

INSIGHTS

BOOKS *et al.*

FILM

Science at Sundance 2021

Like most events that have taken place since March of last year, the Sundance Film Festival—normally hosted in the cozy ski town of Park City, Utah—was held virtually in 2021. But what it lacked in celebrity sightings and snowy ambiance was more than made up for in the festival's assortment of provocative and timely offerings—from gripping accounts of the COVID-19 pandemic and California's wildfire crisis to mind-bending meditations on the limits of perception and the nature of reality. Read on to see what our reviewers thought of nine of the films that featured strong science and technology themes. —Valerie Thompson

Son of Monarchs

Reviewed by **Nia Imara**¹

Science and spirituality unite in *Son of Monarchs*, a new semi-autobiographical film by director Alexis Gambis that tells the story of Mendel, played by Tenoch Huerta

Mejía, a butterfly scientist from the small mining town of Angangueo in Michoacán, Mexico. Since childhood, Mendel has been enthralled by monarch butterflies, which arrive in Angangueo by the millions each year. An endangered insect that crosses two national borders during its annual 3000-mile migration from Canada, the monarch

leads Mendel to fantasize about a world in which humans can fly—across borders, for instance—while also imagining that the ethereal creatures are the souls of relatives who have passed on from this world.

Mendel and his older brother Simon were raised by their grandmother, who encouraged Mendel's curiosity about nature by sharing her own deep knowledge of the natural and nonmaterial worlds. Years later, her death brings Mendel home from New York, where he has spent the past several years working as a postdoctoral researcher in a biology lab. The occasion instigates the spiritual journey that drives the action of the film.

"This land belongs to no one," observes Mendel's uncle Don Gabino as he drives his nephew through town on the day of his return. Deforestation and the adverse environmental impacts of mining and climate change have compounded to wreak havoc on Angangueo. Simon's work in the mines drives an ongoing tension between the two brothers, leading Mendel to remark that these could be the last days of the butterfly, one of many allusions in the film to the mon-



arch as both a political and a spiritual symbol.

The film's cinematography is beautiful, alternating between flashbacks of Mendel's childhood—enchanting scenes of him and his brother playing in a forest filled with butterflies—and his life in New York, where we see him in the lab, peering through a microscope at the magnified scales of a multi-colored wing as he endeavors to understand why the monarch is so colorful. Like his namesake, Mendel is fascinated by the macroscopic consequences of the “invisible” genes. He has developed a technique that uses the gene-editing technique CRISPR to turn on and off the colors of the butterfly wing, one gene at a time.

Seeing a Mexican man portrayed as an innovative, intuitive scientist drawing inspiration from people in his life—women, in particular—who connect with the physical world in a metaphysical way drives home one of the most poignant themes of the film: Science is as diverse and connected with the spiritual as the people who practice it.

Son of Monarchs, *Alexis Gambis*, director, Imaginal Disc, 2020, 97 minutes.

A Glitch in the Matrix

Reviewed by **Valerie Thompson**²

A Glitch in the Matrix, a new film ostensibly about simulation theory—the notion that what we perceive as reality is nothing more than a convincing computer simulation—features no scientific experts. If it had, such individuals might have offered counterarguments to the testimony of the film's “eyewitnesses,” whose ardent belief that they are living in a simulation is generally accepted at face value. But like director Rodney Ascher's 2012 film *Room 237*, which centered on far-out fan theories advanced by obsessive viewers of Stanley Kubrick's 1980 film *The Shining*, *A Glitch in the Matrix* is not necessarily concerned with the veracity of the topic under consideration. It is, instead, a portrait of a particular subculture of people with a provocative worldview.

Featuring archival footage of a speech given by Philip K. Dick in 1977 in which the science fiction author revealed his belief that he was living in a constructed reality and clips of contemporary public fig-

ures who have either expressed support for (Elon Musk) or not ruled out (Neil deGrasse Tyson) the possibility that we are living in a simulation, *A Glitch in the Matrix* leans heavily into quasi-reality with vivid video-game-like animations and scenes from pop culture touchpoints including *The Truman Show* and, of course, *The Matrix*. Cleverly rendered avatars transform the film's main subjects into fantastical creatures—a decision that preserves their anonymity but does little to instill confidence in their assertions—while experts, including University of Oxford philosopher Nick Bostrom, whose 2003 article “Are We Living in a Simulation” compellingly argued in favor of simulation theory, appear unaltered, offering context to the increasingly sinister beliefs toyed with by some of the theory's advocates. (The notion embraced by some believers that other humans might be “nonplayer characters”—computer-generated avatars rather than fellow sentient beings—is “such a school shooter fantasy,” notes cultural critic Emily Pohtast, foreshadowing the film's harrowing retelling of one *Matrix* enthusiast's gruesome 2003 killing spree.)

Leaving aside the flawed evidence for simulation theory offered by the film's subjects—the instances of déjà vu and coincidence that they interpret as “glitches” and “synchronicities” but that are better understood as artifacts of our imperfect nervous systems—*A Glitch in the Matrix* lacks a cultural foil that might have placed the ideas presented in the film into broader perspective. Although their physical features are hidden behind avatars, one can infer that the simulation theory proponents that appear in the film are native English-speaking men with Western worldviews. It is perhaps not surprising that such individuals might come to believe that reality has been constructed especially for them. In a very real way, it has.

A Glitch in the Matrix. Rodney Ascher, director, Campfire, 2021, 108 minutes.

Taming the Garden

Reviewed by **Amit Chandra**³

In *Taming the Garden*, a surreal documentary from director Salomé Jashi, the evocative images speak for themselves. Colossal trees uprooted from rural communities in the Republic of Georgia creep down narrow village lanes and float across the open sea. But as work crews labor around the clock to remove, transport, and transplant the region's most beautiful trees, environmental concerns yield to larger themes of inequity and political influence.

The film begins with the technical dimensions of this herculean project. Heavy bulldozers and excavators rip into the earth to

tear the giant trees from their homes. Roads must be widened and reinforced to transport them through remote villages, which often requires the felling of more trees along the path. At the edge of the Black Sea, the trees are loaded onto barges and drift mutely along their journey.

Gradually, the communities from which the trees are sourced enter the frame. The film captures families in conflict as they decide whether to sell. The trees in question loom large in many owners' family histories and, in many cases, are now their most valuable economic asset. Once removed, they leave behind a scarred landscape and an emotional void. In one scene, a laborer argues with an elderly woman, suggesting that she plant a new tree, which will be just as tall in a few years. “Will I be alive in two years?” she replies.

The oligarch behind this project is not featured in the documentary, but his presence looms large behind every scene. His purpose is never articulated, although the conversations captured between villagers and work crews allude to his political and economic influence.

In the final scenes, we get a glimpse of the ultimate destination for the ancient trees, the Shekvetili Dendrological Park, a lush tourist destination owned by the oligarch's family. Giant steel cables anchor the transplanted trees to the ground as their root systems take hold, almost as if they are being held against their will. The gratuitous resources consumed to maintain the perfectly manicured grounds and whirring irrigation systems reveal the pathos behind the film's title.

The story told in *Taming the Garden* is ultimately a dystopian one. It reveals how a

community's natural wealth can be mined on the whim of a powerful individual and how impoverished people have little economic agency to push back against those who believe they can tame nature.

Taming the Garden. Salomé Jashi, director, Syndicado Film Sales, 2021, 91 minutes.

All Light, Everywhere

Reviewed by **Nia Imara**¹

The ideal of achieving complete observational objectivity seems to have been around for at least as long as the idea that such a feat might be possible to achieve. But both the idea and the ideal are dismantled in Theo Anthony's new documentary, *All Light, Everywhere*, a film about human perception and its limits, police surveillance, and, ultimately, power.

The film begins with a history lesson. A few years before the 1874 transit of Venus across the Sun, an astronomer named Pierre Jules César Janssen invented a device intended to record this elusive astronomical event with unprecedented fidelity. Étienne-Jules Marey would later improve upon Janssen's design, creating a “photographic rifle”—the first portable movie camera. Marey redirected his invention from the heavens and pointed it toward his fellow man with the firm conviction that it would uncover an entirely objective truth about the nature of reality. The film follows this fascinating history—science's attempt to capture objective images—uncovering the roots of the surveillance technology central to law enforcement today.

In one scene, a spokesperson for Axon International, a manufacturer of bodycams used by military and police departments around the world, demonstrates how to use the company's most popular “smart weapon,” the Taser. He shows the sharp prongs attached to the ends of long coils of wire, explaining in a breezy manner how they have to stick to “clothes or skin.” The link between cameras, surveillance, and weapons is clear.

Later, a police trainer who is teaching officers in the Baltimore Police Department how to use a bodycam tells his audience, “Cameras don't take sides.” The film's narrator, however, reminds viewers that “there's always a body behind the body camera.” Alluding metaphorically to the blind spot in the human eye, she declares: “At the exact point where the world meets the seeing of the world, we're blind.”

What I appreciate about this film is how it challenges underlying assumptions about the ideal of objectivity and clearly shows how attempts to control the framing of an image—whether scientific, social, or political—are at the heart of power dynamics. *All*



A mature tree uprooted from a rural Georgian community floats along the Black Sea in *Taming the Garden*.



Vivid footage from California's 2018 Camp Fire and Woolsey Fire drives home the devastation wrought during the state's deadliest fire season in *Bring Your Own Brigade*.

Light, Everywhere reveals how on many levels, throughout history, attempts to achieve objectivity have frequently resulted in failure and how such efforts have also been harmful to vulnerable, criminalized groups. As Anthony suggested in the Q&A following the Sundance screening of the film, perhaps rather than focusing on this unachievable goal, the more honest and just thing would be to “include ourselves in the act of telling the story.”

All Light, Everywhere. *Theo Anthony, director, MEMORY, 2021, 105 minutes.*

Bring Your Own Brigade

Reviewed by **Mike Gil⁴**

In 2018, California experienced the deadliest and most destructive wildfire season on record. The most devastating of the fires that year was the Camp Fire, which took an unexpected turn when it rapidly engulfed the working-class town of Paradise. Residents had little to no warning, and those lucky enough to escape their properties by car found themselves in gridlock on two-lane roads, surrounded on both sides by an inferno. Videos recorded by those inside these vehicles gripped the attention of the world. By its conclusion, the Camp Fire had claimed 85 lives and reduced most of Paradise to ashes. *Bring Your Own Brigade* is a documentary film that draws its audience into the

midst of these events as they unfolded, with first-hand footage and audio recordings as well as gut-wrenching interviews with rescue personnel and citizens who lived through the experience. But that is just the beginning.

The film brilliantly interweaves the timelines of devastation wrought not only by the Camp Fire but also the Woolsey Fire, which began on the same day and ravaged the wealthy enclave of Malibu. Juxtaposing the experience of disaster from both ends of the socioeconomic spectrum, the film paints a biting dichotomy. The role played by wealth inequality in shaping both the immediate and downstream effects of corporate-driven environmental calamities provides a powerful subtext throughout the film.

Following the play-by-play of the harrowing events of that day is a rigorous, systematic foray into how these kinds of wildfires originate, in an attempt to reconcile their unparalleled devastation with their apparent frequency and pervasive causes. It turns out that conventional wisdom about wildfires, their origin, and their role in our environment may be at the root of the problem. According to the film, Western wildfire troubles began with colonialism, as European settlers, many from regions lacking natural fire cycles, failed to anticipate the long-term consequences of building dense structural developments in fire-prone areas in western North America. And although touted by timber lobbyists as a critical service that reduces fuel for wildfires, industrial clear-cutting actually creates fields of debris and early-growth grasses, shrubs, and trees that serve

as fire corridors, spreading devastation to residential areas that may have been spared if old-growth forests had remained.

Although fire takes center stage in the film, *Bring Your Own Brigade* is ultimately about humanity, boldly shining a spotlight on aspects of human psychology and behavior that we rarely face and that, as the film unapologetically showcases, are likely to increasingly threaten our existence in a human-altered landscape.

Bring Your Own Brigade. *Lucy Walker, director, Good 'n Proper, 2021, 127 minutes.*

Luzzu

Reviewed by **Mike Gil⁴**

Luzzu, directed by Alex Camilleri (*Fahrenheit 451*, *Icarus*), is the first film from Malta to be screened at Sundance and is among only a handful of films that have been made on the Mediterranean island. Local fishermen, most with no previous acting experience, make up the majority of the cast. The scripted film takes a narrative-driven approach to communicating how climate change and ocean overharvesting affect the economically disadvantaged, who bear the brunt of these global problems, combining documentary-like interactions and cinematography in a way that makes it difficult to remember that the film is a work of fiction.

Luzzu takes viewers into the lives of Jesmark, played by real-life fisherman and



In *Luzzu*, fisherman and first-time actor Jesmark Scicluna embodies the frustrations of artisanal fishermen grappling with reduced yields and increased bureaucracy.

first-time actor Jesmark Scicluna, and his partner Denise, played by Michela Farrugia. When the couple's baby is diagnosed with a costly health condition, Jesmark faces a harsh reality: Diminishing returns from a sea overexploited by industrial fishing have rendered traditional fishing methods aboard his heirloom luzzu fishing boat increasingly impractical as a means for supporting his family. We follow Jesmark as he struggles to maintain a grip on both his fishing legacy—which spans at least four generations—and the financial needs of his young family, ultimately giving up his beloved luzzu and finding employment with an illegal fishing enterprise that sidesteps fisheries regulations that he sees as punishing small-scale fishermen for the sins of industrial fishing operations.

Jesmark's story of navigating uncharted waters highlights multiple paradoxes. Viewers learn, for example, about a program sponsored by the European Union that offers financial compensation to fishermen who decommission their vessels. The program, intended to facilitate sustainable ocean harvesting practices, appears to have had little effect on commercial fishing operations. By paying independent fishermen to give up their livelihoods, it has instead diminished small-scale, artisanal fishing. Meanwhile, Jesmark's interactions with Uday, a migrant worker whose

financial plight and murky residence status force him to engage in various illegal activities to get by, place the story in a broader, global context.

The film's power lies in the empathy it engenders for the characters it portrays, especially for Jesmark, who feels like the underdog fighting against a system that disenfranchises familial custom in favor of profit. The narrative impressively interweaves relatable dichotomies of various flavors: tradition versus modernity, family obligation versus personal aspiration, financial stability versus career fulfillment, and nature versus industry. But, at its core, *Luzzu* provides a distinctive, personal glimpse into the human experience at the front lines of a major sustainability crisis that extends far beyond the shores of Malta.

Luzzu. Alex Camilleri, director, Memento Films International, 2021, 94 minutes.

In the Earth

Reviewed by **Lindsey Brown**⁵

Against the backdrop of a raging pandemic, scientist Martin Lowery (Joel Fry) sets out for a remote research site to join a colleague who is studying a complex root system deep

in the forest. While being led to the site by park guide Alma (Ellora Torchia), the pair are brutally attacked and robbed. They continue their trek through the woods shoeless and without their gear, before encountering Zach (Reece Shearsmith), who lives in the woods and offers them food and shelter and bandages their wounds. The film shifts from unease to a tense fight for survival, as the pair are forced to join in Zach's arcane rituals by which he worships and seeks to gain the favor of the forest spirit Parnag Fegg.

Part thriller, part horror film, *In the Earth* offers viewers a thought-provoking comparison of the varied methodologies we use to understand and interact with nature as scientific inquiry and ancient tribal ritual begin to blur. In one scene, riffing on Arthur C. Clarke's famous law ("Any sufficiently advanced technology is indistinguishable from magic"), Zach comments that "photography is like magic—then again so is all technology if you don't know how it works." The line between ancient alchemy and modern-day science becomes even thinner after Martin and Alma find Martin's colleague Olivia (Hayley Squires) and discover that her work is more similar to Zach's than it first appears.

Although the pandemic is not the main focus of the story, *In the Earth* was filmed over 15 days during the height of the

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COVID-19 pandemic and it aims to capture the zeitgeist of our current era, even as its vivid forest setting offers a brief respite for those of us who find ourselves stuck inside for days on end. The film's main characters are thrust into extraordinary circumstances controlled by forces they do not fully comprehend, individuals manipulate science and myth to advance their own aims, and seemingly disparate people must work together to survive.

"I wanted to make a film that contextualized the moment," explained director Ben Wheatley in the press notes accompanying the film. To ignore the pandemic would have been "like making a film in 1946 and not referencing the fact that everyone had just gone through the second world war."

Editor's note: The content of this review is solely the responsibility of the author and does not necessarily represent the views of the U.S. FDA.

In the Earth, Ben Wheatley, director, Neon, 2020, 107 minutes.

Fire in the Mountains

Reviewed by Amit Chandra³

Amid breathtaking mountain views of the Himalayan foothills in Northern India, hardworking Chandra (Vinamrata Rai) manages her own household alongside a homestay for visiting tourists. When necessary, she carries her preteen son, Prakash (Mayank Singh Jaira), up and down the steep trail that serves as the remote village's only means of access. Prakash remains wheelchair-bound following a recent injury, despite his physician's insistence that there is no medical reason preventing the boy from walking.

Chandra carefully hides her earnings from her frequently intoxicated husband, Dharam (Chandan Bisht), so that she can pay for Prakash's medical appointments. Dharam, meanwhile, spends his time searching for the hidden cash in order to finance a religious ceremony that an eccentric faith healer has promised will cure his son.

Chandra's daydreaming daughter Seema (Harshita Tewari) and a lecherous local politician round out *Fire in the Mountain's* cast of complex characters. Seema is a top student at the local high school, but her attention is increasingly diverted toward romantic interests and the seduction of social media. Meanwhile, the politician offers his support to ensure that a road is built to Chandra's village, although his offer comes at a steep price.

Fire in the Mountains is a tale of contemporary India that treads familiar yet fertile storytelling themes: urban versus rural, ambition versus apathy, and modernity versus tradition. These tensions are further underscored by optimistic radio reports on the country's progress that appear throughout the film and visuals that convey the harsh realities of village life.

Writer and director Ajitpal Singh was inspired to make this film after the untimely passing of a female cousin, who died after a brief illness when her in-laws took her to a faith healer rather than a hospital. Given his cousin's high level of education, Singh was convinced that she would not have



Chandra struggles to reconcile modern medicine with traditional healing practices in *Fire in the Mountains*.

made that choice on her own, that someone else made that choice for her. In the film, Chandra wrestles back her agency from family, community, and state.

The film's tension builds toward an explosive and chaotic climax, shaking loose each character from their self-possessed roles: Chandra from her restraint, Dharam from his indifference, and even Prakash, whose affliction proves to be beyond the reach of either parent's cure.

Fire in the Mountains, Ajitpal Singh, director, Jar Pictures, 2020, 83 minutes.

In the Same Breath

Reviewed by Lindsey Brown⁵

On 1 January 2020, the Chinese state news reported that eight doctors had been arrested for spreading rumors about a new form of pneumonia. This brief report

would inadvertently become the first official acknowledgment of COVID-19. *In the Same Breath*, by filmmaker Nanfu Wang (*One Child Nation*), examines the impact that misinformation about the coronavirus has had on people in China and the United States.

As the documentary begins, Wang recounts how she was returning to the United States from China on 23 January 2020, the same day that the lockdown in Wuhan was announced. After chest x-rays started flooding Chinese social media platforms because the hospitals were overwhelmed, she assembled a team of 10 camera people who risked arrest as they documented life under lockdown and captured the drama that was unfolding.

"When the government is telling us where to look, they're also telling us where not to look," advises Wang. Footage from Chinese New Year celebrations and large government meetings where Communist Party leaders assured the Chinese public and the rest of the world that everything was under control is juxtaposed with contemporaneous social media posts, footage of busy hospital wards, off-camera interviews with scared patients and frustrated hospital staff, and closed-circuit camera footage of patients with respiratory symptoms seeking care in December 2019 at a clinic located near the market where the virus is thought to have originated.

Turning the lens from China to the United States, Wang's U.S. camera team captured footage documenting how misinformation likewise wreaked havoc on the U.S. health care system, as evidenced by the number of deaths witnessed by traumatized health care workers and by the emergence of large groups of pandemic-denying protesters. Even as both countries' leadership cited the other as a foil to extol their own virtues, the film reveals how citizens in China and the United States became casualties in what would ultimately become a futile quest to maintain appearances.

The film ends with scenes from Wuhan's eerily "normal" 2020 New Year's Eve celebrations. As fireworks explode over packed city streets, Wang reminds us that normality has led to our current circumstances. Insisting on rushing back to normal, she cautions, is not the answer.

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In the Same Breath, Nanfu Wang, director, Stay At Home Production Inc., 2021, 95 minutes.

10.1126/science.abg9908

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Science **371** (6533), 984-989.
DOI: 10.1126/science.abg9908

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