If you travel to remote places, the services of Global Rescue or a similar firm, may have critical value. <u>Wired Magazine</u> profiles the firm as it reacts to the earthquake in Nepal last April.

... Global Rescue, which positions itself as a nimble eject button for those who frequently find themselves in tough spots, has in the past decade established a lucrative client base of large corporations, government organizations, hunters, and adventure travelers. The company has offices in New Hampshire, Massachusetts, Pakistan, and Thailand and a staff that might make some countries' armies blush. Its roster of 200-odd employees includes wilderness paramedics and former military personnel, some of them ex-Special Forces and Navy SEALs. The company's Nepal posting is a busy one. Every spring, climbers and trekkers, many of them Global Rescue clients, come to test their mettle in the Himalayas. In 2013 and 2014, the company evacuated 28 clients and repatriated the remains of three more who perished in the mountains. ...

... And then news of the disaster broke on television in Bangkok. Then Kathmandu's cellular network went down, overloaded by the volume of calls, and Line stopped working. On cue, Global Rescue's phones lit up. Uber, a corporate client, had three employees in Kathmandu. Another corporate client, Condé Nast, WIRED's parent company, called: A climber was on assignment for Glamour. Another call came from Virginia Commonwealth University in Qatar, which had staff in Nepal. Two Global Rescue analysts began sifting through Twitter feeds from Everest climbers they'd been following. But there was precious little to report. Wi-Fi was down in Kathmandu, cell phone service was sporadic, and satellite phones went in and out. ...

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The fact that well-heeled travelers can summon Green Berets and wilderness paramedics almost instantaneously can present an ethical conundrum. The places where Global Rescue operates are often poor and short on resources; the company's business model is predicated on delivering goods and services to its clients first. It makes an effort to help locals when possible,

but as Richards puts it, "We are not the Red Cross. We don't have the ability to just deploy our services to people who haven't paid a membership fee."

A graduate of Dartmouth's Tuck School of Business, Richards founded Global Rescue in 2004 following a successful career as a private equity adviser at Thomas Weisel Capital Partners. He saw a niche that needed filling. ...

Speaking of high altitudes, <u>National Geographic</u> reports on studies to determine how snow leopards get enough oxygen.

Despite living at elevations of more than 16,400 feet (5,000 meters), these spotted big cats breathe in the same way as other feline species that live at sea level—notably your pet kitty.

Anyone who has ever tried to run even a short distance on a mountain has felt the effects of high elevation. The difficulties people and other animals have breathing isn't due to lower oxygen, but rather low air pressure at high altitudes. Each breath takes in less oxygen and fewer air molecules overall.

Without adequate oxygen, mammals can't stay warm, run to chase prey, or escape predators. To get around this, other high-dwelling animals have evolved coping strategies—in particular, many of them have more efficient hemoglobin, an oxygen-carrying protein in the blood.

Scientists wondered if snow leopards had the same adaptation. But the new research, <u>published</u> <u>August 5 in the Journal of Experimental Biology</u>, reveals they don't. ...

Speaking of big cats, (Notice our series of deft segues?), a **Zimbabwean**, studying in the US, tries to point out the foolishness of Cecilmania.

Winston-Salem, N.C. — MY mind was absorbed by the biochemistry of gene editing when the text messages and Facebook posts distracted me.

So sorry about Cecil.

Did Cecil live near your place in Zimbabwe?

Cecil who? I wondered. When I turned on the news and discovered that the messages were about a lion killed by an American dentist, the village boy inside me instinctively cheered: One lion fewer to menace families like mine.

My excitement was doused when I realized that the lion killer was being painted as the villain. I faced the starkest cultural contradiction I'd experienced during my five years studying in the United States.

Did all those Americans signing petitions understand that lions actually kill people? That all the talk about Cecil being "beloved" or a "local favorite" was media hype? Did <u>Jimmy Kimmel choke up</u> because Cecil was murdered or because he confused him with Simba from "The Lion King"?

In my village in Zimbabwe, surrounded by wildlife conservation areas, no lion has ever been beloved, or granted an affectionate nickname. They are objects of terror. ...

Normally <u>Craig Pirrong</u> doesn't show up on science days, but he has pointed thoughts about nuclear fission.

Today is the 70th anniversary of the atomic bombing of Hiroshima. In commemoration, we are being bombarded with moralizing criticisms of the US's actions. Japan is playing the victim card for all it is worth, and it is getting considerable support in the predictable quarters of the US and Europe.

These criticisms only survive in a vacuum in which history begins on 6 August, 1945. Put into proper historical context, Truman's decision to drop the bomb is readily understood and easily defended. Real decisions require an understanding of the choices at hand, and Truman's choices were grim.

The alternative to the bomb was a continued relentless air assault on Japan with conventional weapons, likely culminating with a series of invasions of the home islands, combined with a Soviet assault in Manchuria and then into China. The human toll of this alternative would have far exceeded that of Hiroshima and Nagasaki, especially in Japanese lives. Curtis LeMay's firebombing campaign inflicted horrific casualties: the firebombing of Tokyo on 8/9 March, 1945 alone killed over 100,000 Japanese civilians. The collective toll of the conventional bombing campaign was over 300,000 from November 1944-August 1945, and its continuation would have killed more Japanese than the atomic bombs did. ...

... Some weeks ago, Obama said "ideologies are not defeated with guns but better ideas." There is at least one instance where that is true. In August, 1945, the violent ideology of Bushido was defeated by an idea. The better idea was nuclear fission.

Wired

SOS, Inc.

The Tricky Ethics of the Lucrative Disaster Rescue Business by Abe Streep

Kathmandu, Nepal

In retrospect, the choice to book a ground-floor room was a sound one.

On Saturday, April 25, Andy Fraser lay in bed at the Rokpa Guest House, a modest three-story hotel in Nepal's ancient capital, a city of 1 million sunk in a valley bordered by the Himalayan range. Fraser, a powerfully built 38-year-old British wilderness paramedic with a shaved head and prominent brow, had arrived a few weeks earlier for an extended business trip. A lifelong adventurer, he'd cut his teeth in London's frenetic ambulance service, taught English at a

salmon farm on an island in Chile, and spent six months treating snakebites at a clinic in rural Zambia. Recently, though, things had changed. He'd gotten engaged to another British paramedic, Becky, and with 40 approaching, he'd decided he needed to find what he called "a real job."



He'd sought out a position with Global Rescue, a private crisis-response firm, and in his first year on the job was dispatched to Nepal for the Himalayan climbing season. Global Rescue, which positions itself as a nimble eject button for those who frequently find themselves in tough spots, has in the past decade established a lucrative client base of large corporations, government organizations, hunters, and adventure travelers. The company has offices in New Hampshire, Massachusetts, Pakistan, and Thailand and a staff that might make some countries' armies blush. Its roster of 200-odd employees includes wilderness paramedics and former military personnel, some of them ex-Special Forces and Navy SEALs. The company's Nepal posting is a busy one. Every spring, climbers and trekkers, many of them Global Rescue clients, come to test their mettle in the Himalayas. In 2013 and 2014, the company evacuated 28 clients and repatriated the remains of three more who perished in the mountains.

So far, though, it had been a quiet month. The mountaineers were acclimatizing on the lower regions of the Himalayas' iconic peaks: Makalu, Lhotse, and Mount Everest. Fraser's job in Kathmandu was to assist members in need of medical care or evacuation. He called Becky around noon on Skype, as she was just waking up in England. The couple said good morning, then Fraser's room began to move. It was a steady, primal roll, like a turbulent ocean. "Holy shit," Fraser told his fiancée. "I think there's a fucking earthquake." Then the Wi-Fi connection died. He fell off the bed, pulled on a shirt, hurtled out, and started banging on doors, yelling at his neighbors to leave the hotel. The floor lurched, the walls swayed. Fraser sprinted for the door, assuming the building was coming down. When he reached the lawn he started screaming up at the hotel's windows: Get out! Staffers and guests ran out of the building and onto the lawn. Fraser was shocked the Rokpa didn't collapse.

This had been a long time coming. The last major earthquake in Nepal took place in 1934, an 8.0 temblor that flattened Kathmandu. Before that Saturday in April, seismologists had been warning of another Big One for years. Noting Kathmandu's dense population center and the country's poor infrastructure—Nepal is currently ranked 145th out of 187 on the United Nations' human development report—some observers predicted as many as 100,000 deaths in the event of another 8.0 tremor. At 7.8, the quake that struck on April 25 was smaller than many anticipated. But it was shallow, causing violent shaking on the surface. And at two long minutes, the quake's duration was the seismic equivalent of a Jimmy Page solo. When it stopped, Fraser heard screaming. He sent a message to Hassan Anderson, a colleague in Global Rescue's Bangkok office, via Line, the free communication app, saying, "Big earthquake here."



Global Rescue senior specialist Andy Fraser was on call in Kathmandu when the 7.8 temblor shook the city and threw the country into chaos.

Bangkok, Thailand

When the message arrived, Anderson, a 45-year-old paramedic from Philadelphia who, like Fraser, sports a shaved head, thought he was joking. He'd been a Navy reserve corpsman for nearly a decade and later worked as a paramedic in Afghanistan. His days were now spent on the 22nd floor of a high-rise in Bangkok's business district, at Global Rescue's Thailand

Operating Center, a large space for 20 full-time employees complete with a medical equipment room and two rows of eight desks that sit in front of a panel of flatscreen TVs playing a steady stream of world news. The wall of light presented no news of an earthquake, so Anderson replied: "Stop farting."

And then news of the disaster broke on television in Bangkok. Then Kathmandu's cellular network went down, overloaded by the volume of calls, and Line stopped working. On cue, Global Rescue's phones lit up. Uber, a corporate client, had three employees in Kathmandu. Another corporate client, Condé Nast, WIRED's parent company, called: A climber was on assignment for *Glamour*. Another call came from Virginia Commonwealth University in Qatar, which had staff in Nepal. Two Global Rescue analysts began sifting through Twitter feeds from Everest climbers they'd been following. But there was precious little to report. Wi-Fi was down in Kathmandu, cell phone service was sporadic, and satellite phones went in and out.

By 7:15 pm that Saturday in Bangkok, Anderson had fielded 10 calls. Over and over he recited the emergency responder's rote reassurances: Be patient, it's a fluid situation, we'll keep you updated. Before bed, one of his bosses, operations supervisor Steve Bright, called and told him to pack a bag—he was going to Kathmandu.



Senior specialist Hassan Anderson flew from Global Rescue's Thailand Operating Center in Bangkok to Kathmandu in order to assist in the company's response to the April 25 earthquake.

Los Angeles, California

The company's founder and CEO, a former Wall Street executive named Dan Richards, awoke on Saturday morning to many voicemails. He was on vacation in Los Angeles; back in Boston and New Hampshire, his team was awake and scrambling. Analysts eventually determined that at least 100 clients were in Nepal. Their specific locations, though, were less clear. Climbers on Everest were moving slowly up the mountain, spread between Base Camp, at 17,600 feet; Camp 1, at 19,800 feet; and Camp 2, some 2,000 feet higher. Early Saturday morning in the US, the first reports had emerged of a massive and deadly avalanche of rock and ice at Base Camp. Richards had no idea if his clients were among the deceased. He contacted his associate director for security operations, Scott Hume, who then instructed Drew Pache, a security operations manager for Global Rescue and former US Army Special Forces operative, to leave the New Hampshire office and get on a plane for Kathmandu. Richards was concerned about Fraser—Kathmandu was still rumbling with aftershocks.

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A graduate of Dartmouth's Tuck School of Business, Richards founded Global Rescue in 2004 following a successful career as a private equity adviser at Thomas Weisel Capital Partners. He saw a niche that needed filling. At the time, companies like International SOS provided risk assessments to big corporations sending employees overseas, while travel insurance companies allowed customers to file for reimbursement for services like evacuation or lost luggage. Groups like MedjetAssist, meanwhile, provided evacuation services from international hospitals. But there wasn't a company with the capability to quickly dispatch both helicopters and security personnel to hard-to-reach places—something Richards realized while researching investment opportunities in the crisis-response industry. "When you call the cavalry, you expect the cavalry to show up," he says.

Richards soon hired five paramedics with military experience, negotiated a partnership with the Johns Hopkins Department of Emergency Medicine to provide clients with remote medical consultations, and started reaching out to helicopter companies and current and former military personnel around the globe that he could hire on a contract basis. He began to sign up corporate clients that paid hefty annual fees for memberships that included evacuation privileges. The State Department, NASA, and Uber soon signed up for similar deals. So did many publishing companies, including National Geographic and Condé Nast. Some *Outside* writers, myself included, also have memberships. In the past five years, Global Rescue has become the safety net of choice for adventure travelers, many of whom opt for the company's two-tiered membership program for individuals. Medical coverage costs \$329 per year, while

medical plus security runs \$655. It's something like AAA—most clients won't need the insurance, but for those who do, the cost of their evacuation is covered. The American Alpine Club offers a limited Global Rescue service to all its members; ask a climber if they've heard of Global Rescue and chances are they'll produce a membership card.

Richards built Global Rescue into a juggernaut. "They changed the industry and made the existing players look at their offerings and make adjustments," one veteran crisis-response official told me. But the CEO also developed a reputation as a very competitive and hard-driving boss. In 2011 five high-ranking employees, including two vice presidents, left the company within a month. The VPs, a former US Army Ranger named Tom Bochnowski and a former Navy SEAL named Ted Muhlner, soon started a competing outfit, Redpoint Resolutions. Based in Silicon Valley, Redpoint packages medevac services alongside travel insurance—you can call them in the event of a lost bag as well as a lost limb. The company took more than one Global Rescue employee and client with it. Bochnowski wouldn't comment directly on Global Rescue, citing a 2011 breach of contract lawsuit between the two companies. He did say, "We're able to put the consumer at the center of our services. It's a bigger vision than what we were able to accomplish in our past jobs."

Still, despite the competition, it's been a good few years for Global Rescue's bottom line. In 2012 the company opened offices in Islamabad, Pakistan, as well as Bangkok. Members are given one number to call, which is routed to whichever office is open. Running such a sprawling operation requires a global network of reliable contractors as well as the ability to quickly establish communication in places that don't have it. Employees in the field use a text-only satellite device called a DeLorme InReach, as well as a satellite-enabled modem system that creates a mini wireless network. Then there's the company's newly developed GRID app, which sends real-time security alerts to a client's smartphone—a faster, more accurate version of the State Department's travel advisories. For all the tech, though, says Pache, the former Special Forces operative, "it comes down to a guy on the ground exercising good judgment and doing the best he can with what he's got."

Lukla, Nepal

In Nepal, that person was Fraser. He spent a harrowing night on the Rokpa's lawn alongside the hotel's other guests while a dozen aftershocks rumbled. At one point, he was envious of a neighbor, an American who was able to sleep on the grass through the seismic highlight reel. Then a stray, a rangy mutt, walked up, raised its leg, and calmly urinated all over the American, who slept on.

In the morning, Fraser sent an SMS message to Bangkok, telling his bosses he was going to fly to Lukla, the small mountain town 85 miles to the east that serves as the jumping-off point for most major Himalayan climbs and treks. A Swiss doctor named Monika Brodmann Maeder, who happened to be in Kathmandu, was on the helicopter flight to Lukla with Fraser; when the two arrived, they found an eerily quiet scene. The hospital was damaged, and a few volunteer nurses were trying to set up a makeshift triage ward in the airport. No patients had arrived yet.

They quickly hashed out a diagnostic system: Fraser would give patients a rapid once-over as they were unloaded. Thumbs up meant they went to the nurses; down sent them to Brodmann Maeder for critical care. Then the helicopters started coming in. Here was a broken back. Here a shattered pelvis. A climber with a head injury got off a helicopter and started walking aimlessly in the direction of its tail rotor. Most of the helicopters were small, four-person rigs. Sometimes, though, a big Mi-17 showed up. "Every time it turned up my heart sank," Fraser says, "because I knew there were 20 people in it." By late afternoon he had triaged about 70 patients, most of

them Nepalis. No one knows how many of the patients died. He flew back to the capital. It was time to do his real job.

Kathmandu

When he landed he rendezvoused with Anderson, who had arrived from Bangkok and spent the afternoon negotiating a maelstrom at the airport. Upon arriving, Anderson reached out to Uber's three employees, who were camping on the lawn outside the Hyatt Regency before their flights out. The team looked through their client list. A group of three climbers was on Lhotse, a neighbor of Everest, but they had called in to say they were OK. Another client, a Colorado climber named Brad Johnson, was high on Makalu. He too was in decent shape, with the exception of a painful back.

Global Rescue clients seemed to have evaded the carnage. None were among the 18 casualties from the Everest Base Camp avalanche. There were hurdles to overcome, to be sure—Nepal's government had commandeered all of the country's private helicopters, meaning that the company couldn't make good on its promise to quickly deliver air evacs to clients like Johnson, who needed to get off Makalu before his back worsened. The team kept a spreadsheet with four active tabs: situation unknown, safe and accounted for, evacuation in progress, and closed operation. By Monday, April 27, they had moved 49 clients into the latter three tabs. None had required medical treatment. Overall, they felt like they were in good shape. That's when the call came in about the team at Camp 1.

Fairfax, Virginia

Kathy McKnight's first thought was "My God. Not again." The 52-year-old education researcher was returning from a triathlon training run near her home in Fairfax when her brother-in-law called to tell her there had been an earthquake in Nepal and that there were reports of a massive avalanche at Everest Base Camp. McKnight's husband, Patrick, a 49-year-old psychology research professor at George Mason University, was making his second attempt to reach the top of the world. The previous year, Patrick, a seasoned mountaineer, arrived in Base Camp just an hour after an avalanche ripped through the Khumbu Icefall, a treacherous half-mile section of shifting glacier bordered by rock faces between Base Camp and Camp 1. That slide killed 16 Sherpas and ended Everest climbing from the Nepal side in 2014. Now he was back on the mountain with the same guiding company he'd chosen the previous year, Summit Climb, an outfitter based in Seattle.

Patrick's brother told Kathy there was no reason to panic just yet. Patrick had a SPOT device, a subscription-based emergency satellite beacon that's tapped into international search-andrescue networks. He had linked his SPOT to his blog and Facebook and Twitter accounts via the connection app If This Then That, and starting at 3:17 am Eastern—about an hour after the earthquake hit—he had released a series of three location dispatches placing him at Camp 1, obviously a message to his family. Plus, Kathy knew her husband was a Global Rescue member. But there was no reason to get too comfortable. At 1:27 pm Nepal time—3:42 am Eastern—Summit Climb's leader, a 55-year-old guide named Dan Mazur, tweeted, "Aftershock @ 1pm! Horrible here in Camp 1. Avalanches on 3 sides." Half an hour later, he tweeted again about the situation on Everest. This time his message was even less reassuring; it ended with "Please pray for everyone."

Camp 1, Everest

The Summit Climb expedition had left Base Camp and made its way through the Khumbu Icefall earlier that morning. McKnight was climbing with a team of 17. They were feeling strong after making it through the icefall. Still, when they reached Camp 1—which sits at 19,800 feet—they were struck by the area's precarious glaciology. The team camped just beneath the southeast face of Everest. On both sides loomed sheer walls and immense hanging seracs.

McKnight settled into his tent alongside a Finnish teammate. All of a sudden the tent started moving up and down and side to side. McKnight experienced a great heaving of earth—only he was on a great block of ice. The glacier was shifting beneath him. Mazur, the guide, started screaming, "Get your ice axes! It's coming!" He instructed the team members to lie on their bellies with their axes planted in the ice. Then the avalanches started: one, two, three. They were aerosol avalanches—wind-driven thin layers of snow. They didn't carry the type of deadly mass of rock and ice that struck Base Camp. Still, the power of the air that funneled through Camp 1 was wild, a live, 120-knot thing turned fierce by the snow and vapor it carried. McKnight, a sailor who has navigated through hurricanes, had never felt air moving so ferociously. He was facing uphill when the winds hit, and the air pressure forced his lower body around his ice ax. He was covered by 8 inches of snow, and as he cleared an airway, he braced for the inevitable crashing serac and subsequent slide that he was fairly sure would end his life on Everest.

The mountains shuddered with aftershocks. More ominously, the forecast called for a storm to sock in the region, which would render helicopters useless.

The big slide never came. Immediately following the quake, Mazur decided to relocate to the center of Camp 1, away from the looming seracs. The center of Camp 1 is made up of a series of ice ridges; Mazur picked one that was about 25 by 50 feet. Starting that afternoon they got hit by one aftershock after another, deep seismic shifts that sounded like great grinding gears of ice. This was about the time Mazur sent his tweets, asking for prayers.



McKnight awoke the next morning, Sunday, to sun and a steady influx of helicopters. People were lining up to get on the first flights out of Camp 1, and from the ridge above he could see groups of climbers making their way down from Camp 2, at 21,500 feet. When he called Kathy on his sat phone, he had no idea about the extent of the devastation in Nepal. Kathy told him that an avalanche had killed people at Base Camp and that the low-lying regions outside Kathmandu were devastated; McKnight began to realize his team's lot. The government would be deploying aircraft far from the Khumbu, and the avalanche had destroyed the fixed ladders and ropes that might have allowed a climbing descent to Base Camp. Still, he told Kathy not to do anything—he figured they had enough food and fuel to melt snow for water for a few days, and he even held out a sliver of hope that the team might complete their ascent.

On Sunday, Camp 1's tiny airstrip became a traffic hub to rival a LaGuardia runway. A constant stream of helicopter flights landed that day, shuttling climbers down the mountain. Nepal's high-altitude helicopter operators had all dispatched their aircraft to the Khumbu region. The matter of who boarded the flights was hardly scientific: Access to the helicopters was determined by personal relationships between operators and climbing guides. Occasionally, though, force did the trick. A few members of the Summit Climb team were anxious to leave, so Jangbu Sherpa, one of Mazur's trusted staff, shouldered his way in and pushed them on a flight.



This Fishtail Air helicopter is one of a limited number capable of flying at high altitudes in the Himalayas.

After the earthquake, it made dozens of flights to transport more than 100 climbers to Base Camp.

Kathy McKnight, though, was ready to make contingency plans. She knew that the forecast called for a storm that might sock the region in, rendering helicopters useless. She also knew that her husband and one other person on his team, a Scot named James Grieve, had memberships with Global Rescue. On Monday morning Kathmandu time—Sunday night in Virginia—her husband called again. This time the couple made the decision to call Global Rescue for an evac. Some 150 people had been evacuated from Camp 1, but the Summit group hadn't made it onto a helicopter, and the storm was closing in. Kathy called Global Rescue, connecting with Jeff Weinstein, a paramedic in Bangkok who immediately contacted Shree Hari

Kuikel, the operations manager at Fishtail Air, one of six helicopter companies Global Rescue regularly works with in Nepal. That day the government had announced it was taking control of all aircraft, but Kuikel said he could get a helicopter to Camp 1 the following day, during a down period between government-mandated flights. That night, Weinstein spoke with Patrick via sat phone. "He said, 'Don't sweat it, we're there," McKnight recalls.

The next day, Fishtail dispatched a helicopter from Lukla to Camp 1. When the pilot arrived, Camp 1 was shrouded in a fast-closing cloud bank. He figured he had a 45-minute weather window to perform the evacuation. McKnight pulled out his Global Rescue card and flashed it to the pilot, who gave him a thumbs-up. Soon McKnight and Grieve were in the air. Over the course of the next hour, the pilot shuttled the remaining members of the Summit Climb team to Base Camp. Mazur made the climbers pair up with Sherpas, who often get left off helicopter medevacs because they can't pay. No other option was considered; leaving someone up there could have been akin to manslaughter. They were the last team in camp.

The group spent the night in Base Camp, gathering what was left of their gear. The next day, the Fishtail pilot shuttled them down to Lukla. McKnight and Grieve shared the helicopter with a corpse, a Nepali man who had died in the Base Camp avalanche. There was precious little room in the helicopter, so the team sat on the cold body. Anderson met them when they landed, and they had tickets home within a matter of days.

"I have nothing but the utmost respect for Global Rescue," Patrick McKnight tells me. "I sound like an ad rep, but whatever I paid, I'll pay it every year. Because I sure as hell don't want to be up there without it."

Disaster zones are both collaborative and competitive places. International search-and-rescue organizations come first, followed by the big aid operations—USAid, the Office of the United Nations High Commissioner for Refugees, the Red Cross. Their mission is altruistic but not selfless. The groups give aid and also vie for certain resources: access, local knowledge, hotels, helicopters, publicity. The same holds true for the private crisis-response industry. One day Weinstein ran into a former Global Rescue employee who now works for Redpoint. The two were cordial, but at the time there were a limited number of private helicopters operating in Nepal. Both Redpoint and Global Rescue wanted access to them. Both companies acquitted themselves admirably under the conditions, and both evacuated numerous clients, as well as bystanders. Global Rescue flew Summit Climb's Sherpas down from Camp 1 at no cost, while Redpoint sent a trauma surgeon to tend to rural villages. "These companies will help out if they have extra room on the plane," says John Moretti, a former PR manager for Global Rescue. "And if they get some publicity, all the better. But at the end of the day they're private companies. They're not there to do the government's job."

In the days following the quake, Global Rescue's team was divided. Weinstein, the paramedic who took Kathy McKnight's call, flew into Nepal to join Anderson in Lukla, where the two tended to the last of the descending clients. Fraser and Pache, meanwhile, stayed in Kathmandu, remaining on call in the event a client needed help. One night, during dinner in Kathmandu, I ask if they had thought of heading into the hard-hit mountain villages to help. "We're not equipped, we're not manned, it's beyond our scope," Pache says.

"Beyond the initial humanitarian effort we made, our focus has to be on our members," Fraser says. Then he pauses and says, "Obviously, as medics and rescue workers, it's frustrating to watch."

The next morning, I go to visit Ben Ayers, Nepal country director of the dZi Foundation, a nonprofit group that works on issues like rural school safety and porter welfare in Nepal. The day after the earthquake, Ayers helped Fraser triage those patients in Lukla. Ayers has a deep respect for Fraser, but he takes issue with the role groups like Global Rescue play in Nepal. "There is the issue of those flights going to pick up wigged-out tourists," he says, "instead of going to pick up really fucked-up people in Ghorka"—the epicenter of the quake, where the damage more closely resembled that caused by a tsunami. The fact that Global Rescue was able to commandeer such precious resources, though, came as little surprise. "This is a place where money talks," he says. "It's a feudal kind of society."

Later, I bring this up with Richards. How, I ask, does he justify Global Rescue's role in commandeering helicopters? "These are difficult issues to deal with," he says. "Especially when you're trying to navigate a terrible catastrophe, and you're trying to determine who gets incredibly scarce resources. It's hard to say that there were others that in the first 36 to 48 hours more desperately needed the services than the climbing community. To try to compare levels of need is a really hard thing to do."

He also says, "We always leave these situations wishing we could have done more. When it comes to our clients, though, we feel pretty good about how we've been able to support them."

"Here's a guy lying there," Anderson says, "and just because he can't afford it, he's going to die. He truly needs to get out of here. And no one knows no one even cares."

By Sunday, May 3, most of the climbers and trekkers had left Lukla, and the town's teahouses and lodges were empty. Anderson, though, had one more operation to wrap up before returning to his post in Bangkok: He accompanied a helicopter to pull Johnson, who had a bulging disk, off Makalu. Anderson then stuck around the mountain town for two more days. While there, he went to the damaged hospital to speak with a young doctor he'd met. The doctor, who was Swiss, was seeing a patient. A Nepali man who appeared to be in his late thirties, he had fallen and hit his head in the mountains and was suffering from severe seizures. The doctors were trying to keep him mildly sedated while members of his family attempted to prevent him from ripping out his IV. Anderson quickly recognized that the man needed a CT scan and probably surgery. All signs pointed to a brain bleed. But the Swiss doctor told Anderson that the man would have to wait.

"What for?" Anderson asked. The doctor said it would cost \$3,000 to fly the man to Kathmandu, the only place capable of addressing his needs, but the patient didn't have enough money. No helicopter companies would fly at a reduced rate.

"Here's a guy lying there," Anderson tells me later, "and just because he can't afford it, he's probably going to die. After watching all these well-to-do individuals clamoring to get on these flights, I'm thinking, 'He truly needs to get out of here. And no one knows, and no one even cares."

This was an impossibly difficult situation. Global Rescue can't reasonably be expected to offer pro bono flights to every victim it encounters. As Richards says, it's not the Red Cross. Still, the experience affected Anderson deeply. "It's difficult," he says. "With our background, we want to get in there. We want to help." The patient made it to Kathmandu the next day. His family reported he'd survived. Whether he'd suffered permanent damage was anyone's guess. Neither the doctor nor Anderson knew his name.

Shortly after the Nepal operation, Fraser handed in his resignation to Global Rescue. The move was largely personal—he and Becky planned to marry and wanted to be together. He told me that he would continue to work for Global Rescue on a contract basis, and that he was grateful to the company for the opportunity to triage those patients in Lukla. "GR put me in that position," he told me. "I will never forget that." He also said he was planning to return to sub-Saharan Africa, where he and Becky are starting a nonprofit that provides health care to the needy at no cost. He couldn't wait to get back.

National Geographic

Why Do High-Altitude Snow Leopards Breathe Like Pussycats?

How these big cats thrive in low-oxygen mountain habitats is still a mystery, study says.

by Carrie Arnold, National Geographic



The <u>snow leopard</u> might rule the high reaches of the Himalaya, but they

share some unexpected similarities with the humble <u>house cat</u>, a new study says.

Despite living at elevations of more than 16,400 feet (5,000 meters), these spotted big cats breathe in the same way as other feline species that live at sea level—notably your pet kitty. (See snowleopard-pictures in National Geographic magazine.)

Anyone who has ever tried to run even a short distance on a mountain has felt the effects of high elevation. The difficulties people and other animals have breathing isn't due to lower

oxygen, but rather low air pressure at high altitudes. Each breath takes in less oxygen and fewer air molecules overall.

Without adequate oxygen, mammals can't stay warm, run to chase prey, or escape predators. To get around this, other high-dwelling animals have evolved coping strategies—in particular, many of them have more efficient hemoglobin, an oxygen-carrying protein in the blood.

Scientists wondered if snow leopards had the same adaptation. But the new research, <u>published</u> <u>August 5 in the *Journal of Experimental Biology*</u>, reveals they don't.

In fact, the predators take in about half as much oxygen with each breath as they would at sea level. (See <u>pictures</u> and <u>video</u> of snow leopards in Afghanistan.)

"We were very surprised," said study leader <u>Jan Janecka</u>, an evolutionary biologist at Duquesne University in Pittsburgh. "Changing hemoglobin is one of the simplest ways to adapt to high altitudes."

Mountain High

Scientists already knew that low-altitude feline species generally have hemoglobin that's not good at binding with oxygen.

Even so, Janecka and colleagues suspected that they would find differences in the hemoglobin properties of snow leopards compared with other cats. (<u>Learn more about snow leopards</u>.)

The team obtained blood samples from big cats living in various U.S. zoos, including the African lion, tiger, leopard, panther, and of course snow leopard. They also took blood from domestic housecats.

When the scientists looked at the genes that make hemoglobin, as well as the protein itself, they found no differences between snow leopards and the other cat species.

"We still don't know how snow leopards adapted [to life at altitude]. Our study raised more questions than it answered," Janecka said.

"There Must Be Other Things Going On"

<u>Graham Scott</u>, an evolutionary physiologist at McMaster University who was not involved in the study, says it was "technically very well done and used state-of-the art analyses."

"What's unique about this study is that it shows us there must be other things going on" in the leopards' ability to live at altitude, he notes. (Learn about <u>National Geographic's Big Cats Initiative</u>.)

For instance, Janecka and others believe that snow leopards might simply breathe harder to bring more oxygen into their bloodstream, and have begun studying that theory.

"As long as the animal is getting enough oxygen, natural selection isn't picky," Scott says.

"It shows," he guipped, "that there's more than one way to skin a cat."

NY Times

In Zimbabwe, We Don't Cry for Lions

by Goodwell Nzouaug

Winston-Salem, N.C. — MY mind was absorbed by the biochemistry of gene editing when the text messages and Facebook posts distracted me.

So sorry about Cecil.

Did Cecil live near your place in Zimbabwe?

Cecil who? I wondered. When I turned on the news and discovered that the messages were about a lion killed by an American dentist, the village boy inside me instinctively cheered: One lion fewer to menace families like mine.

My excitement was doused when I realized that the lion killer was being painted as the villain. I faced the starkest cultural contradiction I'd experienced during my five years studying in the United States.

Did all those Americans signing petitions understand that lions actually kill people? That all the talk about Cecil being "beloved" or a "local favorite" was media hype? Did <u>Jimmy Kimmel choke up</u> because Cecil was murdered or because he confused him with Simba from "The Lion King"?

In my village in Zimbabwe, surrounded by wildlife conservation areas, no lion has ever been beloved, or granted an affectionate nickname. They are objects of terror.

When I was 9 years old, a solitary lion prowled villages near my home. After it killed a few chickens, some goats and finally a cow, we were warned to walk to school in groups and stop playing outside. My sisters no longer went alone to the river to collect water or wash dishes; my mother waited for my father and older brothers, armed with machetes, axes and spears, to escort her into the bush to collect firewood.

A week later, my mother gathered me with nine of my siblings to explain that her uncle had been attacked but escaped with nothing more than an injured leg. The lion sucked the life out of the village: No one socialized by fires at night; no one dared stroll over to a neighbor's homestead.

When the lion was finally killed, no one cared whether its murderer was a local person or a white trophy hunter, whether it was poached or killed legally. We danced and sang about the vanquishing of the fearsome beast and our escape from serious harm.

Recently, a 14-year-old boy in a village not far from mine wasn't so lucky. Sleeping in his family's fields, as villagers do to protect crops from the hippos, buffalo and elephants that trample them, he was mauled by a lion and died.

The killing of Cecil hasn't garnered much more sympathy from urban Zimbabweans, although they live with no such danger. Few have ever seen a lion, since game drives are a luxury residents of a country with an average monthly income below \$150 cannot afford.

Don't misunderstand me: For Zimbabweans, wild animals have near-mystical significance. We belong to clans, and each clan claims an animal totem as its mythological ancestor. Mine is Nzou, elephant, and by tradition, I can't eat elephant meat; it would be akin to eating a relative's flesh. But our respect for these animals has never kept us from hunting them or allowing them to be hunted. (I'm familiar with dangerous animals; I lost my right leg to a snakebite when I was 11.)

The American tendency to romanticize animals that have been given actual names and to jump onto a hashtag train has turned an ordinary situation — there were 800 lions legally killed over a decade by well-heeled foreigners who shelled out serious money to prove their prowess — into what seems to my Zimbabwean eyes an absurdist circus.

PETA is calling for the hunter to be hanged. Zimbabwean politicians are accusing the United States of staging Cecil's killing as a "ploy" to make our country look bad. And Americans who can't find Zimbabwe on a map are applauding the nation's demand for the extradition of the dentist, unaware that a baby elephant was reportedly slaughtered for our president's most recent birthday banquet.

We Zimbabweans are left shaking our heads, wondering why Americans care more about African animals than about African people.

Don't tell us what to do with our animals when you allowed your own mountain lions to be hunted to near extinction in the eastern United States. Don't bemoan the clear-cutting of our forests when you turned yours into concrete jungles.

And please, don't offer me condolences about Cecil unless you're also willing to offer me condolences for villagers killed or left hungry by his brethren, by political violence, or by hunger.

Goodwell Nzou is a doctoral student in molecular and cellular biosciences at Wake Forest University.

Streetwise Professor

70 Years Ago, A Violent Ideology Was Destroyed By A Better Idea: Nuclear Fission

by Craig Pirrong

Today is the 70th anniversary of the atomic bombing of Hiroshima. In commemoration, we are being bombarded with moralizing criticisms of the US's actions. Japan is playing the victim card for all it is worth, and it is getting considerable support in the predictable quarters of the US and Europe.

These criticisms only survive in a vacuum in which history begins on 6 August, 1945. Put into proper historical context, Truman's decision to drop the bomb is readily understood and easily defended. Real decisions require an understanding of the choices at hand, and Truman's choices were grim.

The alternative to the bomb was a continued relentless air assault on Japan with conventional weapons, likely culminating with a series of invasions of the home islands, combined with a Soviet assault in Manchuria and then into China. The human toll of this alternative would have far exceeded that of Hiroshima and Nagasaki, *especially* in Japanese lives. Curtis LeMay's firebombing campaign inflicted horrific casualties: the firebombing of Tokyo on 8/9 March, 1945 alone killed over 100,000 Japanese civilians. The collective toll of the conventional bombing campaign was over 300,000 from November 1944-August 1945, and its continuation would have killed more Japanese than the atomic bombs did.

Then there is the invasion itself, for which the Japanese had prepared a last ditch defense that would have put every civilian in the front lines with bamboo spears, grenades and old rifles. On Okinawa, April-June 1945, an estimated one-third of the civilian population died, many by suicide. The civilian toll on Saipan a year earlier was also large.

Then add in the horrific military casualties the Japanese would have suffered. In most previous island battles, Japanese death rates were above 90 percent due to the fanaticism with which they fought. The same fanaticism would have been inevitable in a defense of the home islands, with similar results.

And I haven't even gotten to the American (and British) casualties, which were rightly Truman's first responsibility. On Okinawa, the US lost 20,000 KIA, approximately 8 percent of the peak US force.

To this add the massive Chinese civilian casualties that would have resulted from an extended Soviet attack.

Many critics of the dropping of the bomb counter that these horrors would have been avoided, because the Japanese were on the brink of surrender. This is the most ahistorical claim of all. Any leader contemplating the recent experience on Okinawa and Iwo Jima would have thought the idea of an impending Japanese surrender utterly delusional. Further, the most fanatical elements of the Japanese military were violently opposed to the idea of surrender even after the bombs were dropped. Officers mounted a last ditch coup in an attempt to prevent the playing of the recording of the Emperor's surrender statement. There was a large hardcore element in Japan that would have resisted to the last had not the Emperor ordered them to lay down their arms.

In sum, by any reasonable calculus, Hiroshima and Nagasaki, as horrific as they were, saved lives.

Japanese claims of victimhood ring particularly hollow. The fire in the sky was not a bolt from the blue. It was the climax of an orgy of destruction and death brought on by the Japanese, and carried out by them with a ruthlessness perhaps rivaled only the the Nazis in eastern Europe and the USSR. Indeed, Japanese atrocities pre-dated Nazi ones: millions of Chinese died at Japanese hands, often in the most brutal and inhumane ways, starting in 1931 (in Manchuria) and 1937 (in China proper). Babies on bayonets were not a figment of wartime propaganda. They were a reality. Indeed, the Japanese reveled in such conduct, in large part because of a belief in their racial superiority. And don't forget that Japan: (a) had its own nuclear program, (b) had an extensive chemical and biological warfare program which involved testing on POWs and civilians, and (c) waged chemical and biological warfare in China.

Further, while the Japanese make a moral claim against the US, they are adamant in their refusal to admit the validity of any such claim against them. Unlike the Germans, who have for

the most part come to grips with their past and acknowledge and have paid reparations for the actions of the Hitler government, the Japanese have largely obfuscated and denied what their forebears did with no justification even approaching Truman's.

Japan sowed the wind, and it reaped the whirlwind. That should be the focus of Japan's commemoration of Hiroshima.

Some weeks ago, Obama said "ideologies are not defeated with guns but better ideas." There is at least one instance where that is true. In August, 1945, the violent ideology of Bushido was defeated by an idea. The better idea was nuclear fission.











