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e-flux journal #130 — october 2022 Eben Kirksey, Areeya Tivasuradej, Blake Palmer, Myint Than, Anne Atchara Changwong, Pietro Lo Casto, and Maya Kóvskaya
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Everything you know about the origins of the coronavirus pandemic in Wuhan might be wrong. While Donald Trump blamed nefarious Chinese scientists for creating the “kung flu,” and journalists insinuated that the “Bizarre Wuhan Wet Market Menu” spawned the pandemic, many well-informed experts had their doubts.¹ Rather than focus attention on leaks from labs or the live-animal markets of Wuhan, historian Andrew Liu suggested that we should pay more attention to the banal dynamics of the world market. Wuhan is a sprawling metropolis of over twelve million people. It is larger than New York City, but in China, Wuhan is regarded as a “second-tier city.” Stories of global flightpaths and linkages – connecting Wuhan to places like Germany, Thailand, and Iran – became familiar to anyone who followed the virus as it departed from China along multiple lines of flight.



Map of Hankow, China, 1877. The name “Wuhan” came from the city’s historical origin from the conglomeration of Wuchang, Hankou, and Hanyang, which are collectively known as the “Three Towns of Wuhan” (□□□□).

“What all these stories have in common is how unremarkable they are,” wrote Liu in March 2020. “This is contemporary global interchange at its most prosaic.”² Like most researchers at the time, Liu assumed that Wuhan was where the virus originated. While some scientists still are pinning the blame on Wuhan’s live-animal markets, virologists who specialize on the ecology of animal-borne diseases are now studying the emergence of the coronavirus pandemic with a much wider lens.³ What if Wuhan was not the starting point of the pandemic, but just the site of many super-spreader events that amplified processes of global circulation already underway? Did people who were involved in prosaic stories of global travel – tourists, business travelers, international exchange students – bring the virus to Wuhan and then further hasten its global spread?



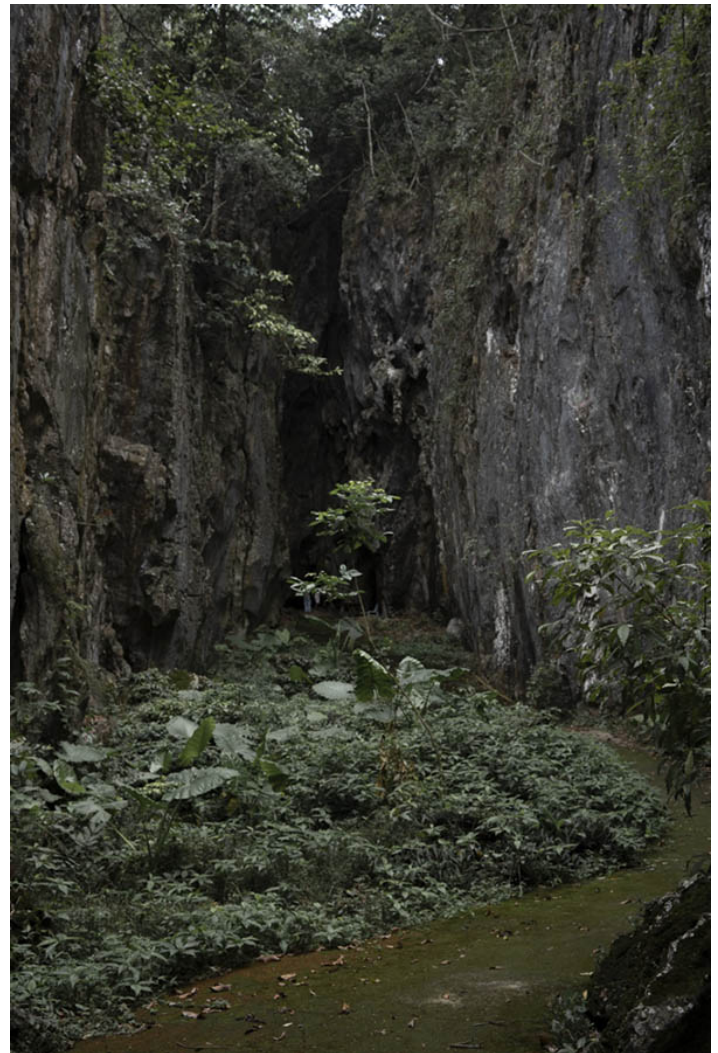
Krasue is a nocturnal female spirit in Southeast Asian folklore. It manifests itself as a woman with her internal organs hanging down from the neck, trailing below the head. Screenshot from *Inhuman Kiss*, a 2019 Thai supernatural horror film directed by Sitisiri Mongkolsiri.

Blood samples collected long before the pandemic reveal that many people in Asia have been living with coronaviruses for years.⁴ A recent scientific paper in *Nature* estimates that around “66,000 people are infected with SARS-related CoVs each year in Southeast Asia.”⁵ While initial reports from Wuhan in 2019 suggested that scientists had found a “novel” coronavirus, the viral taxonomists who later classified the virus concluded that it was the same species as SARS – the respiratory virus that was first reported in 2003.⁶ Scientists named the new pandemic virus SARS-CoV-2, recognizing its kinship with SARS, even though the public and many doctors persisted in calling it Covid-19.

Viral species are best understood as *mutant swarms* – clouds of rapidly changing infectious agents. Swarms contain a multiplicity of strains, which each have distinct properties, making them highly unpredictable.⁷ The pandemic coronavirus strain that people noticed in late 2019 was not radically different from earlier strains of SARS-CoV – it simply acquired a constellation of subtle mutations that enabled it to find new ways to exploit human bodies and our global systems of travel. The latest findings now suggest that SARS-CoV has been circulating undetected for decades, if not centuries. This mutant swarm was largely beyond the purview of our collective awareness, even while different variants moved among animals and people.

This essay builds on the latest scientific studies of coronavirus ecology. Responding to Liu’s call to study banal travel practices, we speculate about how tourism in Southeast Asia may have played a role in the emergence of the pandemic. Tourism is a largely overlooked market force that has transformed flows of capital, people, and viruses through regional and global networks. Broadly, we are interested in how tourism has influenced the speed and intensity of interactions between human bodies and other creatures in more-than-human worlds. Together, the team that coauthored this text visited one kind of popular destination – Buddhist temples in Thailand – where tourists are having close

encounters of the viral kind. As a team we brought together different kinds of expertise – related to multispecies ethnography, Buddhist philosophy, and contemporary Thai culture – to understand these encounters through differently situated perspectives. Our trip took place in May 2022, just as the international restrictions on travel to Thailand were starting to ease. Thai temples in bat caves regularly attract visitors from China, Europe, and the Americas. As we ventured into places where bats, monkeys, people, and multiple species of viruses meet, we paid attention to chance encounters and contingent events in everyday interactions.



Entrance to the Bat Cave at Wat Tham Pla, Chiang Rai Province, Thailand, May 2022. Photo: Pietro Lo Casto.

Evidence from blood samples suggests that people living near bat caves in Thailand were exposed to SARS-related coronaviruses before the pandemic started.⁸ Bat caves have long been used as Buddhist temples in Thailand and many other parts of Southeast Asia. In studying these temples as multispecies contact zones, our aim was to avoid the rhetoric of pandemic blame. Biosecurity initiatives have recently intensified

epidemiological surveillance of “virulent zones” where particular kinds of animals, lifestyles, and peoples have been blamed for collective suffering during the pandemic.⁹ Instead of opening the door to more surveillance in the future, we propose thinking seriously about experiences of luck in Thailand, in the context of viral interchange.

One influential infectious disease expert, whom we met at a workshop in Bangkok, used the idea of luck to explain the dynamics that take place when a virus tries to infect a host. Most viruses usually meet a dead end when they jump across species boundaries. Only a small percentage get lucky, he said. Three of us – Eben Kirksey (an American cultural anthropologist), Areeya Tivasuradej (a Thai master’s student in geography), and Maya Kóvskaya (a scholar who has worked in Asia for two decades) – were visiting Bangkok to interview local specialists who study bat viruses. Our chance encounter with an international expert who was visiting Bangkok from Washington, DC helped us understand the thousands of spillover events that take place every year in Southeast Asia, as SARS coronaviruses jump from animals into people.¹⁰ Imagine that you are in Las Vegas, the infectious disease expert said, playing a huge row of slot machines. If you are trying to get three cherries to line up, this is a very low-probability event, but one with a big payout. The odds are on the house, he said. But if you pull the slot machine lever sixty-six thousand times, then the statistics are in your favor. You will get three cherries at least a handful of times.

With this gambling metaphor, this infectious disease expert was trying to get us to think about the complex molecular dynamics that need to line up for a virus to replicate and proliferate in a new host species. For coronaviruses, the spike protein found on the surface of the viral particle needs to line up with the host cell’s ACE2 receptor. Once the spike docks in the receptor, the virus fuses with the cell. At that point the virus needs to interface with the cell’s organelles. The ribosome is an important organelle where viral genes are turned into proteins. In the Golgi apparatus – an organelle that looks like a bundle of deflated balloons – proteins are modified and turned into new viral particles. Viruses make a gamble with each fresh constellation of genetic mutations. New mutations might be harmful to the virus, since a change can break something that is already working well – foreclosing existing lively molecular processes and pathways for future transmission. Or a new mutation might enable the virus to find a novel exploit in the host – like the “zero-day exploit” that lucky hackers might discover in a computer system – creating an

opening for flourishing in new bodies, populations, and species.

Evolutionary history, like human history, contains many false starts – accidents, small deviations, or errors – that can give rise to new forms of life or power. Sometimes false starts in one direction can become significant beginnings along a new line of flight.¹¹ Getting lucky in a particular host cell – with subtle changes to proteins that might better interface with receptors and organelles – can open up vast new populations of future hosts in that animal species. When the bodies of multiple species are animated by the accelerating speed and velocity of contemporary capitalism, a virus can get super lucky if it can become promiscuous – able to readily jump among species, like SARS-CoV-2.

Hopes about “getting lucky in Thailand” are usually associated with sexual promiscuity, at least for international visitors. Contemporary images of Thailand as a place for sex tourism can be traced to the Vietnam War, when American soldiers found opportunities for sexual exploits during formal “Rest and Recuperation” leave from the military. During the battle for hearts and minds that took place during the Cold War, the people of Thailand found that their own ideas about luckiness and happiness were being transformed by outsiders. Happiness was framed in the terms of economic development and modern prosperity that came with US foreign aid.¹² As Thailand became a paradise for foreign tourists who sought sexual adventures as well as encounters with “exotic” animals and cultures, people in the Land of Smiles learned to live with the desires and demands of powerful foreigners. Ideas about happiness and luckiness became complex and ambivalent in Southeast Asia.

In approaching the subject of happiness and luck in Thailand, we are thinking with and against Anglophone ideas about serendipity, contingency, and potentiality.¹³ We visited Thai Buddhist temples where local devotees and pilgrims from around the globe seek luck (*chohkdee*, or good fortune and fate). Hopes about getting lucky, for many pilgrims, are focused on worldly opportunities. Many temple visitors seek winning lottery numbers, luck in business deals, or success in personal romance. Thai temples are also places where people seek happiness (*khwamsuk*, inner peace). Many temples have successfully integrated secular values related to prosperity with practices of Buddhist meditation that aim to achieve *nirvana*.¹⁴ Pushing these ideas into spaces where tourists, viruses, and multiple species meet, we ask: Are people generally getting lucky at Thai temples, as diverse kinds of coronaviruses mix and mingle in the bodies of bats, monkeys, and people? Can viruses and people be “happy”

together? Did an unlucky tourist visiting a Buddhist temple pick up a virus with pandemic potential?

The new wave of viral theory we are generating with this *e-flux journal* special issue shows that it is increasingly difficult to distinguish “us” (the hosts) from “them” (the viruses). Our genomes are collections of viral junk that has been repurposed for new uses (see Rachel Vaughn). Our bodies and our selves are entangled in intergenerational viral processes that scientific researchers are just starting to understand (see Stephan Guttinger). Some virologists, admittedly a relatively small minority, have lately been suggesting that we should get beyond a general virophobia and instead embrace most viruses with the idea of symbiosis.¹⁵ Most viruses seem to have benign effects on their hosts, and some – like the *Vaccinia* virus that became the first vaccine – can have beneficial effects. Symbiosis literally means “living together,” and symbiotic partners can have good, bad, or pluripotent effects on hosts.¹⁶ Living with an active viral infection can stimulate a host’s immune system and help protect them from new viral guests that might be pathogenic. In this text we will push this conversation forward, using ideas about luckiness and happiness to better understand the symbiotic arrangements that have emerged at Thai Buddhist temples.



Bat guano at Wat Tham Pra, Chiang Rai Province, Thailand, May 2022, Photo: Pietro Lo Casto.

Viral Exposures in the Bat Temple

The pair of Naga dragons at the bottom of the mountain were formidable, with multiple heads and long bodies that snake up and around the limestone cliffs. Steep stairs climbed up between their serpentine bodies, winding around trees and rock outcroppings with many twists and turns. Most of us carried long bamboo sticks, a defensive measure recommended to us by the temple monks, who warned us that

monkeys might attack as we climbed up to the bat cave. Myint Than, a former Buddhist monk from Burma who is now a master’s student in social sciences, decided to not carry a stick – saying that he wanted to be in a risky and vulnerable position to see how the monkeys would respond. No monkeys were visible as we ascended from the main temple complex. At the top of the stairs there was a small ravine leading up to the entrance of the cave. A statue of a boyish figure, perhaps a novice, wearing a fresh red robe and holding a black alms bowl was in a small grotto shrine tucked into the cliff face. An ancient Chinese-style statue with fading features was next to the boy. The older statue was shrouded in a pink shawl and had gold paint around the head, like a crown.

Our team was climbing to reach a shrine inside the upper cave at Wat Tham Pla, a Buddhist temple in northern Thailand, popular with tourists from around the world because of the hundreds of monkeys – Assamese macaques, or *Macaca assamensis* – that live on the grounds. The monkeys and tourists share the temple grounds with a host of other animals, including dogs, fish, and crocodiles, as well as multiple species of bats. Horseshoe bats (*Rhinolophus* species), the kind of bat that is known to carry diverse kinds of coronaviruses, live here.

As we approached the entrance of the bat cave, we noticed electrical wires snaking inside. When we climbed the stairs up into the darkness of the cave’s mouth, we were all hit by the smell. “The first impression when you walk in is the pungent smell of urine,” said Anne, a Thai plant-based chef. The odor was very strong and there was a damp feeling in the air. “It’s like a big bathroom,” she added. Blake, an American writer, was reminded of urban landscapes: “The sense memory it triggers for me is walking in an alley in New York City where people have stopped for street pee, and it has soaked into the concrete a little bit.” Myint Than observed: “It is humid. There is a smell of rock and a smell of fungi, but the strongest smell is the poop and the pee of the bats. It is very stinky.” He made a V with two fingers in front of his face, in a peace sign of sorts, saying that it was a “sharp sensation” going up through his nostrils into his brain. Pietro, an Italian visual artist, said: “It reminds me of an underground garage. It’s sticky, because I feel sticky under my feet. Sticky and sour.” We laughed as Eben, the anthropologist, said: “With a touch of sweet.”

Our research interests primed us to notice these smells and the soundscape. As we entered the main atrium of the cave, the drone of cicadas and katydids from the forested mountain reverberated down through long tunnels that

opened up to the sky. Pockets of light and waves of sound bounced off the walls and dissipated. A couple of flies buzzed around the cave as they slowly circled, but there were no mosquitos. We immersed ourselves in the lively social and multispecies worlds that came together at the cave temple.

The main altar had a smiling Buddha sitting in the lotus position, draped in a yellow and orange robe. The statue's eyes were serenely closed and his face was covered with flaking gold paint. His lips had a reddish tint. Small, studded spikes, a rendering of his hair, rose to a point on his head. A large stupa, with a Buddhist relic inside, pointed up into the dark cavern behind him. As we played our lights across the ceiling, bats started fluttering and chattering overhead. We heard the soft rustle of wings as they shifted to new perches. As they flew, some made audible chirps, squeaks, and clicks.

Before this encounter, Alice Hughes, a conservation biologist who studies the bats of Southeast Asia, told us that Buddhist temples like this one have become refuges for vulnerable animals that are struggling to survive in the Anthropocene.¹⁷ As plantations, mining operations, and sprawling cities encroach on bat habitat, temples have become one of the only places where bats can survive. "In the best-run caves, you'll have one chamber that is full of your Buddhist statues and may have lights," Hughes said. "And then you'll have the dark part of the cave that humans don't really go into. And that's where you'll find a lot more species." Most bat species do not tolerate parts of the caves that are "full of people, incense, and lights," she added.

A pair of women arrived to pray as we were milling around the cave. One was wearing a long red skirt that was embroidered with traditional Hmong symbols – stars and snails – and a colorful jacket. The Hmong have historically lived in the Zomia highlands of Southeast Asia where, according to James Scott, they have been fugitives for two millennia – escaping the taxes, slavery, warfare, and epidemics of the lowlands.¹⁸ Hmong religious practices are generally pantheistic – oriented towards a diverse variety of natural and supernatural forces living in and animating all things.¹⁹ In northern Thailand, many Hmong refugees who fled wars in other parts of Southeast Asia during the late twentieth century found their religious imagination captured by charismatic Thai Buddhist monks.²⁰

As we tried to remain unobtrusive, the two Hmong women stepped forward to pray at the central Buddha statue near the back of the cave. Their family – a few children and a man – were waiting outside, at the cave entrance. The

women approached the platform leading up to the altar and removed their shoes before stepping barefoot onto the raised tile floor. They walked through some of the bat guano strewn in front of the altar and then cleaned off a small spot on the floor with wet wipes. Kneeling down, directly onto the floor, they performed a series of deep bows, or *krab*, with their foreheads and palms of their hands coming into contact with the floor where traces of guano lingered. Throughout the prayers they wore face masks, in compliance with Thai government regulations for wearing masks indoors during the coronavirus pandemic.

The bats were unperturbed as the Hmong women prayed, but their chattering became more animated as we wandered deeper into the expansive cavern – shining our flashlights into nooks and crannies of the vaulted ceiling, struggling to identify different species. We were hyperaware that simply by being there, all of us – and the Hmong women – were at risk of becoming patient zero in a new coronavirus spillover event. We also wore masks, and remained socially distant from each other, as we watched the women repeatedly put their faces on the floor. Despite the modest precautions the women took with the wet wipes and masks, we were anxious. Were we witnessing one of the sixty-six thousand coronavirus spillover events that happens every year?

It would be easy to react with disgust to this scene. Here we were, in a place that smelled like a dank alleyway in New York, where people were apparently exposing themselves to viruses that had the potential to spawn a new pandemic. Linger in this multispecies contact zone, we contemplated the ongoing exchanges of viruses between people and other species, while thinking with care about the religious significance of the prayers.

The women were chanting together in Pali, the language used in the texts that form the Theravada Buddhist canon. Today, Pali is primarily used for Buddhist study and in ritual practice, which indicates that the women had formal or informal Buddhist education and a practice connected to the language. The mode and content of their worship was not unusual for Thai Buddhists. The fact that they recited their prayers in unison and from memory suggests not only that was this a common routine for them, but that they often did it together. They recited three chants in Pali, including the Saṅgha chant, over and over: "The Community (Saṅgha) of the Blessed One's disciples – worthy of gifts, worthy of hospitality, worthy of offerings, worthy of respect – the incomparable field of merit for the world."

Some of the keywords in the Saṅgha chant,

like “hospitality” and “gifts,” are central to *The Parasite*, a classic text by Michel Serres that is a playful invitation to reimagine relationships with infectious agents that overrun our bodies and engender metamorphoses. The book was written in French, and Serres makes much of the fact that one of his keywords, *hôte*, has an ambiguous meaning – signifying both host and guest. While he celebrates the playful ambiguity that takes place when we give and receive during social and ecological interactions, Serres ultimately concludes: “It might be dangerous not to decide who is the host and who is the guest, who gives and who receives, who is the parasite and who is the *table d’hôte*, who has the gift and who has the loss, and where hostility begins with hospitality.”²¹

One word in the Saṅgha chant does not have an easy equivalent in English, French, or other languages associated with contemporary cultural theory. *Punna*, in the language of the original Buddhist Pali Canon, is typically translated as “merit.” People make merit at Buddhist temples by praying, offering donations to the monks, and helping with temple maintenance. Merit is connected to ideas about transforming or overcoming suffering through good thoughts or actions. Making merit produces a shield that protects individuals from harm and danger both in the realms of the seen and unseen. Broadly speaking, Buddhist teachings in Southeast Asia emphasize that the human body is not autonomous, but linked to intergenerational cycles of life and death. While practitioners cannot stop getting old, becoming sick, or dying, they can make merit at the temple to transform or overcome difficult situations. By making offerings, by exchanging gifts and material substances with unseen forces and beings, devotees aspire to get lucky and become happy.



Chien Tung sticks, cylindrical container with 18 inscribed sticks.

Next to the platform in front of the huge Buddha statue, where the women were saying prayers, there was a bowl for food offerings, a box for monetary donations, and a red plastic cup with *siamsee* fortune-telling sticks. *Siamsee*, sometimes called “lottery poetry” in English, each have a number that corresponds to one of several poetic fortunes that, in this cave, were posted to the right of the altar. These sticks are spiritual tools for making sense of the uncertainty of contingent events. They promise to unlock the secrets of luck (*chohkdee*), or good fate. These objects oriented visitors towards the pursuit of luck, or good fortune in the material world.

Thai ideas about luckiness resonate with Sara Ahmed’s theoretical work about happiness. Ahmed reminds us that in the Middle English of the 1500s, the word happy “meant having ‘good *hap*’ or fortune,’ to be lucky or fortunate.” *The Promise of Happiness*, Ahmed’s influential book, disavows “happiness” as an aspirational ideal. Still, she suggests that we might “return to the original meaning of happiness,” with the Middle English idea of *hap*, since “it refocuses our attention on the ‘worldly’ question of happenings.”²²

Worldly happenings – chance encounters and contingent interactions – do not always result in happiness or luckiness for all who are involved. In the context of viral exposures, getting lucky (from the host’s point of view) might mean not picking up a new infectious agent. From a viral point of view, getting lucky means finding yourself in a host where you can come alive. Happiness and luckiness are not zero-sum games in multispecies worlds. While hospitality can expose a host to hostility, sometimes a viral infection can result in a stable symbiotic arrangement.

Generally speaking, bats seem to be living happily with many kinds of viruses. Bats have “an

exceptional ability to host viruses without presenting clinical disease,” according to a paper in *Nature*.²³ In addition to harboring a riotous diversity of SARS-related coronaviruses, bats can also host other viruses – like Hendra, Nipah, Marburg, and Ebola – without becoming sick. Research into basic bat biology is ongoing, as scientists seek to understand how they seem to flourish while living with viruses that have serious pathogenic potential.

People who routinely pray at Buddhist temples in the bat caves of Southeast Asia also seem to be getting lucky with their viral exposures. Generally, they do not seem to be getting seriously sick.²⁴ Coronaviruses seem to have been circulating among bats, people, and multiple other species at these caves for decades, if not hundreds or even thousands of years. Wat Tham Pla was built in the 1930s, but other caves in Thailand have paintings that have been dated to around two to three thousand years ago. Caves were also used during times of warfare and conflict for hiding food and people. Regular exposures to bat coronaviruses may have given many people in Southeast Asia protection from viruses like SARS-CoV-2, and other viruses with pandemic potential.

Monks protect bats and other animals that find refuge in their shrines. Making a speculative leap in the realm of biomedical knowledge, we suggest that the monks may be getting indirect health benefits in return. Scientific research shows that people living near these bat caves have antibodies to SARS-related coronaviruses, which may confer some protection against disease from SARS-CoV-2.²⁵ Alice Hughes told us: “People have acquired immunity” to bat coronaviruses near the temples, but “if you have people visiting the area who are naive, they may be more vulnerable.” Naivete generally means a lack of wisdom or good judgment, but Hughes was using this word in the technical sense of immunology. Someone who is immunologically naive has never been exposed to a particular pathogen, and lacks protective antibodies. Thus, it is possible that a naive tourist gave rise to the coronavirus pandemic.

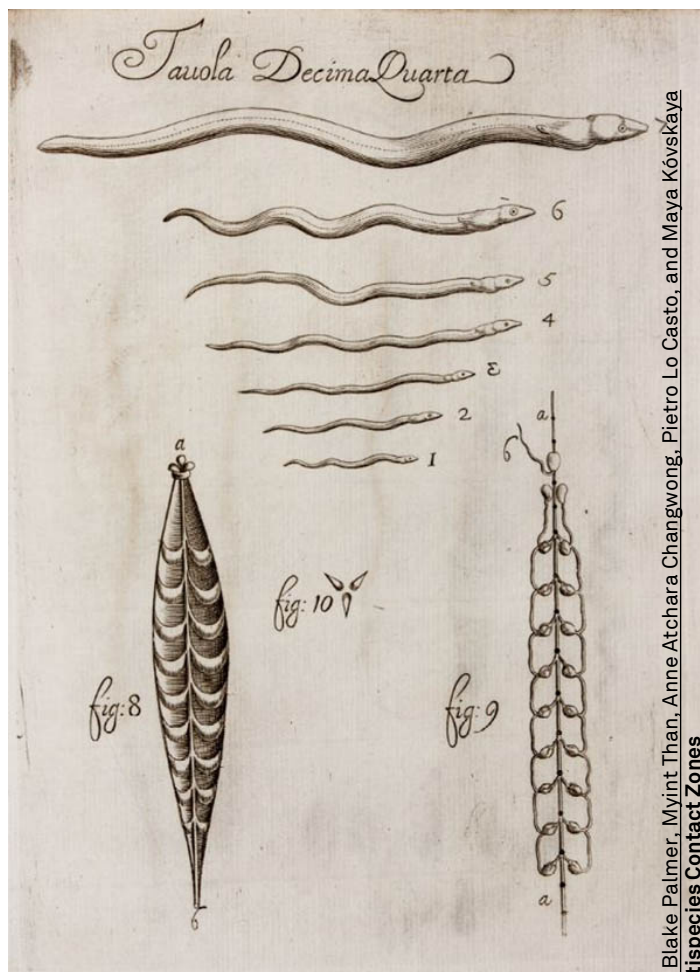
Cosmopolitan travelers have a long history of spreading diseases like smallpox, measles, and typhus around the world. Immunological naïveté to different microbes was spread unevenly across the globe when Europeans began their conquest of the Americas in the fifteenth and sixteenth centuries. Many Indigenous peoples were decimated when Europeans, with acquired immunity to dangerous pathogens, brought new infectious diseases with them during colonial military campaigns.²⁶ In other places, like Africa, endemic infectious diseases produced what Alfred Crosby calls the

“white man’s grave.” Legions of immunologically naive colonizers have died over the centuries.²⁷ Naïveté is still spread unevenly around the planet. Fleet-footed international travelers are now relatively well protected against known pathogens, with vaccines against things like yellow fever and medication to protect against malaria infections. But vaccines are unable to protect international travelers from emergent diseases that have yet to be described by medical scientists.

During our visit to the bat cave at Wat Tham Pla, in many ways we were naive too – vaccinated against SARS-CoV-2, but likely still vulnerable to infection from other bat coronaviruses. None of us became sick after this visit to the cave, but perhaps we were infected with a new symbiotic viral companion. (During a trip to another bat temple – Wat Tham Pra on the Kok River – we inadvertently stepped in bat poop, after following the rules and taking off our shoes at the cave entrance.) It seems that we were lucky during our brief ventures into the bat caves of Thailand.

We did not follow the Hmong women home to see if they became sick after praying in the cave. While we were preoccupied with the viral exchanges that were likely taking place – in biological realms of the unseen and the unknown – the women, and many other worshippers who routinely pray in bat caves, were engaging with a different unseen realm populated by deities, spirits, and hungry ghosts. The cave was a contact zone in multispecies and spiritual dimensions – encounters here had the potential to transform the luck and happiness of us all.

Real risks and dangers existed alongside generative and life-affirming happenings in this cave. Fuzzy mold was thriving amongst piles of bat guano and dead insects. There were patches of green foliage sprouting from layers of organic debris that were slowly drifting onto the cave floor through an opening in the ceiling, as the sounds of bat chirps, crickets, and cicadas intermingled with Buddhist chants.



A plate from Francesco Redi's *Osservazioni intorno agli animali viventi che si trovano negli animali viventi* (Observations on living animals found inside living animals), 1684.

Joy in Multispecies Worlds

As we left the cave, we reflected on the regenerative processes that were taking place, while walking back down towards the main temple complex. A group of monkeys – the Assamese macaques that the monks had warned us about – clambered in the surrounding trees and ventured down to meet us on the ground. As some of us brandished sticks, others tossed bananas towards the group. Vendors had sold us the bananas earlier in the temple parking lot, as an offering to the monkeys. We had been actively enlisted in the ecosystem of temple exchange – with commercial transactions, interspecies gifts, and possibly infectious microbes. Mixed emotions were at play during our fleeting encounters with the resident monkeys. Feelings of delight – when a small monkey made a lucky catch, snagging a banana in midair – mixed with antagonism and aggression as bigger monkeys moved in, trying to secure the lion's share of the food. Affects reverberated and intensified as we all navigated a risky and lively encounter.

Feelings of joy were later apparent in the abbot – the head of the monastery – when we talked about our encounters with the monkeys.

The abbot has worked to foster a safe space for dynamic multispecies encounters at Wat Tham Pla. He is the one who encouraged us to carry sticks and wallop the monkeys if they got too close. When large busloads of tourists show up and start throwing bananas, chaotic scenes sometimes erupt, situations that are full of chaos, laughter, and surprise. But sometimes these encounters end with a hapless tourist getting seriously hurt – with a monkey scratch or a bite. While we talked, the abbot called over a child, a novice monk, who showed off scars across the back of his head from a violent interaction with a monkey. Even in the telling of this tale, there were smiles and laughter in the room. The monks were not heartlessly laughing at the novice, but laughing with him as they talked about living with antagonism in a dynamic multispecies community. They had experienced serious mishaps, but also clearly relished daily encounters with monkeys and other creatures that disrupted the humdrum of everyday life with moments of joyous delight.

Biosecurity experts could soon show up at Wat Tham Pla temple and kill the joy of the monks. Certainly, there are some epidemiological risks in everyday encounters with primates. Each close encounter carries the possibility of viral transmission. In addition to airborne viruses, like SARS-CoV, people who are bitten and scratched by monkeys are also vulnerable to other infectious diseases that are transmitted via blood or saliva – like simian herpes, Japanese encephalitis, and simian foamy virus.²⁸ Monkeys are also at risk in encounters with people. Tourists or visiting researchers like ourselves are potentially dangerous guests, who might also be carrying invisible viral parasites.

The temple monkeys were likely vulnerable to SARS-CoV-2, the pandemic virus that was haunting our every move. Rhesus macaques (*Macaca mulatta*), a different species in the same genus, are vulnerable to the virus. One experiment, conducted early in the pandemic, deliberately infected monkeys with Covid and found that they became visibly sick. One scientist observed: "Coughing was occasionally heard in the room where macaques were housed."²⁹ The abbot told us that the monkeys rarely ventured beyond the cave entrances, which means that they were not likely routinely exposed to the bat coronaviruses that were likely circulating nearby. Occasionally, though, the abbot has heard the monkeys coughing.



Rival monkey gangs fight on the street over food, Photo via Wisrut Suwanphak/Facebook

While we were preoccupied with viruses during our visit to Wat Tham Pla, the abbot was focused on other concerns. During our audience with him he talked about the challenges of feeding his community of monks, novices, and monkeys during the pandemic – when donations from tourists and the surrounding community dried up. We were sprawled around the floor of the abbot's open-air reception room, and he sat above on a low dais – wearing a bright orange robe and a light blue surgical mask. Before the pandemic, large busloads of tourists would arrive with up to twenty or thirty people in a group. Around 70 percent of the foreign tourists were Chinese, he said, while other visitors hailed from Israel, France, Japan, and Burma. While these foreigners often provoked conflicts with the monkeys, and left messes behind, he recognized that the temple was dependent on them for donations. Since the monkeys draw the tourists to the temple, the monastery also depends on them. “No monkeys, no tourists,” he said. “We live together like this.”

When the flow of tourists dried up during the coronavirus pandemic, an important stream of revenue for the Wat Tham Pla temple also dried up. Since the monks could no longer afford to feed the monkeys regular meals, they became more aggressive and also started wandering away from the temple – into nearby villages to steal fruit and other food. The abbot turned to social media to let his followers know about the situation. The community responded with a procession of people in masks, who arrived at the temple with large baskets of fruit.³⁰

Most of the foreign tourists who visit Wat Tham Pla do not climb the 272 steep steps up to the bat cave. Those who do venture up into the cave often hire enterprising villagers who serve as guides and rent out flashlights for an extra fee. Another shrine in the Wat Tham Pla temple complex, with a polished white and red floor,

attracts the throngs of tourists who arrive by the busload.

An animatronic skeleton – wearing sunglasses, shiny blue pants, a collared shirt, and a white N95 mask – startled and amused us at the shrine entrance. Holding his hands together in the *wai* gesture, the skeleton-robot bowed his head, begged, and greeted us in Thai: “Stay safe, free of danger. May you all have happiness, prosperity. Be healthy. Live a long life, without suffering, sickness, or pain, without poverty.” A coffin at the skeleton's feet, which doubles as a donation box, had a message in Thai script: “We cordially invite you to make merit in order to change your bad fortune ... through this act of buying coffins for those who are struggling, poor, and in need.”

A golden Buddha with a dazzling halo – composed of light spinning in a circle, counterclockwise – sat in the lotus position at the far end of the shrine. The clean, modern aesthetic of this temple – with undead robots, brightly colored banners, and flashing lights – was a sharp contrast to the dark and dank cave. Like the cave shrine, this was clearly a place where devotees come for introspective meditation to achieve the happiness (*khwamsuk*) that translates into inner peace. The Buddha's right hand was pointing down, touching the earth, representing the moment he overcame temptation and achieved enlightenment. This modern shrine was also a place where the secular values of the cash economy were hyper-visible as they mixed with ritual practices aimed at generating luck, merit, and good fortune (*chohkdee*).

A bank of automated merit-making boxes – something like supernatural slot machines – lined one wall of the shrine. Each machine contained a little golden Buddha surrounded by brightly colored plastic flowers, an alms bowl, and two lightbulbs that looked like candles. Putting money in the slot made the lights flash and played a prerecorded blessing.

A red mailbox with an English sign, “MERIT POST,” stood nearby. Envelopes featuring the international logo – *by air mail, par avion* – sat on a table. The Merit Post box had one slot for English-speaking visitors – some of whom were perhaps in Thailand for sexual adventures. The label on the slot invited them to “Send Merit to Lovers.” Thai donors had other options with this spiritual mailbox. They could post letters with cash to other people and entities: to mothers and fathers; to guardian spirits; to enemies from former lives; as well as towards outstanding debts with water and electricity companies.

The bright colors and flashy lights of this temple illuminated a path toward modern enlightenment. Happiness and luckiness in this

space were as much about modern dreamworlds – with dependable electricity and water utilities – as making merit in the realm of spirits. Symbolically sending merit to others, while supporting the temple with a cash donation, was a way for donors to symbolically transform or overcome their own suffering, while helping others.

Most donations in the temple are fleeting gestures aimed at getting lucky (*chohkdee*). Cash contributions to the skeleton at the door, to the supernatural slot machines against the wall, and through the Merit Post might, or might not, get recognized by the spirits or by the monks at the temple. Donors who seek recognition in this life, or the afterlife, make more substantial donations that are commemorated with yellow, white, and gold *tung* banners that flutter overhead for future visitors to see. Substantial donations are like an insurance plan that protects believers against mishaps, disease, or danger in their current lives and beyond. Luckiness can extend beyond death in the Buddhist imaginary. Devotees who offer a *tung* banner in life may, upon dying, cling to its tail and be taken to heaven.

10/13



The crocodiles pool at Wat Tham Pla, Chiang Rai Province, Thailand, May 2022. Photo: Eben Kirksey.

Merit in Multispecies Contact Zones

Biosecurity experts would perhaps be alarmed by the multispecies dynamics that are taking place at Wat Tham Pla, and countless other temples in Southeast Asia. We did not directly study viral spillover at this bat cave, since our methods did not include taking biological samples. Despite the limits of our knowledge with respect to the interchange of unseen and unknown viruses, we do not feel alarmed. Monks living at the temple, and people in the surrounding villages, are apparently not becoming seriously sick as a result of viral exposures. Tourists, however, may be vulnerable.

Casual visitors to bat caves could give rise to a new pandemic.

To be clear: we do not think that Wat Tham Pla temple was ground zero for the 2020 coronavirus pandemic. It is just one site, among a multitude of others, where there are regular opportunities for SARS-CoV variants to jump into people from other animal species. The biosecurity community is calling for more “surveillance” in places that are identified as viral “hotspots.” The paper in *Nature* – estimating that sixty-six thousand coronavirus spillover events take place every year – calls for targeted “surveillance and prevention programs for potential future bat-CoV emergence” in Southeast Asia.

Proposals for increased surveillance carry serious political baggage in Southeast Asia. Espionage by the CIA turned many millions of people into targets of unwanted government scrutiny during the Cold War. Now feelings of anxiety are spreading as the mass surveillance programs of the United States are being matched and even surpassed by intelligence-gathering projects in countries like China, Israel, and Russia. Applying surveillance tactics to study the dynamics of viral spillover risks alienating the very people who are best situated to make changes to patterns of daily interaction in multispecies contact zones. Biosecurity practices failed to prevent the 2020 coronavirus pandemic. Rather than launch a broad campaign of surveillance that scrutinizes particular places, religious practices, animals, and lifestyles, smarter viral theory is needed to inform livelier and more viable plans of future action.

Viruses are peripheral to the social world of the monks who live at Wat Tham Pla temple. Their teachings about luckiness, happiness, and joy nonetheless offer inspiration for viral theory and also broader approaches to living with contingencies in multispecies communities. The monks have developed practices for living with joy amidst mishaps. Even in the presence of antagonistic animals, unruly tourists, and potentially dangerous infections, this Saṅgha of disciples remains committed to practices of interspecies hospitality. The monks of Wat Tham Pla continued to give and receive gifts with metamorphic and transformative potentials.

The temple of Wat Tham Pla is not just a source of ancient Buddhist wisdom about achieving happiness in a world full of suffering. It is an active contact zone – where species meet – in situations of improvisation, play, and risky experimentation.³¹ The monks who live in this milieu are not just resigning the future to fate – they are not passively accepting every turn of events, or happenstance occurrence. Making merit in these multispecies contact zones

involves tangible interventions in intergenerational cycles of life and death. Merit involves channeling, and transforming, the *hap* of what happens.

As we were leaving Wat Tham Pla temple we had another chance encounter with the abbot. He was sweeping the ground in front of the building where he received us for a formal audience a few hours before. The novice monks were nowhere to be seen, as the abbot engaged in basic maintenance work – a modest form of labor that involved making merit in the material world.

We also made merit, with small donations of money, during our visit to Wat Tham Pla temple. It is easy to imagine a moment in the near future when major donors in the international community may decide to channel funds to Buddhist temples in the bat caves of Southeast Asia, in an attempt to make them more biosecure. Support for new cleaning staff, who could work with the abbot to keep the temple grounds swept and the floor of the bat cave clean, could potentially transform the *hap* of what happens on the future global stage. But as we continued conversations with the abbot he made it clear that he has different priorities. He hopes to forge alliances with scientists and veterinarians so that he might better care for the monkeys of Wat Tham Pla. Having a local veterinarian on staff would enable him to help injured monkeys without fear of being bitten.



One of the gargoyles replaced a few years ago at Paisley Abbey bears an uncanny resemblance to a Xenomorph from the *Alien* films.

Scientists who hope to save the world from future global unhappiness – the emergence of a new pandemic virus – have much to learn from the monks of Wat Tham Pla who are already happily living with viral biodiversity while caring for lively multispecies communities. Rather than turn these monks into subjects of surveillance, there is an opportunity to forge collaborations with them to better understand how to live with

unseen and unknown forces in shared worlds.

In many ways, Wat Tham Pla is already a relatively safe space – both for the people who visit and the animals who find refuge there. In contrast to other cave temples in Southeast Asia, bats here are not being disturbed with constant bright lights and incense. The steep stairs to the shrine in the bat cave mean that only intrepid visitors ascend to this potentially dangerous zone. Reinforcing distinctions at Wat Tham Pla – between the sacred and profane, between spaces that are open to tourists and other places that are restricted to only the most devoted disciplines – could further protect the bats from disturbance and guard against viral spillover into immunologically naive visitors. Tourists could be confined to the realm of animatronic skeletons and supernatural slot machines. The bat cave could become a place where serious devotees could still pray – while remaining mindful of the powerful unseen forces at play. The abbot of the temple has invited us to play a role in long-term research here – to help him form transcultural theory about the joys and risks of lively encounters.

Virologists may soon arrive at Wat Tham Pla to better understand the factors that led the pandemic coronavirus to get super lucky. We still do not have answers to basic questions: How did SARS-CoV-2 become promiscuous? What enabled this virus to start jumping among species and go global? Perhaps answers to these questions should be sought in places like Wat Tham Pla, where people and viruses seem to be getting lucky together. As new knowledge emerges about viruses in the multispecies contact zones of Southeast Asia, the community of monks of Wat Tham Pla will have new opportunities to make merit. In the meantime, we can learn from their daily practice, which shows that joy, happiness, and luck can proliferate even when sickness and death remain in the world.

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AMOR MUNDI Multispecies Ecological Worldmaking Lab is a multidisciplinary art-science-environmental humanities-oriented research initiative in the Global South investigating how human and more-than-human worldmaking and survival are mutually entangled under the compound crises of climate chaos, mass extinction, and the Anthropocene condition.

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Eben Kirksey hosted an interdisciplinary forum during the pandemic, the "Coronavirus Multispecies Reading Group," in collaboration with Rachel Vaughn. This group brought cultural theorists, historians, artists, and anthropologists into conversation with virologists, ecologists, and molecular biologists. A complete archive of these discussions is available on YouTube <https://www.youtube.com/channel/UCiogwfZav25wt21LwwzWwlg>. For a critical discussion of the primary scientific literature that traces the pandemic to "wet markets" of Wuhan, in conversation with the scientists who conducted the original research, see the discussions with Jonathan Pekar and Joel Wertheim (May 23, 2022), Stephen Goldstein (September 27, 2021), and Kristian Andersen (May 1, 2020).

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Mary Louise Pratt initially developed ideas about the contact zone in the 1990s to

understand colonial encounters “where disparate cultures meet, clash, and grapple with each other, often in highly asymmetrical relations of domination and subordination.” More recently, around a decade ago, Donna Haraway characterized “natural cultural contact zones” that involve subject-shaping encounters in multispecies milieus where power, knowledge, and moral questions are all in play. Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation* (Routledge, 1992), 4; Donna Haraway, *When Species Meet* (University of Minnesota Press, 2008), 205.