

Histoire d'une Mon- tagne

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Humanity has become disgusting. Cities are unbearable. The author must take leave of them both. And so he goes to an unnamed mountain for a long walk. Over the 600 plus pages of Histoire d'une montagne he recounts the ceaseless physical processes of coming into being and passing away that govern the mountain. For Élisée Reclus, to make a mountain the entire cosmos is required, and in the mountain we can see the cosmos. The mountain is never named, it stands in for any. Published in the early 1880s and translated once around the time of publication, Histoire d'une montagne is an early extract from a voluminous oeuvre committed to an expansive processual conception of nature and human life. Reclus, along with others, notably Peter Kropotkin, gave nineteenth-century anarchism its geographical imaginary. This is a new translation by the Scapegoat editorial board.

The Origin of the Mountain

So, down to its smallest molecule, the enormous mountain is a combination of diverse elements mixing in variable proportions; like the stars themselves, each crystal, every mineral, every grain of sand, or deposit of limestone, has an infinite history. Like the universe, a modest fragment of rock has a genesis. Even in helping each other—the astronomer, geologist, physician, and chemist—the sciences still ask with anxiety if we have *understood* this rock and the mystery of its origin.

And what about the origin of the mountain itself? Is it certain that it can be revealed? Sandstone, limestone, slate, granite—can we recount how this prodigious mass accumulated upright towards the sky from the point of view of its rocks? In contemplating its superb beauty can we turn in on ourselves, the staring, feeble dwarves that we are, and say to the mountain, with our proud consciousness and satisfied intelligence: “The smallest of your rocks could kill me, but we *understand* you; we know your origin and your history”?

Even more than us, children question what they see in nature and its phenomena. But almost always, in their naïve confidence, they are content with vague and mendacious responses from a father or elders who do not know, or professors who pretend to know everything. If they don't receive a reply they will search and search until they do because the child

cannot remain in doubt. Feelings enter their lives triumphantly and it is as if they must speak as an authority on everything. Nothing remains unknown.

It is the same for nations, which, having left their initial state of barbarism, found a definitive explanation for everything that struck them: that which responded best to the intelligence and mores of the culture. Transmitted by word of mouth, at the end, the legend became the word of god and the priestly caste (the caste of interpreters), which emerged to give it moral authority and ceremony. It is also true that in the mythic heritage of almost all nations we find narratives that recall the birth of mountains, as well as rivers, the Earth, the oceans, plants, animals, and humans themselves.

The simplest explanation is the one that shows us gods and sorcerers throwing the mountains from high up in the sky and letting the rocks fall haphazardly, or, raising and sculpting them with care into the columns of the vaulted sky. This was the mode by which Mount Lebanon and Mount Hermon were made. Thus were the mountainous roots of the world all held by Atlas's robust shoulders. Also, once mountains were created, the gods used to throw them around, changing their places. The Titans, who weren't as high as the gods, threw down all of the mountains of Thessaly to use them to build the ramparts around Mount Olympus. Even the giant Mount Athos was not too big for them: they picked it up and carried it to the middle of the Ocean where it stands today. A giantess of the North filled her apron with hills, which she dropped along her path to remember her route. Vishnu, one day saw a young woman sleeping under the hot rays of the sun. He lifted a finger with a mountain on one end to shelter the beautiful sleeper. That, we are told, is the origin of shadows.

Gods and giants have not always had to grab the mountains to displace them, they could obey mere signs. The rocks were pulled to the sound of Orpheus' Lyre, the mountains stood up in order to listen to Apollo. This is the origin of Helicon, the home of the Muses. The prophet Mohammed arrived 2,000 years too late. Had he come during a more naïve age the mountains would have come to him rather than he having to go to them.

Beside these explanations of the birth of mountains by the will of gods, other mythologies are less crude. For instance, the rocks and mountains are living organs pushing naturally from

the enormous body of the earth like the stamens in the corolla of a flower. While on one side the ground descended to receive the waters of the oceans, on the other it rose to receive the vivifying light. It is because of this that plants elevate their stem and turn their petals towards the star that watches them and gives them its shine. But the antique legends have lost their believers and offer little to humanity but poetic memories. They have joined the realm of dreams; and the spirits of inquirers, emancipated from these illusions, have become more avid in their pursuit of truth. But even people of our day, just as those from ancient times, must repeat, in contemplating the peaks goldened by the sun: "How do they rise into the sky?" Even in our era, when the learned profess not to base their theories on observation and experience, there are some whose fantasies about the origins of mountains resemble close enough the ancients' legends. A fat modern book tries to demonstrate that the light of the sun that bathes our planet has taken on a body and condensed into plateaus and mountains around the world. Another affirms that the attraction of the sun and moon, not content to raise twice a day the tides of the ocean, has also inflated the earth and caused solid waves to rise up to the altitudes of snow. Finally, another recounts how the comets, lost in the sky, struck our globe, cut through the surface as stones shatter ice and made the mountains shoot up in ranges and massifs.

As always, the earth, happily working on a new creation, never ceases to act under our eyes and demonstrate how it changes bit by bit the roughness of its surface. It constantly destroys yet reconstructs, day by day. It levels mountains and raises others, it empties valleys only to fill them up again. In roaming the surface of the earth and observing with care the phenomena of nature, we can therefore see the formation of the hills and mountains, slowly, it is true, and not by any sudden upheaval as the lovers of the marvellous would have it to be. We see them being born, either directly from the bosom of the earth, or indirectly, so to speak, by the erosion of a plateau, the same as a statue appears bit by bit from a block of marble. When an insular or continental mass rises some hundreds or thousands of metres, receives rain in abundance, its slopes are gradually sculpted into ravines and valleys; the uniform surface of the plateau serrates into peaks, ridges, and pyramids, widens into amphitheatres, basins, and

precipices; mountain systems appear little by little where the ground has fallen great expanses. It is the same with regions of the earth where the plateau, attacked by rain on one side, is cut up into mountains merely on that slope. This is can be seen in Spain, in the terrace of La Mancha that descends towards Andalusia by the escarpments of the Sierra Morena.

Besides external causes that can change a plateau into mountains, there are also slow changes in the interior of the earth bringing about vast excavations. Hardworking people who, hammer in hand, travel in the mountains year after year to study the structure, remark that in the lower beds of marine formation which constitute the non-crystalline portion of the mountains, there are gigantic breaks and fissures extending thousands of metres in length. Masses thousands of metres thick have been completely raised up in the fall or have been completely reversed, such that their old surface became the bottom. Their foundations gave way in successive shocks, the denuded skeleton of crystalline rocks that surround it like a jacket; they have exposed the core of the mountain as a curtain suddenly drawn aside reveals a hidden statue.

But the collapsed themselves are less significant than the folds in the history of the ground and in the mountains, forming the roughness of their exterior. Submitted to the slow, secular pressures, rocks, clay, the veins of metal, all of it folded like a tissue, and the folds thus formed the mountains and valleys. Like the surface of the ocean, the surface is stirred up into waves, but these undulations are of a different magnitude: the Andes and Himalayas, for instance, rear themselves up above the plains. Ceaselessly the rocks of the earth are caught in these lateral pulses, which fold and re-fold them in diverse ways and keep the beds in an incessant state of fluctuation—in the same way that the skin of a fruit is wrinkled.

The peaks that surge directly from the soil and gradually mount from sea level towards the frozen heights of the atmosphere are mountains of lava and volcanic cinders. In many areas of the terrestrial surface they can be easily witnessed rising, growing before the naked eye. Different from ordinary mountains, volcanoes properly so-called, are perforated by a central vent by which smoke and pulverized fragments of burnt rock escape. However, when extinguished the vent closes and the slopes of the volcanic cone, whose outline loses its pristine

regularity under the influence of rain and vegetation, ends by resembling other mountains. Elsewhere, there are rock masses that, in elevating from the bosom of the earth, whether as liquid or solid, exit simply from a large fissure in the ground and are not launched by a crater like the cinders of Vesuvius or Etna. The lava that accumulates in summits and branches into promontories merely differs by its youth from the old ones that bristle across the surface of the earth. The once-burning lava cools little by little; it slowly disintegrates externally and turns into a cloth of topsoil; it is hit by rain, which enters the interstices sending it forth again as streams and rivers. Finally, at its base it is covered with new geological formations and becomes surrounded, like other mountains, with layers of gravel, sand, or clay. In the long run, the look of the geologist can only recognize that it sprung from the bosom of the earth, the grand furnace, like a mass of molten metal.

Among the ancient mountains that form part of these massifs and the systems we call the "vertebral columns" of the continents, there is a large number that are composed of rocks that very much resemble actual lava and an analogue chemical composition. Like lava, porphyries, traps, and melaphyres are ejected from the ground by large fissures and spread on the ground like a viscous substance that soon cools when it contacts the air, most granitic rocks look to be made in the same manner; they are crystalline like lava, and their crystals have the same simple bodies, silicone and aluminum. Isn't it reasonable to think that these granites too were a pasty mass, and that the crevasses of the ground were giving passage to their burning river? As always, this is a hypothesis for discussion and not a demonstrated truth. The same for the lava that, in leaving the ground, raises scraps of land with forests or grasses, so have the eruptions of granite or similar rocks been the most frequent cause of the upheaval of strata of various formations that constitute the vast majority of mountains. Strata of calcium, sand, and clay that the waters of the ocean or a lake have once deposited in parallel layers on the bottom of their beds and that became the external membrane of the earth would have been thus bent and then risen by the mass rising from the depths in search of a way out. Here, the swelling tide of granite would have broken the upper strata into islands and islets, which, dislocated, cracked, and crumpled in bizarre folds, were now

scattered among the depressions and upon the points of the upheaving rock; elsewhere, the granite would have opened only a single passage through the ground by folding back on either side of the outer layers, following the inclination of the most varied angles; again, in other places, without reaching daylight, the granite would have battered the upper layer. Under the pressure that had caused them to become folded, these would have ceased to be plains in order to be transformed into hills and mountains. Thus even the heights formed of strata peacefully deposited at the bottom of the waters could have erected themselves into peaks in the same manner as the protuberances of lava; a bore hole through the stratified beds would expose a core of porphyry and granite.

Admittedly, most mountains have appeared in the manner of lava, though the cause of their eruption from the ground, of all of these substances in a state of fusion, has yet to be explained. Ordinarily people suppose that it has been explained, for example, by the contraction of the exterior crust of the globe, which slowly cooled while radiating heat into space. Formerly, our planet was a drop of burning metal. While rolling through the frigid firmament it has gradually hardened. But is it the shell alone that has become solidified, as people love to say, or has the whole drop been rendered hard, down to its very core? We still don't know. Nothing proves that the lava in our volcanoes comes from an immense reservoir at the interior of the globe. We only know that lava sometimes forces itself through the crevices of the ground, and flows to the surface; similarly, granites and porphyry and other rocks are said to have flowed out of fissures in the terrestrial bark, like sap escaping the wound in a plant. The tide of shattered stones is said to have risen from the interior, under the pressure of the planetary crust, gradually to be contracted once more by its own cooling.