ESSAY

Loving the unpredictable: a story about Etna

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"The Future and Present are One" by Trevor Coopersmith

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We leave the car and start to climb slowly. ‘I’m out of shape,’ Toni tells me only a few minutes in. These last months in and out of lockdown took its toll on my guide, who was born on the slopes of Etna and knows her in and out. In better days, he guided groups of tourists up these slopes through patches of pine forests and over wide-open uphill climbs, pointing into the distance and answering questions, telling the story.

The story he tells started half a million years ago. But it is not only the story of this volcano. It is the story of Sicily and its people, and everything that is here right now, and one day, because of the volcano, might be no more.

As we advance, our footsteps make the sound of crushing crackers as the ash that covered the deep dark pathway crumbles under our shoes.. Etna erupted just the day before and a few days before that — a powerful spectacle of gas, ash and stones booming a kilometre high in the sky and followed by a bright red flow of lava running down her slopes. In the aftermath, the ash covers not only our path but everything around it, pieces of it stuck between the needles of the pine trees like Christmas baubles.

On the 16th of February, the evening of the first big eruption, I was walking towards the sea in Letojanni, a small coastal town between Messina and Catania where I spent the last few months. At the south of this town lies the hill on which Taormina stands. It is just high enough to cover Etna’s frame. At first, I thought I was seeing a beautiful bright-red cloud. But as I reached in my pocket for the camera, I saw and stopped breathing. The inside of the earth was coming out through Etna’s crater, expanding into the sky well above Taormina.

The wind had been blowing south, spreading the ashes in that direction. Then slow-moving flows of lava thick like honey ran down its slopes. Part of the south-east crater collapsed in the eruption, creating a V-shaped dent in the crater’s wall.

Videos followed, and spectacular photos circulated of large pieces of angst-inducing booms of gas, stones and burning ash violently coming out of the top craters. Lava flowed beautifully and so worryingly. Messages from friends from abroad followed too. ‘Are you alright?’ they asked. ‘Are you being evacuated?’

It’s difficult to judge the magnitude of an eruption when seeing it on television. But it’s difficult to judge even when you’re here. Though the current chain of regular outbursts is expected, they can take unpredictable turns. It’s how life is here: living with a constant sense of the unpredictable, but also living with all the beauty and the fertile land that Etna has created, a unique mix deeply rooted in the identity of the almost one million people living on her slopes.

Like all inhabitable land on this planet, Etna sits on a bed of magma, a bright red substance made of molten rock, suspended crystals and gas bubbles. Its deep magma chamber is estimated to be 22 kilometres underground. Magma is produced by the melting of the crust at different tectonic settings, including subduction zones — where two plates come together, one riding over the other — like the one where Etna is located. The mantle and the melted continental crust migrate upwards through the crust underneath Etna, because the liquid rock is less dense than the solid rock around it, and enter what is believed to be a magma chamber. As the magma rises, bubbles of gas form inside. Each bubble, at first the size of one found in a Coca-Cola bottle, expands as it rises to the surface. And the sum of all of them expanding in volume cannot easily escape if the magma is thick, so pressure builds up.

Under such pressure the mountain can expand even 15 meters upwards as it did in 2002, when the lateral flanks of Etna expanded resulting in a lateral eruption that lasted three months and a half and devastated numerous touristic areas. And when the pressure is released, it's still not over. The plates keep moving in the wake of the deflation deep underground, causing earthquakes.

On that February day, the wind blowing south meant it was Catanians' turn to take the brooms out and swipe. The wind decides whose turn it is. Someone always picks the shortest straw. The ash has to be cleaned as it can cause damage even when it's cold. It absorbs water, which makes it heavy, and it's corrosive and can seriously damage eyes.

For a few days it was quiet after that first big eruption. But after all the cleaning was done, it started all over again yesterday.

So here we are. We are walking up the Donkey route to reach Valle del Bove. I'm not sure whether I hope today she'll rest, or what I'd want is to be there and see her in her strength, coming to life like in these past few days. But what I know for sure is that I'm hoping to feel close, breathe the air she breathes, get a sense of standing close to all the might and magic she is made of. Etna is beauty and is love. She is the mother of this region, yet she could take it all away in just a moment. Her beauty is only matched by the power of her potential of destruction. And she is magnetic — when you see her, you can't take your eyes off her, and at the same time she invites precaution.

From the beginning, I have a sense of entering her space, one in which only her rules matter. It all looks calm; the trees are quiet; the sky above is blue, but this layer of ash everywhere tells of a different story. Hiking on Etna feels like entering the realm of the supernatural. It is a place I am not well equipped to navigate, but I know Toni is. He chose the border of Valle del Bove as our destination, a large, deep and deserted basin covering an area of 37 square kilometres, created by the collapse of Etna's predecessors, Trifoglietto I and II, 64,000 years

ago.

The sinking of Etna's two predecessors created what is called a caldera, a kind of deep sinkhole formed through subsidence and then collapse. It forms shortly after the emptying of a top magma chamber in a volcanic eruption. When large volumes of magma are released over a short time, the structural support of the rock above the magma chamber is lost. The ground surface then collapses downward into the emptied or partially emptied magma chamber, leaving a massive depression — a landform sunken below the surrounding areas — at the surface.

This space is like an immense valley with steep walls up to 1,000 meters high. It has the shape of a horseshoe, open from the East, allowing the towns spread on the eastern part of Etna to be safe from lava and from the dense, fast-moving flow of solidified lava pieces, volcanic ash and hot gases Etna releases. The valley collects these flows, stopping them from reaching these towns. And safe from harm, these communities get to witness some of the most spectacular shows Etna puts up.

Today we will hike to its edge, but entering Valle del Bove is forbidden now. In better days, when an eruption is not imminent, one can enter this gigantic amphitheatre from its high rocky side walls — up to 1,000 meters high — slowly descending, watching every step. Such an attempt, preferably done with a guide, can make for a spectacular hike. But entering now is out of the question. The last days' lava has cooled on the outside but is still hot inside. And more, the valley is wider than the eyes perceive, the distance a sort of fata morgana tricking you to keep walking, fully exposed. Helicopters cannot land there, and in the midst of an eruption they wouldn't even try. If Etna wakes up then, there would be no escape and nowhere to hide.

In a sense, Etna is always alive. The most active volcano in Europe and one of the most monitored ones in the world, she sits above the convergent plate margin between the African and the Eurasian Plates and reigns at 3,200 meters high above the Eastern coast of Sicily with her height going up and down depending on the eruptions. Her regular activity makes her what is called a *hyperactive volcano*: Something within her is always on the move.

She dates back 500,000 million years with her first eruptions occurring when she and much of Sicily were still underwater. At that time, Sicily was a tiny strip of land. In fact, it was not Sicily as we know it now at all, but more like a promise of what this charming island filled with history and lemon trees would become.

What remains of that past can now be seen at the shore in Aci Trezza. From this small town close to Catania, you can see three prominent sea stacks. Local legend has it that these were

the great stones thrown at Odysseus by the monster Cyclops. But what they are is what remains of Etna's birth, their top sandy layers sitting on ancient magma that came out under the sandy bottom of the sea.

Toni stops every now and then. He shows me plants like the ginestra, an endemic plant with bright yellow flowers, which is the first to repopulate deserted lava slopes. The higher we go, the more our view broadens and opens. Now we can see the entire coastline from Taormina to Catania and far beyond it. We see what Etna sees: the big picture, what feels like the entire southern side of the island. It is a landscape like a real-life topographic map, with human life sprouted all around and human colonies on her mighty slopes that soften into valleys reaching the sea. This landscape is also a showcase of everything Etna has been up to in the past.

Toni points his finger, and there's La Montagnola, the crater from the 1763 eruption; there's Monti Rossi dating back before it, in 1669. That was one of the most devastating eruptions known in history. And then there are also Crateri Silvestri and lots of other flank cones, all with their history of might and damage. They're close enough to each other to understand that, over time, Etna can burst through literally anywhere.

Millions of tourists come to Sicily every year and a million of them go up on Etna. None are to be seen this February. Few people came last year. COVID-19 all but destroyed the tourist sector in this area. And today, but for the odd Catanese hiking on this sunny day, it is just us.

I came on Etna in November too, when the top was in complete silence but for the occasional gas release from the crater that made a breathing sound and smelled like sulfur. These regular releases make living in this place a life attuned to the volcano. They also make Etna friendlier. Safe is not a word for it, but she is to some degree predictable, and the releases mean she is not building up towards a catastrophe — like Vesuvius, the volcano overseeing Napoli that has seen no major eruption since 1631 but its danger is always looming. Etna is a volcano that breathes, deep breaths that move the earth and its plates with regularity, causing earthquakes and cracks that open up erupting flank vents.

The eruptions are to some degree predictable, but even the most accurate predictions come with uncertainties. The top craters have an open duct, so once the monitoring instruments pick up movement there, activity is expected on the top. The lateral eruptions are more complicated. These are usually announced by earthquakes, and the GPS monitoring system can pick up on Etna's body expanding as her flanks move and dilatate because of the pressure. When a lateral eruption begins, it opens new fractures on one or more sides at low altitude. And when and where this will happen is always a surprise as lateral craters can open anywhere. Living here means knowing that a crater can open in your garden or under your

house at any time.

And even if you're spared, you have to wonder which way the wind will blow and scatter the ash. And it can also find you driving. I recently saw in a video a large cloud of ash encompassing driving cars.

Another unknown is where you and your loved ones will be when things start moving. Sometimes the answers can be put together a few hours ahead, but the outcome of the real event can never truly be foreseen. Etna is the place where human life and a tangible sense of the supreme might of nature meet. A house sitting on Etna, a family making a living on its land — one's entire life can be here now but who knows what tomorrow brings. The towns scattered on Etna's slopes have names of saints because, in the past, people felt that unknown matters beyond one's control were better left in their hands.

Unseen as these saints but in a different manner is the source of Etna's force. This source is a mystery that humans theorize about, but no one can go close enough to see it. It is the stuff of Jules Verne's novel, *Journey to the Center of the Earth*: The vital energy of Etna comes not from the surface world we know well but from one below us. A world that has its own dynamic and power. A world with whims we cannot control but only accept. And always be ready.

Toni tells me that we're almost at our destination. Following the path, two more turns and here it is, wide open: Valle del Bove, vast, deserted, wrapped in silence. We're tiny dots staring into this dark magnetic sinkhole from its south side. The top craters are only a bit over a kilometre from where we stand, but Etna is in good spirits, and above us there's a wide blue sky.

We have no words. We sit down on a rock. And watch. We are on Earth, but here it feels we could just as well be on another planet. From a crater I notice a line of steam going up high reaching the atmosphere, turning into a fish-shaped cloud right above her. And I smile.

A day like this is the equivalent of a blink of an eye in the life of this volcano. If Etna and us would have the same life span, it would mean that she is erupting every few minutes. To us, the remains of a crater that was active hundreds of years ago seems so ancient we might be misled to believe it is past tense. But in volcano years, that crater was formed yesterday. Time flows differently for Etna and for us, and we don't match up. Set on top of each other, her lava layers are layers of a time-frame our minds cannot contain. The sum of our human lives over generations, the total of our few thousands of years of existence means we're a rather recent addition to her life. This temporal mismatch makes it incredible to realize that a 13th century crater could still open up. The fact that there has been no activity in the area for

hundreds of years doesn't make it safe.

Looking back at Etna's history, each eruption is different both in length and in the way it unfolds. Some are more memorable like the 1669 eruption. That was the only time when the lava reached the sea, surrounding the Ursino Castle in Catania and creating one kilometre of new land. And then, 24 years later, the 1693 earthquake followed. A total of around 60,000 people died both from the earthquake and in the tsunami that followed.

The next most destructive eruption took place in 1928 when Mussolini's soldiers evacuated the town of Mascali. The damages were great, but no one died. And then there were the more recent ones, quite numerous in the last two decades, varying in the amount of damage and intensity. Eruptions can last months at a time and can take away one's business and one's farm. The landscape as it is now could be totally different tomorrow.

But despite the dangers, there are many villages on Etna's slopes and 21 little towns that circle it. There is clear water on Etna, and volcanic land is fertile and rich in minerals. The West of Etna is dry so there grows the rare and beloved Sicilian pistachio, aromatic with an intense fruit flavour. In Sicily, pistachio can go in anything except your espresso, the island even having its own version of the mainland's pesto made of it.

Going south, you will find prickly pears, harvested by hand and turned into an ancient liqueur called Rosolio di Ficodindia dell'Etna. And then the East — this side of Etna — is more humid, so it's the land of decadent orange and lemon trees — an area full of orchards nesting Mediterranean-style houses, old and new. Sure, it can all be gone in a day, but while they last, the abundance of the land and these sights setting against a sky that seems eternally blue during the day and filled with milky pastel-colour shades of orange, blue and pink at sunset certainly matches one's idea of what a wonderful idyllic life close to nature might look like.

And that's not all. There is her basalt rock that makes the local houses. There are the honey and the thousands of years of wine tradition with Mamertino being one of the oldest cited wines in history and much loved by Iulius Caesar. There are the cheeses, some made from the milk of an indigenous silverish coated goat named Argentata dell'Etna. There are the tourists coming here, the local brands and all the films that feature Etna. She is at the centre of life, the nod that shaped local culture since its beginnings with its riches and lessons learned from generations of cohabiting with her.

Etna's activity has increased in the last 20 years, and recent research indicates that gravity — with the rising magma also playing a role — is causing the southeastern flank to slide towards the sea. This movement happens at a rate of 14 mm per year, with one instance

around mid-May of 2017, when the flank moved forward for somewhere between 25 and 50 mm. For now, it is unclear whether this is normal or fast slippage, but the question remains: Might this one-day result in a catastrophic collapse? Experts fear such an event would create a mega-tsunami that would devastate not only Sicily but all eastern Mediterranean shores. There is no sign for now of such an event being imminent, but a lack of data on any similar incidents means that we have no way of telling when such a major collapse might occur.

Yet while it lasts, and while we last — more than feared, Etna seems to be loved. Even if born here, she never seems to become common for the locals. They praise her and respect her. 'We don't talk about eruptions, because to us, Etna is not a volcano,' Toni told me. 'She's a living being'.

Her mystery doesn't fade no matter how often they have seen her. They feel Etna provides for them, contains them, and she's witness to their lives, while they, as tiny humans, witness hers. She changes height and shape and skin; she has her moods. But she's a constant presence that can amaze and scare and captivate.

Seeing her and hearing locals talk about her, sometimes using the words that lovers use, makes me wonder how looming danger can coexist with the safety of feeling home. Few of us live with a clear perspective of a natural disaster just around the corner. But are we safe simply because nothing feels immediate?

Sicilians have lived with an appreciation of the unpredictable and learned to live through sudden, sometimes complete change. That is something many people around the world learned about for the first time when COVID-19 upended life as usual. Sicilians know that life as usual might be a temporary arrangement. They know Etna is there; they see her every day, a magnetic constant memento mori they embrace. She's part of their identity. The promise of danger and change she represents is part of their sense of home and what it is to them life as usual.

We leave Valle del Bove, stepping on soft dried plants, sliding on ash along the cone of an old crater. What we see now, tomorrow could be different. But isn't that the case with everything we know? It makes now a privilege and makes the feeling of impermanence so vivid — it's confronting. This "living being" changes often, and with her, the entire world around her changes. But isn't that the same with everything around us and inside us? Our powers are much different. But I wonder whether in the end that's what we have in common. Only that we don't match in time and might.

I turn around again for one more glimpse: She is still busy making clouds.