A=i-lg l s ie l tn he os is

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Of stones, livers and deep biospheres. The Prometheus works of Thomas Feuerstein

In the vast archive of artistic and literary interpretations of the Prometheus myth, one of the most enigmatic renditions comes from Kafka. The text is dated 17 January 1918:

> *The legend tried to explain the inexplicable. As it came out of a substratum of truth it had in turn to end in the inexplicable. There are four legends that tell of Prometheus. According to the first, he was clamped to a rock in the Caucasus for betraying the secrets of the gods to men, and the gods sent eagles to feed on his liver, which was perpetually renewed. According to the second, Prometheus, goaded by the pain of the tearing beaks, pressed himself deeper and deeper into the rock until he became one with it. According to the third, his treachery was forgotten in the course of thousands of years, forgotten by the gods, the eagles, forgotten by himself. According to the fourth, everyone grew weary of the meaningless affair. The gods grew weary, the eagles grew weary, the wound closed wearily. There remains the inexplicable mass of rock.*[1]

These sentences may seem lucid, but their meaning and their ending are enigmatic. A text that remains opaque despite its laconism. In the original German, Kafka uses the term Sage (saga, translated as 'legend' in the above), coined by the Grimm brothers, to refer to what is normally called a myth. Other, less frequently used expressions include Legende or even Kunde (lore), Märchen or Märe (fable, fairy tale). Mythos and Sage are distinct from the latter concepts by their claim to truth. When Kafka writes that the Sage "tries to explain the inexplicable", he emphasises the chasm between the truth-seeking explanation and that which is being explained. This is unsurprising, considering the paradox of wishing to explain the inexplicable: it is impossible. Nevertheless, sagas and myths exist. Their return to the "inexplicable" from which they emerged – in order to eliminate it – is an inevitable result of their origin from a "substratum of truth". What makes them true is that their explanations ultimately leave the inexplicable unexplained. That is precisely where Kafka's text itself ends.

A paradox similar to said text is inherent even to the "principle of reason"2, the foundation of all philosophy. The explanation "trying" to gauge the "substratum of truth" follows the principle of reason (nihil sine rationale) but ultimately and inevitably ends in the lack thereof, for there is no absolute reason. There are only varieties and chains of lore – much like Kafka's four versions of the Prometheus saga. They represent Kafka's view that a myth or a saga is nothing but a successively unravelling layers of different versions obscuring a core, a reason that is in its essence inexplicable. It is precisely this absence of an explanation within each explanation that gives rise to new explanations, thus unintentionally preserving the incommensurable. Sagas and myths are narratives whose historical and factual validity (whatever it may be) is quintessentially questioned by their clarification, which nonetheless fails to resolve the paradox of their "substratum of truth". It is impossible to shed light (clarification) on the dark inherent to the substratum of truth by way of criticism or any other medium. Quite the contrary: at the end stands the all the more inexplicable "mass of rock".

The four versions of the saga and the enigmatic phrase that Kafka added to his paradox introductory sentence do not aim to achieve semantic unity of the myth. Kafka does not limit himself to the existing lore: he expands and partially reinvents it. Above all, he introduces his own temporality, which ultimately resolves the myth. This applies especially to the core of the narrative: the conflict with the gods, which is only referenced in the end, during the punitive torture in the Caucasus. Not just the actors, the myth itself fades out. What remains is the factum brutum: rock. Nothing under the sun seems more lifeless. And this very lifeless matter, the mass of rock, will be the source of life as developed by Thomas Feuerstein.

In the further course of the different versions, the pictorial concepts in the narrative of what Kafka calls the "betrayal" of Prometheus fade and disappear. Tempus edax rerum, as Ovid

stated (Metamorphoses XV, pp. 234–36). Prometheus, defending himself from the eternal pain inflicted upon him, turns into stone: he becomes one with the rock to which he has been clamped. Turning into stone means to lose sensation, to disappear from the time in which our tragedies play out. The symbiosis with the rock constitutes a kind of petrification and anaesthesia: a death that is simultaneously a metamorphosis into a fossil, a sculpture. In the long term, there is oblivion, the amnesia of all those who were involved. But the absence of memory dissolves the cause and reason of that on which the myth is based. The all-encompassing, stony fatigue symbolises the fading and disappearance of those tensions and motives that determine both actors and actions and keep them alive. It also dissolves the "substratum of truth" of the saga, which is now without reason. All actors, all perception, all motivation and all motives perish in the lack of reason. Where there is no reason, everything is a motionless sculpture. The rock is the hypokeimenon (ὑποκείμενον), the essence that underlies everything, which cannot be determined nor described.

"There remains the inexplicable mass of rock", Mount Kazbek, the 5,047-metre stratovolcano in the Georgian Caucasus, of which Thomas Feuerstein speaks in his "Prometheus Protocols". Mount Kazbek at the edge of the world is the mountain of "Prometheus bound" (Prometheus desmotes)[3], whom Aeschylus (or an unknown poet) has made the protagonist of an unprecedentedly bold tragedy.

To Kafka, the rock is the baseless basis of everything. It is the inexplicable itself. The myth is deconstructed in an uninterpretable, even radical way. It is the 'legendary' reason for the entanglements and actions of gods, titans, humans and animals without ever yielding a finite meaning, but nonetheless, everything turns into oblivion in the end. Everything becomes weary, the protagonist turns to stone. The legendary has become insignificant. Fin de partie. End of story. Thomas Feuerstein refuses to accept this anticlimax. Quite the contrary: he turns the stone into a source of life.

Thomas Feuerstein reverses Kafka's process of fading out all that is alive, a process with which

the topoi of transience inherent to the mythographic and literary tradition has made us intimately familiar: is it possible to create life from stone, even discover the source and nourishment of life within it? The artist effectively stages a skilful combination of literary science fiction, mythological re-enactment, biochemical laboratory work and artistic research. An expedition whose aesthetic and cognitive cartography must be elucidated at least partially.

The spectacular point of departure of "Prometheus Delivered" is the marble replica of Prométhée enchaîné (1762) by Nicolas-Sébastien Adam (1705–1778), whose original can be viewed at the Louvre. What truly fascinates, however, is a surprising, almost eerie scientific – indeed, geochemical and microbiological – discovery whose consequences remain to be seen. In the depths of the continental crust and far below the oceanic crust, geobiologists have discovered extraordinary microbes with a surprisingly varied DNA. They live within the rocks at temperatures of up to 113 °C, perhaps even 150 °C, in complete darkness and far from any oxygen, any organic source of food or energy. They are anaerobic protozoa, and scientists estimate that they might make up as much as 30 percent of the entire biomass of our planet. Present in hot plutonic rocks worldwide, they have given rise to an exciting, new field of geobiology: the microbiology of deep sediment, the so-called "deep biosphere". Life as we know it suddenly has company – quite a lot of it, and quite unexpectedly so. What precisely this will mean for the concepts and terminology of life, geohistory and ecology cannot be predicted at this stage.

Drill cores from sedimentary rocks at depths of multiple kilometres, dating back 110 million years, contain thermophile archaea. Ancient life. The density of these microbe populations on the rock, which can also be granite or basalt, depends on local factors. They are very frugal, as their activity and energy metabolism are slowed down to extremes. Cells do not undergo mitosis rapidly, as they do on the surface of the Earth or in the human body, but apparently at intervals of decades or centuries. Nonetheless, the anaerobes are found the world over. They reign over the plutonic rock layers of

the earth and the oceans. Special viruses, bacteria and fungi are their neighbours. More and more types of archaea and bacteria are being discovered: a staggering level of subterranean biodiversity.

Could these creatures be the origin of life? And will they outlive all other organic life, including us? At several kilometres underground, are they not safe from terrestrial catastrophes, climate change, nuclear war and meteorites? Could these skilled survivors, capable of withstanding even the most hostile environments, even have arrived from space – enclosed as passengers in the inorganic mass of meteorites? But how did these minuscule protozoa spread across the subterranean worlds beneath our oceans and continents without any motor functions of their own? And, above all: how do they live?

Even a basic level of scientific common sense tells us: rocks cannot nourish organisms. Life requires metabolic processes or, in the case of plants, photosynthesis – ways of transforming energy. We appear to be witnessing a previously undiscovered biochemical survival technique. These microbes eat rocks. They are rock-eaters, lithophages. They have an endolithic lifestyle: life inside rocks, nurtured by rocks. Put into geobiological terminology, they are the class of "chemolithoautotrophic bacteria". "Autotrophy" refers to organisms that derive their nutrition (τροφή) autonomously (αὐτός) from inorganic matter (such as rocks) by way of chemical transformation processes: chemosynthesis. Heterotrophic organisms, which include humans, animals, mushrooms and many types of bacteria, require organic compounds for nourishment. They consume living matter or, in case of destruents, dead organic matter. Autotrophic rock-eaters derive the energy needed for their preservation from the metamorphosis of rocks – "digested rocks", so to speak. This is why they are called lithophages. To us, rock – especially rock in hot, dark depths – appears extremely hostile to life. To the chemolithoautotrophic bacteria, on the other hand, it is the perfect environment for life and the perfect fuel for their metabolic processes. They are completely adapted to this extreme atmosphere and seem to have generated a vast amount

of biomass there. Our intestinal microbiomes each contain 100 trillion anaerobic bacteria of 1,800 genera and 36,000 species with a total mass of 1–2 kilogrammes. This alone is impossible to grasp. Even less conceivable is the fact that the number of living organisms, including those in the deep biosphere, exceeds the number of stars in space. We are approaching a notion of Kafka's "inexplicable".

The field of the subterranean biosphere may yield unforeseen practical applications. We might, for instance, be able to separate energy consumption (the material throughput of any society) from the consumption-based logic of heterotrophy and develop energy technologies that do not require limited raw materials, using rocks as a source of energy and nutrition instead. Perhaps, innovative biotechnologies will turn us into symbionts of rocks one day? Will we become children of Prometheus, who – according to Ovid – is our forefather, anyway?

Either way – these are the questions on which Feuerstein's Prometheus project is based. It deals with a new or, at least, expanded concept of life – its technology, its ecology and its economy. This is doubtlessly exciting for an artist who has spent more than twenty years creating artworks and installations based on biochemical processes and, in the process, acquired an impressive wealth of knowledge about the natural sciences and even collaborated with high-ranking biotechnical laboratories. Art and science become parallel operations. Art becomes research, research discovers aesthetics.[4]

What does all this have to do with the Prometheus myth? Remember Kafka's Prometheus: he becomes the symbiont of the rock, which is the only way out for the vulnerable titan who has become food for Zeus' eagle. For an organism to serve another as a living food source – this is surely the most horrifying fate for any heterotrophic life form. But is it really? After all, we sustain ourselves by deriving energy from other organisms, both animals and plants. We, as living beings, thrive on the death of other living beings.

Prometheus, as a conveyor of culture, is primarily a giving entity, a donator.[5] By separating the gods from the humans during

the sacrificial rite at Mecone and teaching the latter the skills and arts they needed for their reproduction and development, he antagonises the Olympians and, in particular, Zeus. The gods get their revenge and pass punishment onto the grandchild of Gaia for granting autonomy to humankind: Zeus has Hephaistos clamp Prometheus to a rock on Mount Kazbek and sends an eagle – the executive bird of the father of the gods – to feed on his ever-regenerating liver day by day.

When Kafka's Prometheus becomes "one" with the rock, he essentially becomes insensateness itself – he turns into the rock to defend himself from the gruesome pain he has been enduring. At the same time, he transforms into a mute sculpture, thus protecting the secret Zeus is – according to Aeschylus – trying to wrest from him. Zeus is after information held by Prometheus: the power of the tormented is his knowledge about Zeus' future downfall. This makes him the first figure in world literature to have knowledge about the death of God. He obtained this fateful information from his mother: Themis, daughter of Gaia and guardian of the Oracle of Delphi long before Apollo took over. Despite his surrender to Zeus, Prometheus' knowledge is his freedom. The eagle is the instrument of torture sent to extort this knowledge from him. Hence the attack on his liver.

In the ancient mantic tradition of divination, the liver is the central organ of knowledge and life – the macrocosm of heaven is reflected in the organic microcosm of the liver. Even Plato believed this (Timaeus 70d–72d). The eagle turns Prometheus into a 'man of sorrows', a suffering righteous man. Zeus regards his fate as punishment for his hybris, which Prometheus exhibited by teaching the humans the cultural skills they needed for survival. Worse still: Prometheus knows when the reign of the Olympians will end. This is why he spares Prometheus' life, instead inflicting eternal pain through torture. The ancient Oriental practice of using entrails for divination, which dates back to the third century or further, always involves the sacrificial slaughter of an animal. Its liver reveals the code for an unknown future, inscribed into the organ. The practice is a way of recognising the will of the gods and the future that lies in their hands. The Prometheus myth reverses this principle. Instead, it is Zeus who sacrifices the "friend of the humans" (φιλάνθρωπος) and 'forethinker' (the meaning of 'Prometheus') in order to gain knowledge about his own future. Prometheus' liver contains the oracle about the death of the god.

The statue by Nicolas-Sébastien Adam, which Thomas Feuerstein has chosen as the point of departure for his own installation, depicts the same liver torture. Prometheus' muscle tension, especially in the left leg, is reminiscent of an écorché – an anatomical sculpture of a skinless human figure, widespread in the 18th century. It emphasises the true nature of this scene and all other sacrificial rituals in the mantic tradition: it is a vivisection. Like a scalpel, the beak of the eagle cuts into the side of Prometheus. Thick drops of blood run from the wound. His face is distorted with pain, his mouth opened wide – the sculptor employs the same wildness of expression of which Lessing disapproves in his work on Laocoön, in which he discusses the sculptural representation of pain. At his feet, the burning torch emits heavy smoke, an attribute of Prometheus. The tall rock and the turbulent folds in the cloth further emphasise the dynamic, impassioned character of the scene. They stand in stark contrast to the shackles that restrain the titan's hands and feet, preventing any attempt to dodge the terrible attacks.

Prometheus is the pyrphóros (bringer of fire), hence the torch as a symbol for the cultural gifts he has given to humankind. "Promētheús Pyrphóros" was the title of the last and lost part of Aeschylus' Prometheus trilogy. The stolen fire is indeed of extraordinary significance, which is why the sculptor presents it especially emphatically as an attribute of Prometheus. As a form and energy and medium for many techniques, it plays a role in Feuerstein's work, too.

By denying humans fire, Zeus denies them the very power of nature that allows them to progress from raw to cooked food, from the natural to the cultural. Only animals are without fire.[6] Originally, fire was a privilege exclusive to the gods. Without fire, there can be no cultural evolution.

Johan Goudsblom illustrated this well in his study titled "Fire and Civilization"[7]. While Goudsblom considers the domestication of fire as an opportunity of which early humans took advantage to embark on their "ecological dominion", Gaston Bachelard states that fire was "originally subject to a general prohibition"[8], a taboo, untouchable and therefore unavailable: "The social prohibition is the first general insight we have into [the topic of] fire."[9] This contains a paradox: if cultivation of fire is connected to ownership of fire, but fire is subject to a general prohibition, this means that the emergence of culture comes at the price of a transgression. In the Promethean myth as in the Bible, becoming human requires the breach of taboo. Plato, too, tells this myth (Protagoras 320d–322a).

To punish humanity for Prometheus' theft of fire, Zeus has Hephaistos mould a woman from clay, the first human woman to exist: Pandora. She, too, will play a role in Feuerstein's world of microbes and the narrative of his "Prometheus Protocols". After all, the recently discovered, huge and genetically truly astonishing "Pandoraviruses" are named after her. They were first isolated at locations that seem worlds apart, such as the coastal regions of Chile and fresh-water ponds in Australia. They were also 'resurrected' from the Siberian permafrost, where they lay 'sleeping' for 30,000 years. Once brought into the laboratory, they immediately became active, infected amoebae and started multiplying. Pandoraviruses, much like all other viruses, have no replication system or metabolic function of their own. They are destruent parasites. Do new viral threats lurk in the deep? A Pandora pandemic? Or can these viruses and the insights gained from them help modern medicine find new therapeutic approaches? Will the "deep biosphere" enable us to develop new technologies, new reproductive and metabolic opportunities, new therapies? The "Prometheus Protocols" state: "Promethean technology leaves us torn between our salvation and our extinction. Science is working on Pandora's heritage."

Whatever the ultimate result of this new exploration of the deep biosphere, the myth gives us reason for scepticism: when Pandora is presented to Prometheus' brother Epimetheus as a gift, she carries with her a clay jar containing all the evil in the world – and, at the very bottom of the vessel, hope. Epithemeus opens the jar and all the evils and plagues are unleashed upon the world, while hope remains trapped inside. These evils become the systemic state of our planet. They come, as described in Hesiod's "Works and Days" (verse 103f), "by themselves" – they are automatoi – and "silently", for Zeus has taken their voice.[10] In terms of the Pandoraviruses, however, Feuerstein considers the 'trapped hope' to be a virostatic agent or, in more general terms, the downright utopian remedy that could cure the world of evil. In any case, the bizarre Pandoraviruses raise the question of life and its origin all over again. Fire – the fire Prometheus steals from the gods – is an engine of technological, social and political civilisation, indispensable for any society that is built on ceramics, brickwork and metallurgy. It is precisely this cultural development that the Gods seek to thwart, and Prometheus is the trickster foiling their plan. To the elders, fire is the ultimate force of nature. It is ubiquitous, found in passionate sexuality as well as the planet itself and the technologies developed on it.

The creation of humanity and the theft of fires are two aspects of the same cultural initiation. Their complementary nature is first determined by Plato in "Protagoras" (Prot. 320b–323a). Mixing fire and clay, the gods create the prototypes of all animals, including humans. Epimetheus and Prometheus are given the task of assigning characteristics and gifts to these raw forms. Prometheus does not become the sculptor of humankind until Ovid; the same applies to his son, Deukalion, who creates humanity anew with Epimetheus' daughter Pyrrha after Zeus' deluge (Met. I, 274–435). The Promethean tradition reaches as far as Goethe, Mary Shelley and beyond, all of whom explore the creation of humanity – a model for any art form – as an act of rebellion against the gods. Ever since early modern era, we have witnessed a prevalent Promethean culture. We can see why Nicolas-Sébastien Adam emphasises the torch in his

sculpture of Prometheus. In the long term, however, Prometheus is no longer needed as a divine teacher. In 1509, Carolus Bovillus (Charles de Bouelles) stated that Prometheus found "nothing holier, more precious or more alive than fire" in Heaven[11]: control over energy. Quite in line with Aristotelian thought, Francis Bacon call the soul "the form of forms"; the human hand, to him, is the "tool of tools", and fire is the "helper of helpers and the force of forces".[12] This in itself is an intramundane, anthropological approach. When Albert Camus eventually demands the reinvention of fire, he wants humanity to be redesigned: "l'homme révolté" is a human with autonomy and full responsibility of himself and his own energies.[13] This is the Promethean narrative. Prometheus – not the figurative and mythical but the metamorphosed Prometheus, engulfed in the deep biosphere and the world of rocks – could become the symbol of a new utopia. It is the narrative that Thomas Feuerstein takes up.

Feuerstein wraps tubes upon tubes around his marble replica of Nicolas-Sébastien Adam's Prometheus statue, reminding of Laocoön and His Sons, strangled by the many-headed serpent. This technique effectively doubles the misfortune of "Prometheus desmotes". Feuerstein goes further: he dissolves Prometheus, as Kafka did, and transforms him. The chemolithoautotrophic bacteria ("rock-eaters") are fed with lava and pyrite, causing them to generate sulphuric acid. This acid is then directed into the stream of water that has been flowing over the petrified Prometheus for several weeks, slowly breaking him down into plaster. The plaster is sedimented and gradually turned into a new sculpture resembling a squid. Feuerstein calls this chemical procedure "Ovid Machine", referring to the narrative process of "Metamorphoses", inspired considerably by the physical transformation of the dynamic matter.

Accompanying drawings by the artist project an ancient Babylonian liver sculpture into the body of the squid. Its surface is inscribed in cuneiform, mapping the semantic regions of the oracular knowledge obtained during hepatomancy, the reading of the liver. This micro-macrocosmic mapping corresponds to the famous Etruscan bronze liver (approx. 100 BC) at the Museo Civico in Piacenza.[14]

The squid, on the other hand, is one of the creatures into which the sea nymph Thetis – grand-daughter of the sea goddess Tethys and sister of Themis, Prometheus' mother (Ovid, Metamorphoses, XI, 221–265) – shape-shifts during her struggle with Peleus, which results in their marriage and the conception of Achilles. Feuerstein's hybrid of a squid and a hepatomantic map, then, creates a link between Prometheus, the liver and the sea – and, certainly, also Gaia, the personified Earth and mother of all life, Tethys, the goddess of the sea, and her brother and consort Oceanus. Tethys feeds her countless children – springs, streams, rivers, lakes, wells – through water conduits in the subterranean rock layer: the same sphere that is home to those lithophages and Pandoraviruses that are so central to Feuerstein's work. In Feuerstein's installations, the lithophages gradually transform the marble statue of Prometheus into a plaster sculpture of a squid. This metamorphosis is titled "Ovid Machine" but constitutes a biochemotechnical process. Prometheus' lithophagic disfigurement gives rise to a new form. The plaster is broken down into powder that is then pressed into pencils, which create new drawings.

Using biochemicals and technologies that penetrate the molecular and microbial layers, Feuerstein organises and controls aesthetic moulding processes and the forces that make them possible. Matter becomes different matter, marble is transformed into artistic materials that become the "matter" of drawings. The artist has been practicing this art of transformation for a while: earlier, he produced a type of primordial coal of an outstandingly deep, dark black and created drawings and sculptures from it. He also created pigments in a bioreactor fuelled by algae and used them as paint. These concepts and bioaesthetic processes are based on the Ovidian principle of metamorphosis. Science, process technology, archaic life forms and art meet in his pieces. Not voluntarily (they must be forced) and not without their own enigmas: a great deal of knowledge is necessary to gain an in-depth insight into

these works. But we will never be able to fully lift the secret of these bio-metamorphoses, which the artist has derived from nature itself.

The main point of Feuerstein's installation, however, is that the petrified Prometheus is not dissolved and deconstructed but, instead, transformed. This is achieved with the help of the chemolithoautotrophic bacteria, which generate organic compounds from the rock, thus 'feeding' human liver cells and stimulating growth and reproduction. Ultimately, the stone sculpture turns into a sculpture made of living flesh, the Promethean liver: Prometheus de-liver-ed.

All is lithogenesis. In his "Prometheus Protocols", Feuerstein cites this first line of the poem "On a Raised Beach" (1934) by the Scottish poet Hugh MacDiarmid (1892–1978), a poetic reflection on the archaic landscapes of the Shetlands. Remember Deukalion and Pyrrha, Prometheus' and Epimetheus' daughter, the only survivors of the deluge unleashed by Zeus to destroy humankind (a parallel to the Biblical Noah myth and the Babylonian Epic of Gilgamesh). They survive because Prometheus tells them to build a boat. Albeit the only survivors, they are too old to become the biological ancestors of a second humankind. Deukalion asks Themis, the Oracle of Delphi, mother of Prometheus and grandmother of Deukalion, how humanity could prevail in light of her infertility and impending death. The Oracle tells them to throw the bones of their mother behind their shoulders.

Relief of Deukalion and Pyrrha at the Parc del Laberint d'Horta in Barcelona, around 1792, probably by Domenico Bagutti.

Her bones, meaning: stones, which are interpreted as a corporeal metaphor for Gaia's bones. Gaia, the archaic mother of Earth and opponent of Zeus. Behind their backs, unseen, the miracle of "lithogenesis" takes place: the stones soften and slowly morph into organic forms before turning fully human. "Behind her face", "in the back": lithogenesis acts vis a tergo. It must not be observed, this transformation of the inorganic in the organic, of dead matter into life – the most enigmatic of all metamorphoses told by Ovid (Metamorphoses I, 260–415). According to Ovid, we all carry something of the stone within us despite the sensitive softness of our flesh. We are "a hard race [genus durum] and inured to labours" and "give evidence of the origin from which we were born" – the rock. (Metamorphoses I, 414/5; cf. Virgil: Georgica I, 63). Kallimachos (frag. 496/500), too, laments about the hart-hearted nature of humankind. Similar notions exist in Pindar's Ninth Olympian Ode (9, 41ff). This is where the rhetoric of the heart of stone begins.[15] The genus durum that we are gives rise to a new, rather Promethean anthropology: "hardened" by our compulsion to labour, "hardened" by our malicious intent, yet simultaneously earthy, moist and warm. A race that is both stone and softness, aggression and vulnerability.

Where Kafka's Prometheus turns to stone, Deukalion does the reverse: from stone to flesh. And this is the direction of art. Consider Pygmalion: the inorganic sculpture appears alive. Pygmalion dreams to animate the inorganic matter of his statue to make it come alive, as Ovid tells in his classical version of the story (Metamorphoses X, 243–294). It is no coincidence that the Pygmalion myth is undergoing a modern revival that has a major impact on art theory in particular. But to Feuerstein, the archaic process by which nature itself creates life from stone is more important than any art mythology. This process is the work of the chemolithoautotrophic bacteria, which use the rock as their habitat and source of food, and which have been creating an enormous realm of life since time immemorial – vis a tergo. Where the humans in Ovid's myth are generated directly from the bones of their mother Gaia – a beautiful yet fantastical story –, Feuerstein's lithophages are the true children of Gaia. They become brilliant evidence for what the chemist, physician and geophysiologist James Lovelock called the "Gaia principle", an idea that the microbiologist Lynn Margulis applied specifically to the ancient evolution of microbial life.[16]

In Feuerstein's works, art is a bidirectional space of transfers and transformations. We ought not to interpret the transformation of the inorganic into the organic and vice versa as a new type of alchemist art, the resurrection of which has been attempted frequently and regularly in modern art. Feuerstein works with molecular biologists and radiation oncologists for a reason. His art, as much as it draws on ancient mythology, is meant to be at the state of technology and science. In the network-like shape of his experimental settings, with which he initiates biochemical processes that last for weeks, Feuerstein explores the autopoietic, self-regulatory, reproductive dynamism of nature through the medium of art. He undermines the ontological separation of organic (living) and inorganic (dead) matter, which has been enforced habitually for millennia. In his serial lithophagic experiments, he develops a relational structure that combines all three realms of nature into a single biochemical, energetic and ecological dynamic. His project is a monumental scientific and fantastical, i.e. artistic, programme. It is artistic research at its best. Modern natural scientists acknowledge this form of research, provided that they understand the visionary and aesthetic aspects of their own processes. It is no coincidence that Feuerstein draws on the mythological tradition, too. In "Prometheus Delivered", Prometheus' liver is being eaten by lithophages as his entire body surrenders to an invisible metabolism. The liver becomes a real-life metaphor for a new kind of metamorphosis, surely unimaginable to Ovid: the transformation of stone into nutrient for the artist's own extracted liver cells. It recreates the regrowth of the Promethean liver – beyond the despotism of the gods and the torture from the eagle. This piece of art radically deconstructs the myth while re-awakening the productive and living aspects of art in the deepest part of nature, furthest removed from the world of humans: stone. Prometheus, the creator of humans, and Pygmalion, the artist, could not have created a more intense work.

1 (Translated by Willa and Edwin Muir. In: The Complete Stories. Nahum N. Glatzer (ed.). 1971. Schocken Books. New York. p. 432.) Cf. also Kafka's short story "The Vulture" dated autumn, 1920. – Wagner, Frank Dietrich. 2006. Antike Mythen Kafka und Brecht. Würzburg. pp. 42–52.

2 Heidegger, Martin. 1957. Der Satz vom Grund. Pfullingen.

3 Lefèvre, Eckard. 2003. Studien zu den Quellen und zum Verständnis des Prometheus Desmotes. Göttingen.

4 Cf.: Henning Schmidgen. 2017. Forschungsmaschinen. Experimente zwischen Wissenschaft und Kunst. Berlin.

5 For more information about the Prometheus myth, cf. Walther Kraus, Lothar Eckhart. Prometheus. In: Pauly-Wissowa RE. 1957. Vol. 23/1. Stuttgart. pp. 653–730. – Walzel, Oskar. 1968. (1st ed: 1910.) Das Prometheussymbol von Shaftesbury bis Goethe. Darmstadt. – Kerényi, Karl. 1959. Prometheus. Menschliche Existenz in griechischer Deutung. Hamburg. – Dessauer, Friedrich. 1959. Prometheus und die Weltübel. Frankfurt am Main. – Steiner, Reinhard. 1991. Prometheus. Ikonologische und anthropologische Aspekte der bildenden Kunst vom 14. bis zum 17. Jahrhundert. Munich. – Pankow, Edgar & Peters, Günter (Ed.). 1999. Prometheus. Mythos der Kultur. Munich.

6 On the same topic, cf. the following study: Lévi-Strauss, Claude. 1964. Le cru et le cuit. Paris.

7 Goudsblom, Johan. 1995. Fire and Civilization. London / New York.

8 Bachelard, Gaston. 1989 (1st ed: 1949). Psychoanalyse des Feuers. Munich. p. 18.

9 ibid.

10 Panofsky, Dora & Erwin. 1992. Die Büchse der Pandora. Bedeutungswandel eines mythischen Symbols. Frankfurt am Main. – Cassirer, Ernst. Goethes Pandora. In: id. 1921. Idee und Gestalt. Berlin. pp. 7–31. – Borchmeyer, Dieter. Goethes 'Pandora' und der Preis des Fortschritts. In: Études Germaniques 38. 1983 pp. 17–31. – Renger Almut-Barbara/Musäus, Immanuel (Ed.). 2003. Mythos Pandora. Texte von Hesiod bis Sloterdijk. Stuttgart.

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