

The Abode of Pele: A Reflection from the Edge of a Volcano— On the Chorology in Plato's Timaeus and Nietzsche's Sense of 'Living Dangerously'

For believe me: the secret for harvesting from existence the greatest fruitfullness and the greatest enjoyment is—to *live dangerously*! Build your cities on the slopes of Vesuvius! (Nietzsche 1974, §283)

Mai Kaua'i nui a Oahu, a Moloka'i, Lana'i a Kanaloa, mai Maui a Hawaii, Ka Wahine — o Pele —i hi'a i kana ahi A á pulupulu, kukuni, wela ka lani: He uwila ku'i no ka honua; Hekili pa'apa'ina i ke ao; Pohaku puoho, lele iluna; Opa'ipa'i wale ka Mauna; Pipili ka lani, pa'a iä moku. Nalo Hawaii i ka uahi a ka Wahine, I ka lili a ke Akua. From famed Kaua'i to Oahu; Thence on to Mother Hina's isle; To Lana'i of Kanaloa; To Maui and, last, to Hawaii: This the route of the Woman — Pele. Then she rubs her fire-sticks to a blaze: Up flames her touchwood, kindling the heavens. Earth sees the flash of lightning, hears the boom Of thunder echoed by mountain walls — Rocks flung in space bombard the day, Shaking the mountain to its base. The firmament sags, clings to the earth; Hawaii is lost in Her smoke, At the passion-heat of the Goddess. (Emerson 2005, 229-232) In *Topographies* John Sallis recounts the famous tale Nietzsche tells in *Ecce Homo* concerning where the thought of the eternal recurrence first came to him, at a place marked by a large pyramid-shaped rock during a hike around Lake Silvaplana. In leading up to recounting this tale Sallis writes:

Not all thoughts are alien to places. Not all are such that thinking them requires disregarding the particular place where one happens to be at that moment. Not all thoughts can be thought just as readily in one place as in another. Not all are such that they can be thought—indeed with the same clarity and intensity—anywhere. Not all thoughts require a thinking elevated above and beyond everything local and concrete. (Sallis 2005, 70).

Earlier in *Ecce Homo* Nietzsche had shared a few secrets concerning some essentials that had to be considered in his task as a thinker, and these include such things as nutrition, climate and place. "No one is at liberty to live everywhere," he writes,"and anyone who has to perform great tasks that call for all his strength has indeed a very limited choice in this respect" (Nietzsche 2007, 22). He notes the difference that the climate and meterology of various places had in his experience, and laments that much of his life, up until he began his ten yeas of wandering,"only played itself out in places that were wrong and practically *forbidden* to me" (Nietzsche 2007, 22).

The attention to the significance of place, to a thinking that is not elevated above place, follows from his *perspectivism*, his view that "[we] cannot look around our own corner" (Nietzsche 1974, 336). One might wonder, of course, how a thinking that is situated in a particular place can have such weighty significance for all of humanity, as Nietzsche seemed to emphasize regarding the thought of eternal recurrence. Here it is perhaps not insignificant, as Graham Parkes has shown in a remarkable video essay, that Nietzsche's favorite thinking places encountered in those last ten years of wandering and writing, were for the most part extraordinary places, especially the place above Lake Silvaplana where the thought of eternal recurrence came to him.¹

In *Topographies* Sallis takes up a reflection at such extraordinary places, as Bernard Freydberg explains: "The places (*topoi*) that occupy Sallis's attention are one and all extraordinary, but in a very special sense: they are *seductive* insofar as they elicit a response that dis-places any everyday sense of familiarity" (Freydberg 2012, 216). I can certainly relate to this seductiveness and this sense of displacement after having made a trek one night to a place on a

little ledge on the edge of the innner crater within the caldera at the summit of Kīlauea on the Big Island of Hawai'i. The place is named *Halema'uma'u*, and the name means "the house (*hale*) lined with a'uma'u ferns," and it names the place long regarded by Hawaiians as the home or abode of Pele, the volcano goddess celebrated in Hawaiian myth. I had been to this place several times in years past. It used to be the case that one could drive to a parking lot and take a short five minute walk to an overlook and look down into the floor of the crater. One might say, however, that the reason for this ease and relative safety in viewing the crater from this place was that Pele was not home at the time, the eruptions that had been ongoing since 1983 were far downslope from the summit. This changed dramatically, however, in the spring of 2008 with the first explosive eruption at the summit since 1924, an explosion that ripped a hole in the floor of the crater just below the overlook. Over the next months and years numerous explosions and collapse events have widened the vent considerably, so that now the opening measures over 500 feet across. Within this vent a lava lake rises and falls periodically; and thus from the observatory a mile away visitors can often see a spectacular glow at night. As the road has been closed since the onset of the eruption, and access to the overlook has been restricted to scientists, the overlook has become a forbidden place, a place too dangerous to allow the public. I suppose it was that seductiveness, however, that led some friends and I to take the dangerous journey to the overlook and look into the fiery lake of Pele's abode. After having paid close attention to the activity at the summit for a few years I had some sense of when conditions might be best for such an expedition and the conditions on this night seemed to be quite favorable.

As it was a dark new moon night our way was lighted only by the glow and thus it seemed like Pele herself in her seductive way had lit the way for us. Every step of the way the intensity of the experience ratched up as the glow from the lava lake grew larger and brighter. When we reached the abandoned parkling lot for the overlook we were stunned to see heaps of Pele's hair, the fine hairlike filaments of glass that are spun by the wind when molten lava is ejected into the air, piled all along the curbside of the parking lot. We were close, very close to Pele's abode. All that remained was a short walk up a stony trail that led to the overlook. Yet the way was marked by numerous small steam plumes, the scent of sulpher hung heavily in the air. The wind was blowing steadily at our backs, however, blowing the main lethal plume from the vent out of the way opening up the path to the overlook. Our hearts raced fast as we carefully, silently took the last steps, and then we came to the overlook and then the great fiery

cauldron opened up before us. I doubt anything could have prepared one adequately for such a breathtaking moment. The lava was down a couple hundred feet from the floor of the crater and strechted out all the way across the diameter of the vent. The lake was fairly calm, eerily quiet even, there were no fountains ejecting Pele's hair into the wind. There was, however, an almost barely perceptible movement of the lava, the deep orange-red hue surface was broken up by a continually changing pattern of brightly golden cracks. Within these cracks small specks of golden light danced against the dark red background, glittering like stars against the night sky.

One of the first thoughts that came to me at this place looking in upon the molten lava lake was the thought of the ancient primeval earth. Long before the earth cooled enough to become suitable for the evolution of life the whole surface of the earth must have looked something like this. There is a phrase in a Hawaiian myth that refers to this place as *Ka Piko o ka Honua* ("The Navel of the World"), and it is said to be the place where the gods began creation.² As one could also see various striations in the rock walls of the vent, marking the rising and falling of the molten brew within the vent, it struck me how the vent itself, this huge opening in the floor of *Halema'uma'u*, was like the opening of a vessel or receptacle of some kind, what the Hawaiians call an *ipu*. This thought of primeval earth and a time before that, back perhaps to the beginning of creation, along with this thought of Pele's abode as a kind of *ipu* from which creation poured forth, reminded me of that difficult, even dangerous, notion of the $\chi \omega \rho \alpha$ which is described as something of a receptacle, introduced in the account of creation in Plato's *Timaeus*. In the interpretation of the dialogue opened up in readings from Heidegger to Derrida, Sallis and others, the notion of the $\chi \omega \rho \alpha$ turns out to destablize Plato's discourse, displacing the history of metaphysics at its beginning.

The $\chi \dot{\omega} \rho \alpha$ is that third kind of thing that Timaeus eventually introduces, as necessary before the artisan god could fabricate the cosmos from the mixtures of the elements fire, earth, air, and water. It is a third kind of thing distinct from the two classes of things Timaeus had introduced earlier in his first attempt to give an account, a $\lambda \dot{\omega} \gamma \sigma \zeta$, of the beginning of the cosmos. There Timaeus had set out the distinction between that which *always* is, perpetual being, that which is always the same as itself, the selfsame, and that which is generated and thus subject to perishing. Just as an artisan brings forth a work as an image or copy of a pattern or paradigm, the artisan god, also making making according to the structure of $\pi \omega \eta \sigma \iota \zeta$, fashions the visible cosmos as an image, an $\varepsilon i \kappa \omega v$, that is an imitation of the selfsame perpetual paradigm.³ As the twofold distinction between perpetual being and that which is generated, determines the subsequent history of metaphysics, Timaeus's introduction of this third kind of thing, a kind of thing that proves "most difficult to catch," abysmal even, eluding the $\lambda \dot{\alpha} \gamma \alpha \zeta$ and thus withdrawing from discourse itself, proves decisive in bringing, as Sallis explains: "both the founding of metaphysics and its displacement, both at once. Originating metaphysics would have been exposing it to the abyss, to the abysmal $\chi \dot{\omega} \rho \alpha$, which is both origin and abyss, both at the same time" (Sallis 1999, 123).

The problem with the traditional interpretations, which since Aristotle renders $\chi \dot{\omega} \rho \alpha$ as "space," "place," and even "matter," is that the radicalness of the $\chi \dot{\omega} \rho \alpha$ as a third kind of thing is lost. These interpretations would reduce $\chi \dot{\omega} \rho \alpha$ to just another thing among generated, ephemeral things in the twofold structure set out in Timaeus's first attempt at giving an account of the beginning. As Sallis explains, it is Timaeus's discourse on fire and the other elements that leads to what he calls the "chorology," the section of the dialogue where the abysmal $\chi \dot{\omega} \rho \alpha$ is introduced. In an earlier attempt at giving an account of the beginning, Timaeus had told of how the artisan god had made the body of the cosmos from fire and earth and air and water.⁴ This discourse, however, turned out not to have begun at the beginning, Timaeus realizes, as it did not give an account of the generation of these four. The difficulty with giving an account of the generation to one another, as we see fire becoming air, air condensing into water, and water becoming earth and stones.

Standing there at the edge of the crater, seeing the great rock receptacle with its sea of molten fiery earth, the large plume of steam and volcanic gasses blowing in the wind, numerous other small steam vents billowing up all around us, a light rain falling upon us and into the fire below, I could appreciate Timaeus's difficulty. As Sallis puts it, when fire, air, water and earth are seen "moving in the cycle of transformations" there is a "flight of fire and the others from discourse" since "fire and the others lack the stability that would allow them to be said, because they are fugitives from $\lambda \delta \gamma o \varsigma$ " (Sallis 1999, 103-105).

The $\chi\omega\rho\alpha$ is first introduced by Timaeus as the "receptacle [$\upsilon\pi\sigma\delta\sigma\chi\eta$] and "nurse [$\tau\iota\theta\eta\nu\eta$] of all generation" (49a) (Sallis 1999, 98). The $\chi\omega\rho\alpha$ is then in some sense like a vessel within which fire and the others come forth and from which they pass in the cycle of transformations. It is like a mother that gives birth and nurses the fleeting elements in their transformations that give

generation to the cosmos.⁵ Of course, the $\chi \omega \rho \alpha$ can also mean "womb," an image that brings together the procreative imagery of the mother with that of the receptacle. Timaeus also suggests the $\chi \omega \rho \alpha$ is like gold, not as a specific type of matter, but rather as that which is capable of being molded into any figure. "As all possible figures," Sallis explains, "come to be modeled in the gold, so do fire, air, water, and earth come to be in the third kind and pass away from it. The gold is an image of that which receives all the fleeting images, an image of what Timaeus has called the receptacle" (Sallis 1999, 108). The more I marveled at the whole scene before me, the transformations of fire, earth, air and water cycling all around within the great *ipu*, the dancing figures of gold emerging from and passing away into the surface of the lava, it seemed perhaps that Pele's abode reminded me of what Timaeus said of the χώρα: "Moreover, a third kind of thing is that of the $\chi \omega \rho \alpha$, everlasting, not admitting destruction, granting an abode to all things having generation" (Sallis 1999, 118). Sallis explains that the χώρα is said to be everlasting because it must be "rigorously distinguished from the generated: it is that *in which* that which is generated comes to be and *from which* that which is destroyed passes away" (Sallis 1999, 119). Regarding the image of the *abode* Sallis explains that the word ἕδρα means "*chair, seat* in more generalized senses and especially a seat or abode of the gods, hence also altar or temple" (Sallis 1999, 119).

Of the $\chi\omega\rho\alpha$ itself Timaeus goes on to say that it can only be apprehended by a not very trustworthy "bastard reckoning." To understand this it is necessary to go back to Timaeus's earlier discourse on discourse. There Timaeus had marked a limit to discourse, in coming to the conclusion that the character of a discourse is determined by the subject of the discourse. Thus a cosmology, a discourse on the generation of the cosmos, would be constrained by the fact that the cosmos, as a generated thing, is an image, an $\epsilon i \kappa \omega v$, of a paradigm; and thus a discourse on the cosmos must be an an $\epsilon i \kappa \omega v c \lambda \delta v c v c v$, which Sallis translates as "*likely discourse*," emphasizing its character as likeness and image. Thus, Sallis explains, "Like the images of which it speaks, such discourse would be removed from the truth itself, set at a distance from it" (Sallis 1999, 55). A discourse about the $\chi\omega\rho\alpha$ would have to be a different kind of discourse, since the $\chi\omega\rho\alpha$, being this third kind of thing, is so radically different. Timaeus suggests it is something of a bastard discourse, $\nu o \theta \sigma c \lambda \delta v \sigma c$, and Sallis explains: "In Athenian usage a bastard ($\nu o \theta \sigma c$) was the child of a citizen father and an alien mother. As is the chorology: this bastard discourse is fathered by citizen Timaeus and is to be borne by the maternal $\chi\omega\alpha$ in all its alien elusiveness, its alterity,

its strangeness" (Sallis 1999, 120). Any discourse on the $\chi \omega \rho \alpha$ must therefore be something of an illegitimate discourse.

Timaeus refers then to a dream and, as Sallis explains, it is a dream in which "the $\chi \dot{\omega} \rho \alpha$ appears as a place in which all that is must be" (Sallis 1999, 120). Turning then to the *Republic*, Sallis calls attention to the passage where Socrates suggests that dreaming consists "in believing a likeness of something to be not a likeness but rather the thing itself to which it is like" (*Rep.* 476c; quoted in Sallis 1999, 121). In the dream then, according to Socrates, an image goes unrecognized as an image, whereas when one is awake, one can distinguish between the image and its original. Thus, in the dream where the $\chi \dot{\omega} \rho \alpha$ appears as a place, a kind of region or place of sensible things, there is a conflation of the $\chi \dot{\omega} \rho \alpha$ with its image. Sallis then explains that distinguishing the three kinds would be like awakening from the dream.

What kind of awakening, however, is it to distinguish the three kinds? Of course, at the end of the myth of the cave in the *Republic*, Socrates suggests that philosophy, the upward ascent out of the cave, is like awakening from a dream. A discourse that is truly awakened would then have to be a discourse of the first kind, a discourse on perpeptual selfsame Being, a discourse on the father, to use the metaphor of procreation. A discourse that was able to distinguish the three kinds, a discourse that took account of the mother, the $\chi \omega \rho \alpha$, this illegitimate discourse, would seem to have to be a discourse of a third kind, distinct from both the awakened discourse and the dream discourse—perhaps be something like the lucid dreaming that characterizes Nietzsche's discourse.

The more I thought about this I wondered whether I was dreaming in thinking there was something of the $\chi \dot{\omega} \rho \alpha$ in the scene that had opened up before me. Of course, the $\chi \dot{\omega} \rho \alpha$ is not a place like Pele's abode, but perhaps this place is something like an image of the $\chi \dot{\omega} \rho \alpha$. In any case, what seems most significant about this discourse on the $\chi \dot{\omega} \rho \alpha$ is that in undermining metaphysics at its inception, it makes it obvious how difficult it is to say anything at all concerning the nature of nature, and such ultimate questions like that concerning the beginning.

Lost in these thoughts about the $\chi \omega \rho \alpha$ and Pele's abode and this discourse on discourse, I had not been paying too close attention to what my friends were saying but then one of my friends turned to me and said, obviously referring to the circulating pool of red hot lava below us: "It looks like blood." Well I could see why she could say that. It did seem like we were looking down into something like an open wound, or perhaps even the womb of the the mother

earth. This thought, of course, brings up the the conception of the Earth as a living being, a conception that resonates with Timaeus's conception of the cosmos as a living being.⁶ Of course, in a well-known passage Nietzsche warns us to "beware of thinking that the world is a living being" (Nietzsche 1974, 167). Sallis draws attention to this passage and notes how the questions it raises shows the engagement of Nietzsche's thought with the *Timaeus*, in his attempt to revert or invert "Platonism."⁷ Nietzsche basically warns us against imposing our aesthetic anthropomorphisms upon the world. Although by *world (Welt)* here Nietzsche clearly is referring not to the Earth, but the cosmos, Nietzsche's warning would seem to apply just as well to the tendency to impose these anthropomorphisms upon the Earth as well the cosmos. So perhaps, I considered, I should pause before going too far with this thought of the living Earth.

Nevertheless, even if one should pause before thinking of the earth as a living being, it is certainly the case that the earth is a living place, a place that has allowed for the evolution of life, and thus not a dead place like the Moon or like Mars. Looking down upon this opening into the interior of the earth, I couldn't help but think of the hotly contested debate in geology concerning what is happening beneath the hotspots that bore through the earth's crust in bringing forth these volcanic places like Hawaii and Iceland. From what I understand there are either fairly narrow "magma plumes" that rise through the magma layer from the earth's core or rather, as other geologists contend, broad upwellings of magma thousands of kilometers across that produce these volcanic regions.⁸ As I continued to gaze downward, awestruck and transfixed by the fiery lake below, it occurred to me that this molten interior of the Earth is one of the reasons why the Earth is a living place. There are many reasons, of course, to account for why the Earth is a living place—there is the mystery, for one thing, of the origin of life itself; nevertheless, it is well accepted today that the Earth's atmosphere is protected from the solar winds by a magnetic field, and this magnetic field is generated by the movement of the magma around the iron core.⁹ It thus seemed suddenly rather obvious that without this fiery interior the Earth would not be a living place.

At this point I had to pause and try to take a deep breath. It was clear that any breath could be the last breath, if the winds were to suddenly change, or the ledge underneath our feet were to collapse, or, of course, if the volcano were to right then and there suddenly erupt. We had, after all, come to a very dangerous place. Now I am sure that there are many who might question the wisdom of living so dangerously and going to such a place—and perhaps even more

so, the wisdom of making this public presentation about this forbidden expedition. However, it should be becoming clear now, if one is paying attention to the most recent warnings from climate scientists and conservation biologists that our whole civilization stands today at an even more precarious, dangerous place. The only real question today is not whether or not global warming or climate change is taking place, or whether it is caused by human beings or not, but whether it will lead merely to a crisis of global destablization or rather a global mass extinction.

Scientists understand better today the likely cause of the great Permian Mass Extinction 250 million years ago that wiped out at least 95% of all life on Earth. It began with a collasal "flood basalt eruption" that poured out a massive amount of lava onto the surface in present day Siberia. Something like this on a much smaller scale took place in Iceland in the late 18th century. While that one led to some unusual weather noted by Benjamin Franklin in 1784, the one 250 million years ago led to at least a six-degree Celsius rise in global average temperature. Still, even this was not enough to account for the mass extinction found in the fossil record. In the late 1990s scientists realized that it was not just the greenhouse gasses, particularly carbon dioxide, that were released into the atmosphere by the volcanic eruption, but it was the melting of frozen methane hydrates in the ocean seafloor that resulted from the increase in global temperature that is the most likely explanation for the Permian Mass Extinction. The threat we face today is not just from the rise in sea levels and climate disruption from the increase in global temperature but also the potential release of an astonishing amount of methane into the atmosphere. Thom Hartmann summarizes the threat in the recent book Last Hours of Humanity: Warming the World to Extinction: "So we now know the formula for extinction. Something happens to increase global temperatures five to six degrees, which triggers a melting of the frozen carbon and methane oceanic reserves that then leads to further global warming devastating life on Earth."¹⁰ While there is a very strong consensus among climate scientists today concerning anthropogenic climate change, there is still considerable debate among scientists concerning the threat posed by methane release. Some argue that because of the tremendous depths of the oceans that the release will be gradual over the course of many centuries. After all, the Permian Mass Extinction took place over something like 100,000 years. Others argue that what is taking place today is completely unprecedented, that the rise in global temperature due to the burning of fossil fuels is happening much more dramatically, and that the greatest threat comes from the methane trapped in the Arctic permafrost. While the total release

of carbon since the dawn of the Industrial Age is estimated to have been 234 gigatons by 2006, the methane trapped in Arctic permafrost is thought be equivalent to 1000 - 10,000 gigatons. The alarming pace of the melting taking place now in Arctic regions is dramatically captured in breath-taking time-lapse photography in the 2012 documentary Chasing Ice, filmed mostly in Greenland and Iceland. In summarizing many recent scientific studies, conservation biologist Guy McPherson states that as of 2010 release of methane in the Arctic "appears to have already gone exponential." McPherson, who has earned some notoriety for his dire prognostications, states that even a one-degree rise in average global temperature may start to trigger "rapid, unpredictable and non-linear responses" and this may already be happening with the alarming increase in the methane released in the last few years by the melting of the permafrost. The consequence of all this, he makes clear, is that we may be facing "the demise of all life on earth before the middle of the century" and perhaps less than 20 years from now in the northern hemisphere.

Of course, there are still very few today who are really hearing this prognosis and even less facing up to what they are hearing. The President, for example, is still focused on growing the economy, while McPherson says that our one slim hope left, the only thing that could possibly prevent this imminent demise of all life on earth, would be the complete collapse of this global economy. Whether we have only slim hope left or, in the best case scenario, facing only rising sea levels and climate disruption that will still be catastrophic in parts of the world, it should be clear by now that our civilization is facing a crucial turning point. It should be clear that the development of our civilization cannot continue on its current course. If it does turn out that the human impact on the Earth's climate brings about another mass extinction event, then the cause of our demise will be that we never solved the basic problem Plato recognized in ancient Athens, the problem of the city that drove city-states to expand beyond their borders, the problem that drove cities necessarily to war. This is the problem posed in the *Republic* as the problem of the *luxurious* city. When the city becomes swollen by unnecessary desires then the satisfaction of these desires will lead to the need for more resources and thus more land is needed and this leads to the inevitability of war. The desire for wealth that fuels the need for more resources still drives states to war today, and it is this desire that has led to burning of the vast quantities of fossil feuls that has destabilized the fragile equilibrium of global climate.

I am reminded also of Heidegger's attempt to trace the source of the problem posed by modern technological society back to a way of thinking that began with the Greeks, a mindset that framed the basic way of being-in-the-world, a mode of dwelling upon the Earth that reduces everything, including human beings, to the status of Bestand, mere resource for human use, like a forest reduced to stacks of lumber. For Heidegger, the most difficult thing is that the enframing of this thinking is so deeply embedded that it is a challenge to even consider that there might be a different mode of dwelling upon the Earth.

Two years have now passed since I took the dangerous journey to the Halema'uma'u overlook to look down upon the fiery cauldron of Pele's abode. In the last year it has become a most interesting time on the Big Island of Hawai'i. In the fall of 2014 a lava flow from Kīlauea threatened the town of Pahoa in the Puna district, stopping just short inundating a neighborhood and crossing the main highway, cutting off the whole district from the rest of the island. It seems the lava flow down the circuit of the east-rift zone of the volcano became obstructed somewhat and this has led just in the last couple of weeks to extremely high levels of lava in the lake within the vent in Halema'uma'u at the summit. For the first time since this eruption began in 2008, the lava has risen to the top of the vent and now overflowed across the floor of Halema'uma'u. Now one doesn't even need to take the journey to the forbidden overlook to see molten lava. From the observatory a mile away one can see lava fountaining and pouring out across the wider crater. Meanwhile, a third event has also grabbed media attention around the world in the last few weeks, and that is the protests by Hawaiian activists and others sympathetic to their cause, that has brought to a halt the construction of of a new large telescope, the Thirty Meter Telescope (TMT), on the summit of Mauna Kea, the volcano that, rising to almost 14,000', looks down about 10,000' to the summit of Kīlauea. The summit of Mauna Kea is one of the prime places on the planet for astronomy, and the new telescope promises to be able to look deeper into space and further back in time toward the beginning of the universe than has ever been possible before. Yet, the summit of Mauna Kea is also the most sacred place in all of Polynesia, the home of Poli'ahu, one of the snow goddesses honored in Hawaiian culture. The controversy has been portrayed by many as simply a conflict between science and religion, a conflict akin to that between science and Christian creationism according to an article in the New York Times.¹¹ The controversy is much more complicated than that, however, as the opposition to the telescope is based on a multitude of factors including the politics of the Hawaiian sovereignty movement,

environmental concerns, as well as Hawaiian cultural issues. What I find most interesting is that this issue, as well as the debate about what to do concerning the lava flow threatening the town, both bring out some of the radical differences between Hawaiian and modern Western culture. Regarding the lava flow some non-Hawaiian residents wondered why the State didn't bring out the heavy machinery and thus use modern technology to divert the flow. Government officials explained that they didn't consider that option based on both cultural concerns as well as the uncertain consequences of diversion-that blocking the flow in one direction might just send the lava onto someone else's property. Several Hawaiian women spoke at the public hearings and explained that the Hawaiian response to the advancing lava was simply to get out of the way and prepare for the arrival of an important guest. If Pele wants the land back she is going to take it. It's easy to see why the non-Hawaiian property owners thought the State should at least try to stop the flow. From that paradigm, nature is simply a resource to be manipulated and used up in any way that serves human interests, especially the interests of property owners. Mountains have been strip-mined down to molehills, carved into giant sculptures of Presidents, and turned into repositories for nuclear wastes. It seems none of that would be conceivable from the Hawaiian perspective. The controversy concerning the telescope leads one to wonder whether cultural concerns really would have made any difference in the debate about the lava flow if diversion had really been a feasible possibility. When cultural concerns come up against the advancement of scientific knowledge they are easily dismissed as merely anti-scientific superstitions.

I wonder, however, whether the advancement of scientific knowledge should always trump other concerns. One might wonder how one could take heed the scientists warnings about anthropogenic climate change and yet question the development of the TMT telescope that might reveal secrets about the origins of the universe. On the one hand, the positions are not necessarily inconsistent. The telescope will require a significant amount of energy. It sure would be ironic if the telescope revealed knowledge about the origin of the universe just as humans were about to go extinct due to the burning of fossil fuels. On the other hand, perhaps trying to really understand what the sacredness of Mauna Kea to Hawaiians really means might open up a different mode of dwelling upon the Earth, and that something like this is what is needed in responding to the threat posed by anthropogenic climate disruption. In any case, it is becoming increasingly clear that the future of humanity and perhaps for all life on Earth depends

upon our capacity to conceive a mode of dwelling upon the Earth that does not reduce everything to mere resource for human use and which recognizes limits to development.

To move toward a different mode of dwelling upon the Earth would involve a profound transformation of human beings, and this brings me in closing back to the beginning, to Nietzsche's exhortation to live dangerously and build cities on the slopes of a volcano. The injunction comes in the context of a passage, titled *Prepatory human beings*, a passage that looks forward to the coming of "prepatory courageous human beings . . . human beings who are bent on seeking in all things for what in them must be overcome" (Niezsche 1974, §283). Nietzsche's emphasis on overcoming here connects this passage unmistakeably with the main theme of overcoming introduced in Zarathustra's teaching of the Overhuman. The Overhuman is, of course, contrasted with the last human in Zarathustra's discourse. The last human might be understood as the human being that refuses to take on the challenging process of overcoming; but it might also be taken more literally, and thus Zarathustra's pronouncements on the Overhuman and the last human would serve as a warning to human beings—that unless human beings take on the difficult and dangerous task of overcoming, of evolving especially with regards to the dominant values of human culture, then the day of the last human on the face of the earth could come. A repeated refrain in the text is Zarathustra's exhortation to "stay true to the earth" (Nietzsche 2005, 12). Zarathustra goes on to emphasize that it is the longing for another world, for another place not of this Earth, that lies at the root of the nihilism that threatens to end in the day of the last human.

To use Plato's terms, the discourse about climate change and the debate about whether or not we are headed to another mass extinction, would be, like all discourse that seeks to understand the observable world, an $\epsilon i \kappa \omega \zeta \lambda \delta \gamma \circ \zeta$, a likely discourse. The question, however, of whether or not there is another world we may go to after we've "shuffled off this mortal coil" is, of course, a question that comes up upon the problem, just as with Timaeus's questioning concerning the beginning, of just how anything can be said at all; and thus it is a question that can only be taken up in another kind of discourse. And thus we come back here at the end to Nietzsche's thought of eternal recurrence. Nietzsche's thought, in supposing that each moment comes back again and again for all eternity, cuts off the escape route of thinking that there is another place we can go to after this life is done. And yet, one might say that Nietzsche's discourse on eternal recurrence is something of an illegitimate discourse, perhaps like the vóθog λόγος of Timaeus's discourse on the χώρα. The scene where the thought is introduced in *Thus* Spoke Zarathustra is something of a lucid dream sequence. It is not presented in the published writings as a truth about time and the nature of the cosmos. In Beyond Good and Evil it is presented as an ideal that opposes the longing for another world, for another place, challenging one to affirm this life, to say yes, the sacred yes, to this moment, this place: "the ideal of the most exuberant, alive and world affirming human being who has not only come to terms and learned to get along with whatever was and is, but who wants to have what was and is repeated into all eternity, shouting instatiably *da capo*—not only to himself but to the whole play and spectacle" (Nietzsche 1966, §56). To get this one must understand that *da capo* is an Italian musical direction meaning "from the beginning." The thought of eternal recurrence is, on the one hand, most serious-the famous passage where the thought is introduced in The Joyful Science is titled "The greatest weight." The thought is heavy in its psychological impact and momentous in its implications. And yet, a line in one of his last mad letters in which he says he will be "whiling away eternity with bad jokes" might even lead one to suspect that the thought of eternal recurrence was, for Nietzsche, something of a joke. This might make sense consider Nietzsche also said "I should actually risk an order of rank among philosophers depending on the rank of their laughter—all the way up to those capable of golden laughter" (Nietzsche 1966, §294). Perhaps then the point of the thought of the eternal recurrence is to meet even the worst that may come in the time we have left with laughter, perhaps like that exuberant laughter that closes The Treasure of the Sierra Madre, that great laughter of the old timer played by Walter Huston after all has come to naught when the gold they had labored so hard to get is blown away in the wind.

Endnotes

⁴ Since the body of the cosmos must be both visible and tangible, and since "without fire nothing becomes visible" and since without earth nothing can become solid and tangbile, the beginning was determined: "in beginning to compose the body of the universe, the god was making it of fire and earth" (Sallis 1999, 60).

Air and water turned out to be necessary as well in binding together the other two.

⁵ As Sallis explains, ""Yet it not only receives but also harbors, shelters, nurtures the fleeting newborn traces of fire, air, water, and earth. It not only nurtures and succors them like a nurse but bears, gives birth to, them (and so to all that arises from them): it is the mother" (Sallis 1999, 114).

⁶ In Timaeus's account of the fabrication of the cosmos the artisan god places voῦς within ψυχή and ψυχή within σῶμα, thus animating the cosmic body, as Sallis puts it, using the traditional translations with some hesitation: "the god set intelligence within soul and soul within body" (Sallis 1999, 57).

⁷ Nietzsche's text continues in Sallis's translation: "Where should it expand? On what should it feed? How could it grow and multiply? We know more or less what the organic is; and we should not reinterpret the exceedingly derivative, late, rare, accidental, which we perceive only on the crust of the earth, and make of it something essential, universal, eternal, which is what those do who call the universe an organism. This nauseates me...the total character of the world, however, is in all eternity chaos" (Sallis 1999, 58).

⁸ The mantle plume hypothesis was initially put forth in the early 1970s. See: W. J. Morgan, "Deep mantle convection plumes and plate motions". *Bull. Am. Assoc. Pet. Geol.* **56 (1972)**: 203–213. For the more recent broad upwelling hypothesis see: Don L. Anderson and James H. Natland, "Mantle Updrafts and Mechanisms of Oceanic Volcanism". *Proceeding of the National Academy of Sciences.* **111 (2014)**: E4298-E4304.

⁹ The magnetic field is generated by the movement of the magma around the Earth's core, and the movement of the molten iron outer core around the solid iron inner core.

Apparently, the early Earth didn't have a magnetic field and thus did not have an atmosphere. Once the Earth cooled to a certain point where an inner core of iron solidified enough to differentiate from the liquid outer core then a magnetic field began to hold

an early atmosphere consisting of mostly hydrogen and helium.

The atmosphere further developed as different elements were added through volcanic outgassing. Eventually oxygen was added through the breakup of water molecules by ultraviolet light and then through photosynthesis.

¹⁰ Thom Hartmann, Last Hours of Humanity: Warming the World to Extinction (Watershed Productions, Incorporated, 2013), p. 16.

¹¹ George Johnson, "Seeking Stars, Finding Creationism." The New York Times, October 21, 2014.

¹ note to Graham Parkes's video essay Nietzsche's Thinking Places

² Emerson

³ As Sallis explains "Timaeus thus submits the structure of cosmical production, its distinction between paradigm and image, to the distinction between perpetual being and that which is generated" (Sallis 1999, 54).