion until it can be presented in its entirety; petitioner will be able to do just that within a day or two."

And with that noted, the petitioner did indeed pass out, only to wake up in the same place today, nine years later, still behind bars and on death row, with nothing changed, holding up his left hand in the visitors' room to show two twisted and scarred knuckles.

"And that's another thing," he says. "This is an almost 20-year-old wound, right? Now the state said that I supposedly shot the officer from six inches away. Well, if I fired from six inches, blood and bone and the tops of my knuckles are going to be all over everything. But none of my blood was on the deputy's clothes. At all. So what does that mean? Well, guess what? The state's theory is completely fictitious. There's no physical evidence. With all their unlimited funds, all they could come up with was, 'Boy, he sure acted like somebody who was not a good person, like a killer.'" That and a drop of Will's blood on the officer's shoes.

And this is but a fraction of it, all of which, in September 2018, led Judge Ellison to reconfirm what he'd written earlier: "Will has repeatedly and persistently argued that [his co-defendant] Rosario killed Deputy Hill.... Moreover, the presence in the trial courtroom of so many uniformed policemen would have likely justified post-trial relief had the issue arisen on direct appeal.... On top of the considerable evidence supporting Will's innocence and the important errors in the trial court, there must also be addressed the total absence of eyewitness testimony or strongly probative forensic evidence. With facts such as these, and only circumstantial evidence supporting Will's conviction and death sentence, the Court laments the strict limitations placed upon it.... The questions raised during postjudgment factual development about Will's actual innocence create disturbing uncertainties that, under federal habeas jurisprudence, the Court is powerless to address.

The reason for this powerlessness is a 1996 law called the Anti-Terrorism and Effective Death Penalty Act, which puts severe restrictions on what federal judges can consider, no matter the number of disturbing uncertainties, which is why Ellison had to bounce the matter back to the 5th U.S. Circuit Court of Appeals, which in 2014 the American Bar Association Journal called "one of the most controversial, rancorous, dysfunctional, staunchly conservative, and important appellate courts in the country."

According to Robert Dunham, executive director of the Death Penalty Information Center, "We will now see whether the 5th Circuit has any commitment to fair process or whether it is simply a rubber stamp on the way station to the gurney." Should the circuit rule against him, however, Will's next and final move would be to try get his case heard before the U.S. Supreme Court. And he might have a chance there. "His case is one where the procedural irregularities are so extreme," says Dunham, "that if the Supreme Court allows it to stand, it is basically saying that states are free to make death-penalty reviews a charade. That doesn't mean they won't allow that to happen. But that is what's at stake with this case."

or that it changes anything, but Will had a pretty shit childhood, growing up in a pretty shit part of Houston. His father was a jailbird heroin addict who was murdered when Will was 10. His mother, a meat wrapper for a Kroger supermarket, testified in court that he was sexually abused by an uncle from the age of four to around 12. "There was a lot of abuse," Will says grimly. "It was bad, very bad, as bad as you can imagine." He waves off any further discussion of the matter. (Will's mother could not be reached for comment.)

He dropped out of school in the ninth grade, but not before being suspended once, he says, for "being mean to Jesus. At least my conservative Republican teacher thought so, because I always thought of deities as being feminine. I mentioned this in class, got in an argument with the teacher, and he kicked me out. I was mainly a quiet, reserved kid who liked to read. I thought I was a weirdo."

Around the age of 14, he met Rosario and started doing "stupid things." When he was 17, he got busted for joyriding in a stolen car, for which he received community supervision; a year later, he was arrested on an aggravated robbery charge, meaning a weapon was likely involved, in this case a shotgun, and he was sent away to boot camp. At the time of his arrest for the Hill murder, he had a five-month-old son to

take care of and was apparently trying to turn his life around, having already earned his GED and enrolled at Houston Community College, studying child psychology and moving forward with a 3.43 GPA. "I wanted to help children not go through what I went through, even though, of course, I was still doing stupid things. I thought I was cool. I was hanging around with guys that were cooler than me. They had pretty girlfriends. Tough guys. And I thought that made me tough, too, which is ridiculous."

Why he went out that night with Rosario, Will still can't understand. "Well, it's because I'm an idiot," he says. "When he came over there, he used to always do this shit with me, 'Oh, come on, man, I'll get you all some money.' He kept badgering me. I was like, 'I could use some money for my son. Yeah, OK,' which is stupid, horrible, stupid idiocy. Stupid pure stupidity." And it's the same for why he had the Sig Sauer murder weapon on him when he was arrested. "Again, it was stupid. But I wasn't thinking properly. I mean, I didn't hang around people who were carrying guns or shooting people. That's something I wouldn't have been all right with."

Then again, during the trial, the prosecutor introduced a photograph in which Will appears to be wearing a bulletproof vest and holding a revolver. And when cops showed up at his girlfriend's home, they found, among other things, a vast quantity of car-stereo parts, a couple of walkie-talkies, a pair of playtime kids' handcuffs, a security-officer badge, a few pawn-shop tickets, bolt cutters, binoculars, an Armor of America bulletproof vest, and two Mossberg 12-gauge shotguns. Neither of the shotguns had Will's fingerprints on them, but at trial, one of Will's friends testified to often seeing loaded guns in his house and that Will often carried a handgun with him. Which is really neither here nor there when it comes to his actual guilt, but the apparent contradictions might say something about Will's credibility, or at least about how a wronged man, if truly wronged, might feel justified in trying to dust away his past, especially if it might help lead to freedom.

Certainly, in recent years, Will has been a fairly easygoing, get-along prisoner. Mostly, he reads and studies and paints and writes long, long letters and blog posts for his Free Rob Will website. He's earned a yoga-instructor certification and a paralegal degree. "Unless you're involved with gang stuff or drug stuff, you don't really have too much to worry about in here, and I don't care nothing about those things," he says. "When the hit squad comes onto the pod and shakes us down, they never find anything in my cell. I have no use for shanks or drug paraphernalia. No interest. The only thing that bothers me is, sometimes they'll mess with my art stuff."

He was much more troublesome for authorities in the early 2000s, when he and fellow death-row inmates Kenneth Foster, Gabriel Gonzales, and Reginald Blanton founded a group called DRIVE, Death Row Innercommunalist Vanguard Engagement, to protest the conditions under which they had to live: tiny cells, crappy food, sleep deprivation, solitary confinement, as well as the upcoming executions of a couple of their friends. "We were literally having days-long discussions and engaging in dialectics on how we could apply lessons learned from everything from the Foco theory that grew out of the Cuban Revolution to Gandhi's satyagraha movement, to just about every other social-justice movement or theory one can imagine," he once said.

In 2005, in what he calls a peaceful protest based on the teachings of Gandhi, he swiped the handcuffs while they were being taken off him in his cell, jammed the door shut, barricaded himself behind his mattress, and waited for the extraction team to come with its tear gas, which it did, dutifully recording the removal on video, which later found its way onto YouTube, while he voiced his complaints and coughed, choked, and wheezed, naked, and doubled over. In the time since, prison conditions have improved somewhat, so he's backed off his activism, even though, he says today, "Disciplinary write-ups, if they're done for righteous matters, they're like little rewards. You know what I mean?"

As well, he no longer has any like-minded souls to gather with and have dialectical discussions. Foster and Gonzales had their sentences commuted to life, and Blanton was executed. His last words: "They are fixing to pump my veins with a lethal drug.... They want to kill me for this; I am not the man that did this. Fight on. I will see y'all again."

And then, in 2008, a friend and convicted cop killer committed suicide, prompting Will to write on his blog, "Jesus Flores killed himself yesterday. He slit his own throat and died in his cell. He died alone in a small, cold cell of steel and concrete on Texas Death Row. I've been fighting back tears all yesterday and today, but as I'm writing this I have tears in my eyes. I knew Jesus since the day he got locked up in Harris County jail, about seven years ago."

With all of them gone, Will says, "I haven't had a normal conversation with anybody in about two months." He smiles. "My interests are, I guess, different than most people's."

One thing he's liked to do is teach yoga and reading skills, which a few years ago got him into trouble with a fellow inmate. In an aside in one of his memos to Judge Ellison, he wrote, "This guy is mad at me because he feels I'm not keeping it real – which translates to 'being an imbecile and engaging in criminal-minded behavior' – and because all his 'homeboys' want to do now is 'read those bullshit books.' The greatest slur he directed at me was, 'You ain't even ever killed no one! You're here for someone else's murder!'"

Looking at Will today, the way he presents himself, it's hard to see the killer in him. To Deputy Hill's widow, Cathy, of course, this is irrelevant. "He knows he did it," she says. "I reminded him during my victim-impact statement that every time he looks at those scars on his hand he will remember what he did to our family. He knows. And when the 5th Circuit Court rules, no more trials, then we will start pursuing an execution date. He's been on death row for 18 years. His time is coming near. Right now, he's pleading for his life, doing whatever he can."

Even as an outsider, submerge yourself in a few hundred pages of court documents, and it's indeed easy to see how different he once was, the Texas petty criminal out for a night of stripping cars, before he steeped himself in art and literature and meditation practices and yoga. But read enough about his case, leaning first this way, then that, both with similar amounts of rage, outrage, and perplexity, and you finally arrive at one possible conclusion, that he honestly does deserve a new trial. And with Dr. Phil's upcoming ministrations, perhaps it'll happen.

Meanwhile, in a few moments, he'll return to his cell and start filing paperwork about that missing 15-page letter. "Trust me," he says, "they stole it. Or it's just sitting on a security desk somewhere." Pinocheted, as he likes to say, just like he's been, according to him and his supporters, for the past 18 years, at least for right now. @

ELECTION INTERFERENCE

[Cont. from 41] Trump echo chamber and amplification machine sprang into action. Fox News contributors, right-wing social media celebrities, and presidential allies shared the tweet, reaching an audience of millions. In reality, Clyburn had merely compared Mitch McConnell's pledge to work in lockstep with Trump during a Senate impeachment trial with a hypothetical rigged trial and hanging. Every fact checker who reviewed the tweet - which is still up - rated it false.

How do you defend against disinformation when the president of the United States spews lies and retweets conspiracy theorists? How can you deter election interference by foreign nations when the commander in chief has invited other countries to intervene in our elections? "There's a counterintelligence threat coming from inside the White House," Joshua Geltzer, the former National Security Council lawyer, says. "How do you guard against that?"

Donald Trump got elected with the help of foreign interference as well as domestic and foreign disinformation. ("Russia, if you're listening, I hope you're able to find the 30,000 emails that are missing.") He dismisses talk of Russia's election interference as an attack on his legitimacy. His senior aides have reportedly declared discussion of election security to be off-limits in the Oval Office. The National Security Council cut the position of cybersecurity coordinator. The White House's chief of computer network defense - a position created after Russian hackers penetrated the White House's network in 2014 - resigned last fall in a scathing memo that described a

"hostile" and humiliating work environment for cybersecurity staffers. Most recently, the head of DHS's young cybersecurity division left for a job at Google. One expert describes the wave of departures as "the systematic decimation of the personnel" tasked with protecting the administration and the vote in 2020.

The biggest obstacle to any government-wide strategy to defend our elections is the current occupant of the White House. Trump's refusal to consider the issue has led to a logjam in the Senate, where McConnell, in lockstep with the president, refuses to allow a vote on bipartisan bills that would require transparency by tech companies on advertising spending and make paper backup ballots mandatory in elections. Still, Trump hasn't managed to prevent various agencies – FBI, DHS, NSA, and so on – from taking their slice of the issue. "I've been surprised at how much we've been able to accomplish in spite of that," says one elections expert who has advised state and federal governments and requested anonymity to speak about Trump. "Maybe where we're at in year four is where we could've been at year two and a half."

But that doesn't mean the agencies are on the same page in addressing the threat. And if any threat to national security required a unified strategy set by the commander in chief, it would be election interference. "If your only problem is somebody is robbing banks, the FBI can probably take it," says David Kris, a former assistant attorney general for national security at the Justice Department. "This effort is cross-cutting, requires the whole of government and whole of nation, and you can't get the whole of government aligned and moving downfield in formation unless you've got strong leadership from the White House." Instead, he adds, "we've got a commander

in chief who is at best highly ambivalent and at worst actively courting its return in 2020."

Experts interviewed by ROLLING STONE say the 2020 attack might look something this: Malware hits voter-registration databases in Ohio, Florida, and Michigan, altering the addresses of thousands of people and causing chaos at polling stations across the country. Some affected by the breach vote by provisional ballots, but those backup ballots soon run out, and thousands of frustrated voters give up and go home without voting. Then a tweet appears purporting to show a local Democratic official bragging about rigging the vote to oust Trump from office. The tweet goes viral. Soon, the president tweets that Democrats "rigged" the election and the result can't be trusted.

This may sound far-fetched. But it isn't all that different from the things Trump said in the waning days of 2016. He said the election was "being rigged by the dishonest and distorted media" and "also at many polling places." Even after he won, he promoted a bogus conspiracy about "millions and millions" of illegal votes cast in states like California. If his second term hangs in the balance, and there's even the faintest whiff of controversy, is there any doubt what Trump would do to stay in power?

Kris, the assistant attorney general who now runs the consulting firm Culper Partners, says this scenario in particular keeps him up at night. He can easily imagine Trump and his allies challenging countylevel vote totals across the country and refusing to concede. "He simply says, 'I'm not leaving. I didn't lose, it was rigged, and you can see that we have literally 78 lawsuits going in 78 different counties and states challenging the result," Kris says. "It makes Bush v. Gore look like a nursery school exercise." @

→ LIZZO

[Cont. from 52] celebrities. Then they got the ultimate co-sign for any Minneapolis musician: Prince was a fan. In 2014, Lizzo and Eris appeared on Plectrumelectrum, an album by Prince and his backing band 3rdeyegirl, singing on "Boytrouble." Prince invited them back to perform at Paisley Park; later, His Royal Badness even played a solo piano show for them and a few others. Before he died, he offered to produce an album for Lizzo.

For Lizzo, this kind of respect was life-changing. "I used to be so upset that I never had co-signs," she told ROLLING STONE in 2018. "I was like, 'I'm too weird for the rappers and too black for the indies.' I was just sitting in this league of my own. To be embraced by Prince and co-signed, I am eternally grateful for that."

WEEK AFTER WE meet in L.A., the high priestess of self-empowerment is playing a Jingle Ball concert at Dallas' Dickies Arena. Backstage, she fields crying fans at a meet-and-greet while wearing drawstring Gucci pants, a Gucci top, and cozylooking camel boots that she asks the photographers to avoid shooting. A bag of Flamin' Hot Cheetos seems to appear out of thin air as she jumps from radio interview to radio interview, fielding questions about everything from her tastefully nude photos ("Everybody's naked a lot!") to her dating life (Lizzo never DMs first).

Lizzo is selectively revealing, as all the best selfhelp gurus are. She reveals key parts of her journey while holding back the best bits of herself for the people who have been with her for a decade-plus. She was, after all, private even in her youth.

But one reason her brand has been so successful is that her positivity isn't idyllic or saintly. She'll get angry or depressed, cruel or weepy. She's a bundle of feelings, some of which have come out in interactions with trolls and Instagram Lives, where she offers unfiltered commentary on happenings in her life and feelings.

While she found the right way to explore love in her music, she can stumble while talking about it in person, still trying to maintain her privacy. The first time she thought she was in love coincided with one of the lowest points in her life. She was 19 and "delusional," trying to be someone she wasn't. "Skinny guys like me," she says with a light chuckle. "But I remember he was like, 'I'm a little guy. I need a little girl." Because it was 2007, she tried to emulate Zooey Deschanel ("I can't just wake up and be a white girl"). The demise of the relationship made her ask a question she would try to answer in her music for years to come: "How can you be in love with someone when you're not even you?"

Two years ago, a more confident Lizzo fell in love for real - this was the unnamed Gemini of Cuz I Love You fame. She chalks up the demise of that relationship to bad timing and her need for freedom. "As fucked up as it sounds, I needed that heartbreak experience," she says. "I'm not sad, because I use the pain so constructively. It's inevitable. The pain is human experience."

For a long time, the future she had perceived for herself was a lonely one - "no children, two friends"

 with her head buried in her work. "But it's different now," she says with a sigh, dropping the adviceguru voice she delivers her self-help sermons with on- and offstage. "Like my relationship with my family, I'm working on that. I open myself up to friendships. I open myself up to the idea of children, which is big for me, 'cause my albums are my babies."

While driving around Los Angeles a week before, she had put her work-in-progress relationship with her brother to the test, informing him via Face-Time that he couldn't spend the night at her place before they drove to Joshua Tree for Thanksgiving because she was expecting company. "I feel so bad," she groaned after hanging up. "But I'm tryin' to get my pussy licked!" Lately, she's been writing songs while on the road, mostly inspired by the "cute little things" more recent lovers have said to her. "That's the good shit right there."

Lizzo finds another potential suitor in Dallas when she runs into Charlie Puth backstage. She shoots her shot in front of his parents and sister. "We're about to make out and it's gonna get weird!" she shrieks as they prepare to take a photo together. She calls his dad her father-in-law before the two artists pantomime walking down the aisle to Puth's hummed version of "Bridal Chorus."

It's all a joke, Lizzo coming alive for the cameras one last time before she clocks out for the day. Still, the ruse goes on long enough that you kind of wish they'd run off to city hall someday.

"Call me," Lizzo says as she winks at Puth, hands clutching the robe of her sexy-Santa costume. She's given him the greatest gift of all: the hope he could one day be with Lizzo. She's done for the night. @

BILLIE JOE ARMSTRONG

[Cont. from 57] and putting in some echo and delay on it, doing what I normally do and trying to come up with riffs.

21 Guns

21ST CENTURY BREAKDOWN, 2009

I got really burned out, because I was pushing myself to take things to a new level musically and lyrically, and that got pretty serious and dark. I had this feeling of wanting to surrender. I was just kind of living like a tortured soul. And you end up kind of torturing the people that are around you, whether it's your family or your friends, and nobody understands what it is that you're going through, and maybe that's just being an artist or the pains of getting older. So, that's sort of what that song is about, where you just get so lost in what you're doing that at some

"I got really burned out, because I was pushing myself to take things to a new level musically and lyrically, and that got dark. I had this feeling of wanting to surrender. Like a tortured soul."

point all you're doing in life is just trying to find your way back. Maybe back to sanity. Sometimes you have to figure out what's worth fighting for, because you might just be fighting yourself. I think that that's the one thing that's a theme throughout a lot of my songs: the feeling of being lost.

Fell for You

IUNO!, 2012

I always wanted ¡Uno!, ¡Dos! and ¡Tre! to be our power-pop Exile on Main Street, and I understand it sounds a bit stiff and the production isn't great. I love those songs, but a lot of it feels half-baked. It was a weird time. I sort of had my own private nervous breakdown. Well, it wasn't really private. I think it was just a lot of exhaustion. There's, like, 36 songs on that album. It's insane. But when I revisit it, "Fell for You" is what stands out. I was listening to a lot of power-pop music. I always say that power pop is the greatest music on Earth that no one likes, whether it's something like Cheap Trick or [another band]. That was like, "Let's just write a gooey bubblegum song about dreams and love and crushes and all the stuff that kind of keeps us alive."

Those things never really stop as you get older. You always come across people that you want to spend time with, but you have to be realistic about it. When you're a kid, it's OK to be more impulsive. When you grow up, it can cause a lot of wreckage in your life, so it's best to maybe write a song about it.

Ordinary World

REVOLUTION RADIO, 2016

I was in a movie called Ordinary World in 2016, and the director, Lee Kirk, wanted a song that kind of summed up the character's life. I had a couple of strikeouts with it. One of them was "Outlaws," which is also on *Revolution Radio*. Then I ended up writing this song, "Ordinary World," that sounded more country, and it just sort of fit the movie. It's about family, really. ["Where can I find the city of shining light/In an ordinary world?/How can I leave a buried treasure behind/In an ordinary world?"] It's just finding out that the things in life that are more simple are actually the biggest connections that you can have. We tend to overthink the things that are not really important.

I think about this song as an extension of "2000 Light Years Away," 20-something years apart. I value my relationships so much. I'm very deeply connected to Adrienne, and I'm very deeply connected to Green Day. People ask me, like, "Why do you maintain these relationships for so long?" I don't know. Roots matter to me, I guess.

Love Is for Losers

LOVE IS FOR LOSERS, 2018

I recorded an album as the Longshot, which was kind of an extension of ¡Uno!, ¡Dos! and ¡Tre!, except where I produce it myself and not overthink it. I recorded all the instruments myself, and just started putting stuff out on SoundCloud and releasing little clips on Instagram. It taught me how to have fun with making records again, and how cool it can be, you know? It was this concept that ended up turning into a real band. I was dipping into music that's way more rock & roll and more like, I would say, midcareer Replacements, or this band I love called the Exploding Hearts. I was also thinking of the Ronettes and early Beach Boys. I remember when I came up with the riff in that song, and I love the first line, "I'm riding shotgun in a car that's broken down." It's just like, you're going absolutely nowhere. It's sort of like the anti-Valentine's Day song. I think I got back to something that felt more self-deprecating and dumb, and when I'm dumb, I'm at my best.

Father of All...

FATHER OF ALL..., 2019

I was getting deep into Motown and soul music, and trying to channel that. You have to kind of thread the needle with Green Day to make sure that all of a sudden we're not just trying too hard to be something that we're not. It takes a weird balance. I had the riff, and I sat down with Tré and we did a demo. I'd been listening to the first couple of Prince records. He really threads the needle on ticking every genre — he was taking funk, R&B, and old classic-rock music, and he was able to turn out this sound that is so uniquely Prince. And everything is in falsetto. I wanted to try to sing through a falsetto. I was like, "I don't want to sound like me, necessarily."

At the same time, I was in this weird kind of depression, and that's what the song is about. I was just struggling in life, and I think it has to do with reflecting on the current culture that we're in. It's hard to write songs about Trump. With American Idiot, there was a rallying cry. With Trump, it's this toxicity that's in our culture and we're deeply, deeply divided to a point of paranoia that we've never felt before. It's just bloody, and it's gross. There's a line: "We are rivals in the riot that's inside of us." I feel like that's what's happening in our culture. There's this civil war that's brewing. With Mike throwing the bass on top of it, it just sort of created this ultimate Green Day song. And I've never been more proud of a single before in my life. @



RADIOACTIVE SECRET

[Cont. from 81] Landfill, just down the road from his home in Belle Vernon, about 25 miles from Pittsburgh. It's been accepting fracking waste since 2010.

The end of the line for much of the radioactive solid waste produced from extraction, like drill cuttings and the sludge filtered out of brine, is the local dump. Kruell used to keep a pair of Geiger counters on the spice rack in his kitchen to monitor the regularly above-normal levels.

There are facilities that treat drill cuttings and sludges, "downblending" them with less-radioactive waste to obtain a brew with a radiation content low enough to be accepted at regional landfills. Otherwise, they have to be sent to a low-level radioactivity waste site out in Utah, says Troy Mazur, a radiation safety officer I speak to from Austin Master Services, a downblending facility in Martin's Ferry, Ohio. "I would not like to divulge too much about our process internally," says Mazur. "There is waste that comes in that goes directly to a low-level radioactivity site," he says. "It is all based on an economic decision."

A 2013 study co-authored by Resnikoff calculated that sending solid oil-and-gas waste like drill cuttings to a low-level radioactive-waste facility could mean as much as a 100-fold increase in cost, so there's an incentive for companies to get the waste into a regional landfill.

A letter from a whistle-blowing employee of Westmoreland to one of Kruell's neighbors last April told of "numerous overlooked DEP violations" and "dumping of frackwater material and sludge in excess of legal limits."

The company "is getting away with everything that they can," the letter said. "I am writing to you because I know your quality of life is being affected and I don't want you to get a raw deal." The Westmoreland Sanitary Landfill did not reply to questions from ROLLING STONE.

But what worries Kruell most is a metallic dust he has noticed speckling his bushes and grass, and the pain he gets when he mows his lawn. "The day after I cut the grass, I have pain in my bones so bad I can't move," says Kruell. "Like someone taking a drill bit and drilling into your bone without anesthetic."

"These are the people who I worry about most," says Weatherington-Rice, because metals like radium can easily become airborne with small clay particles in dust. "You put it up on top of the landfill and put a wind over it, what do you think is going to happen?" she says. "Radioactive metals and other heavy metals are going to settle out over communities and people downwind. They are all hazardous, and they will all kill you eventually if you get enough of them in you."

There are at least five landfills in West Virginia that accept drill cuttings, at least five in New York, 10 in Ohio, and 25 in Pennsylvania. Most of the drill cuttings are from fracking and can be radioactive. "We have never knowingly buried very large quantities of known low-level radioactive waste in a generic, municipal solid-waste landfill originally designed for household garbage," Bill Hughes, an industrial electrician who served 15 years on a board overseeing the municipal landfill in West Virginia's Wetzel County, wrote to the West Virginia Department of Environmental Protection. The dangers involved, he said, "might not be known for generations." In 2018, when I met Hughes, who is now deceased, he told me the issue of dealing with the industry's radioactive drill

cuttings "blindsided" state agencies. "They really weren't sure how to regulate this," he said.

The foul discharge of water passing through Westmoreland, called "leachate," flows downhill through a sewer pipe and into the Belle Vernon sewage-treatment plant, where superintendent Guy Kruppa says it was killing the microbes needed to digest the sewage. His facility has no ability to remove the radioactivity, he says. This means, as long as his plant was receiving the contaminated leachate, insufficiently treated sewage and radioactivity was being spewed into the Monongahela River, which runs through downtown Pittsburgh.

"What this place is, essentially, is a permit to pollute," says Kruppa. "It's a free pass to go ahead and dump it in the river, because we don't test for that stuff, we don't have to. It's a loophole. They found a way to take waste that no one else will take to the landfill and get rid of it in liquid form. Essentially, we are the asshole of the fracking industry."

Kruppa tried for months to make the Pennsylvania DEP act on the dilemma, but to no avail. "DEP has no evidence... that would indicate levels of heavy metals or radioactive elements in leachate," says spokeswoman Lauren Fraley. The agency is not worried about the leachate entering Pennsylvania rivers. She says the DEP concluded there was "no immediate or significant harm to human health or the environment, given the enormous volume of water in the receiving river."

But in May, a county judge ordered the landfill to stop sending the sewage plant its leachate. And there are risks even when there's a large body of water to dilute the contamination: A 2018 study found that in Pennsylvania's Allegheny River, oil-and-gas waste was accumulating in the shells of freshwater mussels.

"We are putting things in the river and don't know what we're doing, and we might be putting people at risk," says Kruppa. "At times it seems like I am the only one not playing ball here, and everyone else, including the DEP, is turning their heads and telling us there's no problem."

ESPITE DIRE CLIMATE warnings, the U.S. oiland-gas industry is in the midst of an epic boom, what a 2018 Department of Energy paper calls an "oil-and-gas production renaissance." Pipelines, power plants, and shipping terminals are being developed across the nation at a dizzying pace.

But in the excitement of this boom there is little mention of the pipes, pumps, and filters in these plants that will become coated with radioactivity. Or of the fountain of radioactive brine and drill cuttings spewing forth from wells. Or of the workers being exposed, the land being contaminated.

"One question I ask these companies," says Smith, the New Orleans lawyer, "'What have you done to go out and find all the radioactive waste you have dumped all over the United States for the past 120 years?' And the answer is nothing."

A 2016 lawsuit by environmental groups forced the EPA to reassess its monitoring of oil-and-gas waste, which it had not done since before the fracking boom. But in 2019 the agency concluded "revisions...are not necessary at this time."

When I checked in with Peter around the holidays he had collected a new batch of samples and said anxiety levels among brine haulers were at an alltime high. "The other drivers are getting scared," he says. "Guys are wanting to get tested." "The workers are going to be the canaries," says Raina Rippel of the Southwest Pennsylvania Environmental Health Project, a nonprofit public-health organization that supports residents impacted by fracking. "The radioactivity issue is not something we have adequately unpacked. Our elected leaders and public-health officials don't have the knowledge to convey we are safe."

But knowledge is out there. Radium can be detected in urine; a breath test can pick up radon. Because radium builds up in bone, even a body buried in a cemetery could convey details of someone's exposure, says Wilma Subra, a Louisiana toxicologist who first started tracking oil-and-gas radioactivity in the 1970s.

"There is a massive liability that has been lying silently below the surface for all these years," says Allan Kanner, one of the nation's foremost environmental class-action lawyers, whose recent cases have included PFAS contamination and the Deepwater Horizon oil spill. "The pieces haven't all really been put together, because the industry has not really been telling the story and regulators haven't been telling the story and local doctors aren't informed, but at some point I expect you will see appropriate and reasonable litigation emerge on this."

If so, it could have a devastating impact on the fossil-fuel industry, especially if tighter regulations were put in place and oil-and-gas waste was no longer exempted by the EPA from being defined as hazardous waste. "The critical component of the profit margin for these companies is that they can get rid of the waste so cheaply," says Auch of FracTracker Alliance. "If they ever had to pay fair-market value, they wouldn't be able to exist."

"It has been argued," says Liz Moran, with the New York Public Interest Research Group, "that if you close the loophole, you would put the industry out of business." When asked what would happen to the industry if the EPA exemption were removed, University of Cincinnati legal scholar Jim O'Reilly, author of 53 textbooks on energy development and other topics, replied with a single word: "Disaster."

Radioactivity "is the way into the Death Star," says Melissa Troutman, an analyst with the environmental group Earthworks. The industry is afraid of two things, she says, "losing money, and losing their social license." The high cost of drilling relies on a continual infusion of capital, and "the number of operational risks and bottlenecks continues to grow," states a 2018 article by the energy consultancy group Wood Mackenzie. But while the industry is continuously supported by Wall Street cash, social license may be a more difficult coffer to refill.

Paul Templet, the former secretary of the Louisiana Department of Environmental Quality and the first state official to tackle oil's radioactivity issue, is now 79 years old and lives with his wife in an adobe house in New Mexico. But he has to return to Louisiana once every couple of months to serve as an expert in lawsuits over oil-field contamination. In recent years, a growing group of landowners has discovered that the oil-and-gas wells that brought them riches also tarnished their property with heavy metals and radioactivity. "Almost everywhere we test we find contamination," says Templet. There are now more than 350 of these legacy lawsuits moving forward in the state. Proceedings are sealed, and it is difficult to tally sums across all cases, but Templet says it's fair to say that what began as a little nibble on the industry's pocketbook has turned into a forceful tug. "They've known for 110 years, but they haven't done anything about it," says Templet. "It's the secret of the century." @

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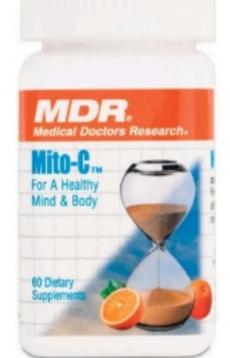
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Patrick Stewart

The legendary actor on the secret to great acting and Picard's evolution

What's the best advice you ever received?

Duncan Ross, a brilliant acting teacher, gave me a stern talking to. He said, "Patrick, you will never achieve success by ensuring against failure." I thought I understood what he meant: You've got to take risks. It was 30 years of being an actor before I really understood; now it's become

> Stewart stars in the series 'Star Trek: Picard,' out now on CBS All Access.

a habit of mine. Every night before I make an entrance onstage, I say out loud, "I don't give a fuck!" And it works. It takes away anxiety, stress, and all of those stupid wasteful things that don't help you at all.

You grew up in an abusive household. How did that experience shape you? My father was in the British Expeditionary Force, and the German panzers massacred them. He suffered from PTSD for the rest of his life. That was not recognized at the time, and it made many aspects of my life unpleasant. The sad thing is, I didn't know that he was suffering and needed therapy. I could do nothing for my parents when I was little. Nothing. I would put my body between my father and my mother and defy him, but it didn't often help. In their names, I'm able, through my charity work with families suffering from domestic violence and veterans coping with PTSD, to do more for them.

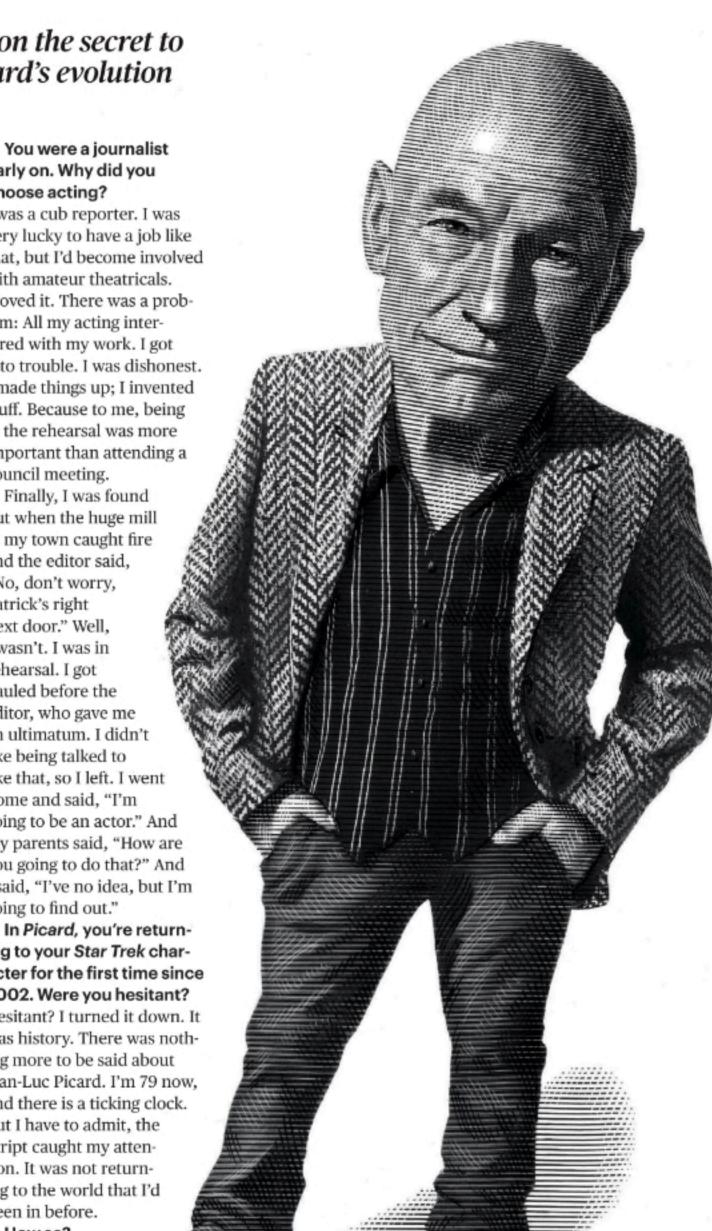
You were a journalist early on. Why did you choose acting?

I was a cub reporter. I was very lucky to have a job like that, but I'd become involved with amateur theatricals. I loved it. There was a problem: All my acting interfered with my work. I got into trouble. I was dishonest. I made things up; I invented stuff. Because to me, being at the rehearsal was more important than attending a council meeting.

Finally, I was found out when the huge mill in my town caught fire and the editor said, "No, don't worry, Patrick's right next door." Well, I wasn't. I was in rehearsal. I got hauled before the editor, who gave me an ultimatum. I didn't like being talked to like that, so I left. I went home and said, "I'm going to be an actor." And my parents said, "How are you going to do that?" And I said, "I've no idea, but I'm going to find out."

ing to your Star Trek character for the first time since 2002. Were you hesitant? Hesitant? I turned it down. It was history. There was nothing more to be said about Jean-Luc Picard. I'm 79 now, and there is a ticking clock. But I have to admit, the script caught my attention. It was not returning to the world that I'd been in before.

How so? The world we're liv-



ing in is a different place. Both our countries are in the same kind of predicament: We have a totally unsuitable person running the country. I use, as an example, the film Logan. No longer was Charles Xavier the compassionate intellectual sitting in his wheelchair; he was a totally broken person. When I thought about Star Trek, I used Logan as an illustration - we continued the themes of the X-Men movies, but there had been dramas, horror, and tragedies, and things were now grim and perilous.

You went bald very young. Was that hard to cope with?

Yes, it was. By the time I was 20, [my hair] was gone. I thought it meant my romantic life was over. What woman would go out with a bald 19-year-old? I thought,

"Romance is dead for me, so just throw yourself into your work, Patrick. Make the best of it."

You recently revived your one-man A Christmas Carol show. What has that classic taught you?

I'm seeing the story very differently. Because [of] what has happened in our world, I'm seeing it more as a political document than as a sweet, adorable Christmas story. It's full of bitter, savage attacks on the inequalities of life. Dickens wrote brilliantly about it. It's not about being rich or poor; but it's about, if you have resources, what do you do with them? You make them available to people who have less, and you do all that you can to care for them. SEAN WOODS





