

A Rule of Natural Disasters Coming to Rebalance Unjust Development and Irresponsibility-Laws of Physics Explain the Trope of “Divine Retribution” against the “Nouveaux Riches”

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Abstract Earthquakes, volcanic eruptions, fireballs are here discussed with, again, explanation on why fireballs obey to strict physical rules and demonstration that they are among other things the definitive explanation of the collapse of the Maya civilization in what was actually a sudden obliteration by a cluster of fireballs. Extractive development (what has been defined already by Acemoglu and Robinson) is what natural disasters come to rebalance ; extractive development leads to over-accumulation of typically weighty resources in a small area where they disrupt the crust and also represent particularly attractive beacons for fireballs. This is carefully demonstrated over a wide range of time with many examples.

Keywords: gravitation, fireball events, earthquakes, volcanic eruptions, natural disasters, Maya civilization, geophysics, economics, black holes, economic collapse, seismology, Volcanology, astrophysics, bolides, Tunguska

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1. Introduction Summarizing Earlier Work

A meteor procession occurred recently (end of Sept. 2019) in Chiloe, Chile, with very small bolides actually impacting the ground. Another well-known occurrence is the Great Meteor Procession of 1913. The “meteor processions” are a phenomenon simple to understand when applying the general frame already presented by the author [1]. Antigravitons, the main matter of black holes, are attracted by each other in addition to being attracted by gravitons (the reverse is untrue, gravitons are attracted by antigravitons but are not attracted to each other). Bolides have a small cluster of antigravitons inside, as they are expelled from black holes and keep inside themselves extremely small groups of antigravitons. So fireballs have a tendency to travel in groups. Black holes are the cradle of heavy atoms which they produce in permanence through the fusion of lighter elements under extremely intense pressures, coming to extremely heavy atoms; chain reactions due to some free neutrons slowly moving in the black hole sometimes nevertheless happen (as the neutrons move extremely slowly due to the hyperstrong levels of pressure, the chain reaction eliminates solely isotopes which have a high cross section for fission solely with slow neutrons, such as U235, and not U238, hence

the typical ratio) and can manage to break the equilibrium, the supercriticality liberating some groups of heavy atoms together with some antigravitons around which they wrap themselves (formation of stars, planets, moons... smaller objects shot at slow velocities will not have a group of antigravitons surviving inside and do no wrap on themselves but solely bend in the back due to the remaining forces of the black hole from which they erupted, hence much flatter forms - for instance Oumuamua, or with at best a small nuclear supercriticality of the heavy actinides *in the middle of the sandwich*, where density after bending is bigger, hence the „UFO shape“ due to the magma bubble left out by the small supercriticality ; bigger objects retaining a small black hole present a round shape and a ridge, like for instance Iapetus).

2. More Details on Black Hole Eruptions and Their Dynamics

Many black hole eruptions are already seen on the screens (GraceDB LIGO/VIRGO O3 Public Alerts) and not understood correctly. To take recent examples, S190707q for instance, S190923y, S190930t, for very beautiful examples, S190814bv (a smaller one with a supercriticality point more in the periphery of the black hole, launching most blocks of actinides on a sole side,

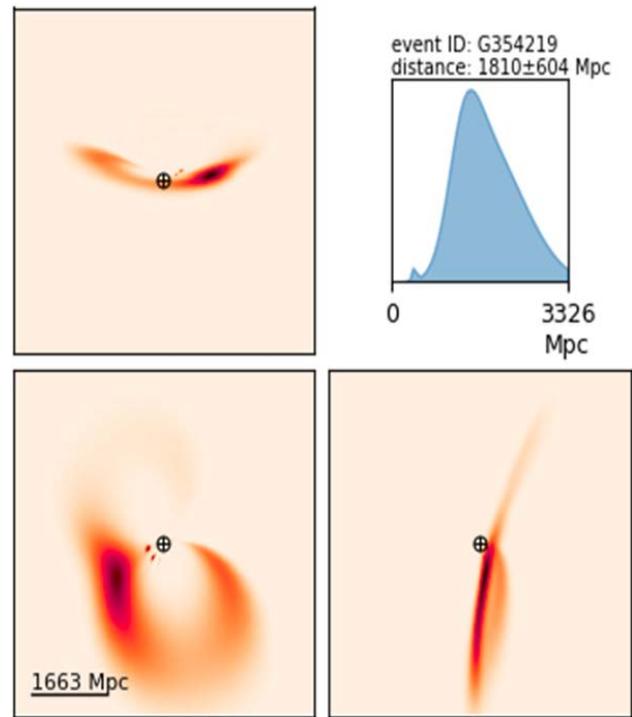
hence the very unsymmetrical shape), S190910d, S190930s (another event in a peripheral point of the black hole), S191120aj (likewise)... the arc-like effect comes from the immediate entry of the heaviest objects in nuclear criticality (birth of stars), signalling them easily on the screens. Each of these events is a black hole eruption but sometimes the supercriticality inside the black hole happens very close to its center, hence a well balanced ejection of superheavy actinides on all sides (1), sometimes the supercriticality happens much closer to the periphery (2).

(1) Whenever a supercriticality happens near the center, the weight of the superheavy actinides that were too peripheral to take part to the internal explosion nevertheless weigh on the bubble of energy and fissioned matter¹, hence due to the jam, to the rule of antigraviton attraction linking peripheral parts together and to the fact that in fission most of the energy is developed through the expelment of fission products on each side, the eruption shall always happen through an even-numbered amount of vents.

(2) If however the supercriticality happens near the periphery, one vent dominates clearly but there will always be another opening (the vents are always paired) as the energy is dissipated on all sides and this is obvious in the data recorded in the GraceDB database ; the nature of fission, the fact that fission products are pushed away from each other means that. Big eruptions near the center of the black hole lead to a good mixing of fission products and to a good symmetry of the ejecta but when it happens close to the periphery and due to the lesser amounts of energy that are mathematically involved by such eruptions near the periphery, where actinides are less heavy and where pressure is insufficient, the asymmetry of fission products with thermal neutrons will be still visible, likely with amplification due to the typical rotation energy of the black hole. An interesting event is S191109d: it is an example of eruption close to periphery without strong rotation of the black hole. So, unlike in most GraceDB results, we see clearly the two points of first supercriticality close to each other and to the black hole: these two dots show where the ejected matter inflates to normal size (as expected the dots are asymmetrical) and where the wrapping events happen. Then there is the second flash (delayed, due to delayed neutrons from the first thermonuclear explosions triggering relighting; the energy of the various supercriticalities in a localized point then push some lighter stars in a rotation clockwise wherever most go counterclockwise, there is indeed a small rebound effect) whose marks are much more extended as these

¹Fission does not mean we have come to light elements ; what fissions is so heavy that the fission products are still heavier than uranium, as again demonstrated by the inflated size of Arrokoth ("Ultima Thule") ; Arrokoth is a typical example of unfinished fission, the atom (akin in specie to U236) simply inflated to normal size at the instant of eruption (each eruption producing many of these atoms, as in any nuclear chain reaction for U235 with thermal neutrons there is circa 18% of atoms that end up activated but stop before the fission, as U236), and its superheavy particles changed into atoms matching their size but these atoms are as well heavy, there are many actinides and, as they still are pressed onto each other after inflation to normal size, tiny supercriticalities produce a bit of magma : the precise observation of the surface of Arrokoth by the NASA probe shows light "bubbles" around its circumference ; as for the magma bubble in the "UFO case" listed above but with even tinier supercriticalities.

stars (the only objects visible from so far away with our instrumentation, but of course there are also as always smaller objects erupted, including the very small objects that become the fireballs) start gravitating around the black hole. Due to the rapid rotation in most black holes this is usually not directly seen but this black hole was extremely stable (Schwarzschild black hole or close to - absence of rotation has no impact on the possibilities of supercriticality inside the black hole). Below is the depiction of the event from LIGO/VIRGO EM Follow-Up.



So, in each black hole eruption, wherever the spin, much, much much smaller objects also escape together with much smaller clusters of antigravitons which can survive due to the velocity of the fireball²: the fireball supercavitates, pulled by its small cluster, and so the antigraviton cluster can direct softly the fireball thanks to the weighted average of gravitons (in an obvious barycentric relation) : high density areas, where there are more gravitons than average, such as magmatic pockets, heavy industrial areas, big castles and buildings made of dense materials in cities themselves ultradense for instance are the typical targets onto which the fireballs will be attracted. It was noted in the earlier works of the author how the „U236-shape“ explains the typical division in two of many fireballs at the end of their path in the atmosphere. The remains of the event listed in the Ancient Testament have been located by the author : the impact of the fireballs happened in uranium-rich earth crust as little volcanoes which you can find in a straight north-south line whose middle is at 37°53'27.9"N 34°04'26.3"E --- the plume went of course (as the spin of the Earth involves) to the west and covered Çatal Höyük in a fine but important

²One can note the implicit reference, in the Muslim religion, with the Ka'aba representing the black hole, pilgrims dressed in white spinning around it as if they were stars and a small meteorite in one of the corners confirming the very implicit and imperfect understanding

cover of tuf that explains it can be retrieved even though it is more than 10 000 years old. And we find a few more fireballs more to the South, including one powerful that produced a lake, Acigöl.

So there were obviously relatively big cities that were together in that area and they are close enough of Israël to justify the finding of the event in the Ancient Testament. The two groups suggest one side for Sodom, the other for Gomorrha on the other side of the mountain chain. There is also a unusual crater on top of the mountain chain in the middle which leads to the conclusion of an additional fireball attracted not to the cities but to the dense land mass in the middle (all the events happening at the same time, of course, in a single immense collar of fireballs, as for the event discussed below for the Maya civilization). It is absurd to have a separate fireball landing on what just is a group of mountains among many other such chains in the region before or after the destruction of the cities, it is a product of antigraviton-antigraviton attraction and happened at the same time.

For a group of fireballs that aimed at Earth in an angular line, passing above the Pacific, the area of Chiloe is a good beacon; the fireballs are obviously attracted both by the island and by the underground magmatic chamber of the Corcovado volcano behind, with a good amount of magma as there has been an ongoing production of magma in the Chilean part of the Pacific Belt over the past months.

It must be reminded that in such fireball events, with a fireball dominated, as it has been shown, by Cm247, with a medium cross section for fission with slow neutrons (circa 84 barns according to IAEA NDS database), the yield of the explosions (triggered with the light materials of the ground losing neutrons under the shock of the mass of alpha emitters firmly pressed, as in a typical Ra 226 + Be neutron source) is not enormous and burn of the metal mass is dominant, this also is evident in all videos of fireball events where there is always a limited flash of light together with a bigger fireball. This is evidenced below, fireballs leave relatively small craters and blast effect of the fireball burst dominates.

3. Proof of the Fireball Event on the Core of the Maya Civilization

Rock pyramids in the middle of an area much less dense, with water surrounding almost everywhere, are also found in Central America, in the Maya culture, and fireballs are actually the best explanation for the disappearance of that civilisation. Isotopic enrichment from the neutrons of the supercriticality at impact of the fireball against the ground is actually found for carbon, with high carbon-13 ratios [2,3]. The signs of drought that have been collected are easily explained by the massive and sudden fire from the impact instead of a long-duration event ; alike for deforestation.

The key proof is the presence of the remains of impact craters : In Chichén Itza two craters for a couple of fireballs (case of an activation product like what postulated for Sodom and Gomorrha) are close to another, one in the middle of the ruins (the „cenote Xtoloc“) and

another with many human remains, jewelry etc. which seems on the outside of the city but with more rock trashed to the north (as it is obvious the huge city was in the middle of a tremendous urban area) ; the gold jewelry presents various traces of limited melting down [4], akin to lead in Hiroshima and a vase also presents black marks of burns together with remains of paint consistent with brutal semi vitrification. In Caracol there is identically a crater until now marked down as “water reservoir” [5] just near the main group of ruins on top of a hill. In Tikal it is evidenced through a study of the topography: Templo de la Serpiente Bicéfala on the Western ridge, Mundo Perdido on the Southern ridge and Great Jaguar Temple to the Eastern ridge: the ovoid crater is evident. In Copan a crater remain is also apparent to the North of the main ruins (14°50'24.4"N 89°08'36.2"W), near the flat where only a small temple remains, and to the South-West of another small temple - the main remains, farther away, escaped the highest degree of burn and shock and survived but destruction is also evident.

The black marks on the pyramids with no paint remaining together with other traces of destruction is explained by the explosion and burns (unlike for instance in Uxmal, a smaller city in the periphery, less attractive for antigravitons, where paint on buildings is still obvious, proving again that the remains in the main cities where burned down by a brutal event).

Craters are generally ovoid because the fireballs rarely comes vertically but with some angular momentum.

It is important to note that, as the fireball fissions and also fissions matter in the crust at impact, impacts, especially, produce an abundancy of lighter elements (decay products of fission products) and makes the soil less dense, hence, esp. in tropical areas, this less dense soil is particularly beneficial for the vegetation³.

We find more crater events around the peninsula that all obviously happened at the same time, a very big cluster. The precise criteria for best evidencing the event is the asymmetrical shapes, all the fireballs came with the same slanted curve, striking in the direction of the south-south-west : for instance, the observation of the Laguna of Kaan Lum shows a very typical slanted impact, we see the fireball struck on the north (where the pier for tourists is), so we have the direction of a very long stream of fireballs that came from north to south in that precise axis shown by this crater ; with a ruler one can see the straight line, that for the first obvious impact starts at 20°29'43.3"N 87°23'46.2"W ; up to 20°01'31.6"N 87°37'04.6"W the succession of fireballs is evident but in spite of rain, river erosion etc there is a good level of elements to say that it continues much more to the South, some other craters are evident, in Sian Ka'an for instance at precisely 19°29'10.2"N 87°43'38.9"W this is one impact, another at 19°10'06.1"N 87°47'34.4"W, another at 19°07'20.3"N 87°48'02.2"W, another at 19°05'00.5"N 87°48'13.7"W and many much smaller impacts all around, showing a wide zone of mass destruction, another double impact (even more massive) at 18°59'38.1"N 87°52'52.4"W and 19°00'18.3"N 87°50'34.1"W typical of the U236-type fireball. Then the ground becomes uncertain but there is

³Fusion is here insignificant of course due to lack of pressure !

another clear smaller U236-type impact at 18°19'05.8"N 88°16'37.7"W, another at 18°02'40.3"N 88°26'16.5"W, the last in the series being 17°31'45.1"N 88°50'39.2"W; in between the last one and the penultimate we find more craters in the axis and, just near these craters, the Lamanai archaeological reserve with more traces of burns on the rocks of the buildings except for the most lateral buildings where paint is still visible (this is evidenced by a watercolour⁴).



The watercolour does not show the area void of vegetation just to the North (as always for that chain of fireballs coming from North to South) with the Temple of the Jaguar that was the precise area of the event but without direct impact, the fireball disintegrated in air with a small nuclear explosion and the fireball blast went through the middle of Lamanai (only small buildings, blackened walls), sparing the paint of the peripheral temples whose remains are taller. It was not a direct impact so it did not change significantly the geology of the soil. Lamanai area and the surrounding temples was a smaller Maya site, in the periphery, and the graviton density was relatively low, hence a smaller event but still destructive. This powerful cluster could *perhaps* have been mostly driven by the antigravitons of the cohort that struck the known Maya sites more to the center of the peninsula (by suggesting Lamanai and surrounding temples were isolated in the margins of Maya development) but the magnitude of the craters in Sian Ka'an leads to the almost certain conclusion that more Maya cities were in the path (near the coast, for trade and fishing, this seems evident) and were totally obliterated by the cluster.

One can note, lastly, how the rate of ~18% U236-shape is also relatively close to the rate of such twin craters on the ground.

4. Economic Analysis and More Physics of Natural Disasters with a Strong Economic Impact - a Natural Osmosis

To define unjust development, the concept of extractive economy⁴ is taken from [6]: it means development from accumulation of resources, either pillage of nature or stealing of other groups of people, or both, and not actual production of added value through amelioration of raw materials into advanced quality products with limited intakes of natural resources, respect of the ecosphere. This

unjust development is what natural disasters come to damage or even destroy totally. For the cities of Sodom and Gomorrha⁴ for instance, the locations in key land positions suggest a custom of pillaging visitors by using the strategic position around a mountain chain (with the Biblical accounts transforming these bad memories into something resounding more with the average homophobia of the people); the Maya civilization was in a similar position and certainly developed the same way, with, likely, the weight of gold as a particular reason for accumulation of gravitons in a limited area (gold being traded around Meso-America, thanks to its big density and hence small volume, and, it can be expected, frequently seized by Mayas benefitting from their key position on the isthmus).

It is also simple to show how the overdevelopment in general digs its own grave, using many other simple examples. Earthquakes being caused by nuclear supercriticalities, density (pressure) is a key factor, the economic development, except if there is a smart use of light materials, no focus on munificence, a low interest in gold etc., in heavy impressive buildings for instance and in what is superfluous in general... which is actually not expected in extractive development which is always sudden and leads to tastes of exaggeration and showing off (the „nouveaux riches“ who try to consolidate their influence with spectacular displays of wealth, of political power) brings progressively more pressure onto the rocks as stratas collapse slowly. The nouveaux riches “rule applies everywhere in this paper. The San Francisco 1906 earthquake follows the development of a city fueled by a gold rush, certainly with some depravation in the city. The Montagne Pelée 1902 eruption follows also the development of a city where profit relied on slavery (slavery is archetypal of extractive development). The pressure on a side of a volcano inactive for a long time leads to a rise in magma that is channeled by the hard column left in the chimney, the magma is formed on the side of the city, stays on the same side due to the presence of the column, so the dome forms above the city. It is further interesting to note how the only formally known survivor is a black man who was in a bunker-like jail that shielded him from the pyroclastic flow - another occurrence of natural justice. Another example that can be given is the development of colonial Lisbon thanks to the pillaging of Latin America; the increase of pressure triggers an abnormal earthquake in 1755, the tsunami wipes down the wealth and the people that lived in it, obviously linked to the horrors of colonization. China's rapid urban development due to rural exodus under Mao's extremely harsh policies for peasants leads to an unusually powerful earthquake just near Beijing (Tangshan) in an area with traditionally low seismic activity but massive recent urban growth - the implementation of the single-child policy is associated with a later reduction of such disaster rates vs. total population, still ongoing at the time of publication of this paper.

In Italy in the area of the Po valley, during the period of the Republics which was a period of relative economic growth, a strong earthquake destroys Ferrara, area usually without earthquakes as it is sedimentary and not so far from the mountains but on the side opposite to the pressure forces that cause the magmatism and volcanism of the

⁴Watercolour by Stan Loten,

<http://people.uncw.edu/simmonss/Lamanai%20overview%20of%20LAP.htm>

Italian chains⁵. Ferrara developed thanks to its military vigour, under Alfonso 1, married with Lucrezia Borgia (daughter of a catholic cardinal and of one of his mistresses; Lucrezia Borgia will marry three times and eventually will be buried in a convent); Alfonso 1 wins the wars which help the development of his city thanks to the foundries of the city allowing the production of a good artillery, the best foundries at this time “[7,8]. So Ferrara can be compared to the other cases, it is a city whose rulers do not obey the religious rules of the area and which develops thanks to force, in a typically extractive process; an earthquake comes to rebalance.

From 1975 to 1982, there is in Haiti a rise in natality levels from 5,61 to 6,15 children per woman, in a data that does not represent of course the dual responsibility in the couple but is enough to identify a particular familial irresponsibility as such rise is not seen in neighbouring countries e.g. Guyana, the Dominican Republic (an excellent case as it is the direct neighbour); and then a reduction of natality that is slower than in neighbouring countries to, still, 3,67 children per woman in 2006 (World Bank data is used). Haiti is a country with a particular history, it has suffered from unjust debt repayments imposed by France after it liberated itself from slave rule in the early 1800s, but this does not eliminate the simple argument that is the common sense of not making too much children which already was the trend all around the world at this time. Further, the area is earthquake-prone (subduction area, there is even a volcano with a crater (volcan de la Vigie) just near Port-au-Prince) and this should have readied minds, especially as concerns the frail state of the cities. Hence the earthquake also comes to produce a natural rebalance for the average irresponsibility of the population (with of course protection of the people who invested more efforts in resilience of their houses due to some scientific knowledge, hence improving the overall intellectual level). In Haiti, furthermore, it is well known that the population rapidly used the limited resources of the island, cutting massively trees to produce fuel for cooking; the satellite images of the border with the Dominican Republic typically show the unbalance; this is the very definition of “extractive development” and this wood brought into Port-au-Prince by the many inhabitants not caring about their environment obviously weighted on the crust, contributing to the seismic response.

Coastal development in areas where the tsunami risk is naturally high should be dubious in many minds.

⁵An isolated small groups of powerful underground earthquakes in the Po valley purely with P-waves on May 19, 2012 has to be excluded as, clearly, a NATO underground nuclear test to verify ability of Italy to manage the US B-62 bombs lended to its army, carried out in a more rural area of flats farther away from the chains, with solely 10 deaths. The intensity of the cluster decreased extremely rapidly, confirming the source is a nuclear test, whereas the intensity in the Ferrara 1570 event decreased very slowly, with aftershocks felt for months and even years, showing the progressive growth of the city had brought close to criticality threshold a big slice of mantle coming from below (due to the tectonic pressure coming from Africa), and further, the destructivity of the 1570 quake confirms there is as well a good rate of S waves naturally coming together with the initial supercriticality opening a magma chamber filled up in a few dozens of second by the mantle under pressure from the mantle pushed from Africa. Italy has no overseas colonies and for a secret nuclear test to verify signalling of the ability of the Italian army to detonate itself a lended NATO material was compelled to use its own land, with strong population densities in all non-mountainous areas. Nevertheless Italy could certainly have taken a rocket on a boat and fired the warhead in the high atmosphere to test without risks for civilians.

And tsunamis always come with a warning sign selecting uninformed people with no particular interest to natural forces. Tourism for sea sides, suntanning etc. far away (with a long flight time) for Europeans /Americans is also somehow dubious in countries where the vast cultural heritage allows much more interesting activities than inertia on the beaches and whereas for these tourists there are plenty of other resorts in closer countries (shorter flight times, lesser contribution to climate change) with sun in December (the event just at the peak of touristic inflow shows how the weight of tourists in particular contributed to the earthquake). Aceh is the only province of Indonesia practicing sharia law officially and started to do so in 2003. It receives however many tourists not applying the religious law, drinking alcohol, and partying, breaking in general the morality rules that are imposed to autochthonous persons; furthermore, ecologically speaking this represents extractive development through the simple perspective which is that these tourists could have traveled less far away, with a lesser environmental impact, and still found beaches for tanning; the elites planned touristic development, as demonstrated by the dual rule allowing half-nude tourists, alcohol drinking, etc together with sharia for the locals. So the elites have planned something that is ecologically destructive, in two ways, the impact of plane flights and the replacement of marshes and natural spaces by touristic buildings i.e. a rapid extraction of touristic resources with no care for the long-term. The tsunami destroys many buildings, brings back some water and, in principle, sets the bricks for the beginning of a return to natural state.

The above are just a list of examples but the rule has to be extended. Each natural disaster is a collective judgement. This is a simple law. There is indeed the idea of what is traditionally called „divine retribution“ but with a precise definition which is that those who are victims are the sole culprits (unlike in some deformations, e.g. the idea that the ruler is always the sole culprit, in China for instance; each individual retains free will wherever he or she is and each individual so has full responsibility on the organization of his/her life; vegetarianism, at least, could have spared many lives of peasants in Mao’s China as it strongly reduces the ecological print of agriculture and hence reduces the graviton density (cattle represents a big accumulation of useless gravitons as there is a dispendious use of agricultural goods to feed the cattle which has itself low nutritive power vs. energy invested in the growth of the cattle, and so each user of meat gathers much more gravitons in comparison with a vegetarian) - one can note the anciennety of the Hindu culture together with Jainism, which survived for thousands and thousands of years and where vegetarianism together with respect of cattle is a widespread custom and traditional use of cannabis also improving health quality naturally (limiting the economic needs for medical purposes and hence contributes to slowing down concentration of materials and energy sources needed for health), there obviously is a clear and direct link between these elements and the longevity of these cultures⁶ - in Israel as well some

⁶Hindu cosmology and Buddhist cosmology also anticipated a bit on the cosmological facts established by the author, esp. (1) the central position of black holes (implicit) in the permanent cycle of creation and destruction and (2) hence, absence of a Big Bang – the author’s research was done without any knowledge of these traditional cosmologies (under strong veil of ignorance).

degree of traditional vegetarianism (falafels...) is found together with a strong anciennety of the culture and the Ancient Testament includes some limited knowledge of cannabis and its uses (kaneh-bosm). Natural disasters represent the destruction of extractive development. They can be said to be a definitively positive contribution to the better good once they are understood as such.

The idea of natural disasters rebalancing extractive economic development is also implicitly developed, through the climatic perspective which is also of course in osmosis with the above, in [9].

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Annex

Proof of limited melting down from small supercriticality and fire on jewelry found in one crater of the Chichen Itza site.



The burns on the left object and melting down on the two faces to the right are obvious.



The burns on the second object from the left and on the last collar are obvious and limited melting down on the top object at the center as well.



Melting down and burns are obvious in the fourth object, limited melting down also clear on the first three objects, on the fifth and on the last.



The superficial burns from instantaneous but limited overheating are also obvious.

(All pictures Jorge Pérez de Lara / Raices)



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