

V. *A Letter from Mr. Martin Hartop at Naples, to the Publisher. Together with an Account of the late Earthquake in Sicily.*

Worthy S I R,

I Have sent you, as you desir'd, all the Account which I has yet seen the Light of the late Earthquake in *Sicily*. There was nothing that ever I could hear of particular in it, and therefore you can expect no great matter of Reflection upon it. However, to comply with your Commands, I send you my general Thoughts of this and such like *Phænomena*.

First, It seems highly probable that these Tremblings of the Earth proceed from the same incens'd matter, which finding a way at other times through the *Mongz-bello*, has so furiously broken out in Smoak and Fire: This appears by the Tragedy of *Catania*. Now you must know the Eruptions of these Mountains are of two sorts; the one not so very violent as to disturb much the adjacent Country, and this happens once in two or three Months, and lasts three or four days. The other is more furious and of longer Continuance, and is observ'd here at *Naples* to happen to Mount *Vesuvio* once in about Eighty Years, as I heard the ingenious Mr. *Peccacio* say. Of these, the last, which as well as I remember, he said was in 1632. was so very violent, that by the best of his Observation it cast the Rocks three Miles into the Air. Now from the burning or not burning of this Hill, *Naples* (and without doubt the same holds in *Sicily*) calculates its safety or danger of Earthquakes: For without doubt the matter is perpetually burning under the Mountain, and these vast Clouds of smoak which daily issue out of the top, if the Cavity happen by any Rock or

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inward

inward Alteration to be stopt, must deviate through other Passages under ground, heaping up continually Magazines for a future Calamity. Now this combustible matter seems to me to be nothing but Nitre mixt with some other Minerals and Sulphur. He that has seen the way of making Salt of *Tartar* by Deffagation, where you mix an equal quantity of pulveriz'd Nitre, has seen an exact Type of these burning Hills: For after each spoonful you put into the burning Crucible, arises first a black thick Smoak, after which the fired Mineral boils up, as if it would over run the top of the Crucible.

This I take to be the matter. But, 2<sup>ly</sup>, How this Motion of the Earth is perform'd is not so easily explicable, especially if one considers, that the Motion of the Earth is not from the Perpendicular, but Horizontal *Verte*; 'tis a Vibration so quick, that it cracks the Glass in the Windows: 'Tis disputable whether the Reciprocations of a Lute-string, are more frequent. Now when the Vibrations are so quick, and the Body mov'd so great, the Motion must be prodigiously violent, and by consequence the Cause, which I take to be nothing else but the aforesaid Vapours incens'd. We observe the Thunder, which is the effect of the trembling of the Air, caus'd by the same Vapours dispers'd through it, and encountering one the other, has force enough to shake our Houses. And why their may'nt be Lightning and Thunder under ground in some vast Repositories there, I see no reason, especially if we reflect, that the matter which composes the noisy Vapour above us, is in much larger quantities to be found under ground. Now if you ask me how this Horizontal Trembling is perform'd, (for such doubtless it is, as appears by the Cracks in the Earth, which they say, are to be found now all over *Sicily*) I can attribute it to nothing else but the furious Passage of the incens'd matter from one Grotto to another: For 'tis very probable these are continued in some parts

parts of the Earth for several Leagues together : Witness your last Earthquake about four or five year ago, which was felt, (with little difference as to time) in *England* and *Ireland*. Another Confirmation of this, is, the manner these trembling Fits are perform'd; which is not all of a suddain, like that of Gunpowder in a Mine, but is small at first, afterwards gradually more terrible, like a growing Tempest. A Third may be, the Observation of some here in *Naples*, that when Mount *Vesuve* ceases to burn, the *Sulfaterra* sends out its Fumes more violently, & *vice versa*. Now this *Sulfaterra* is a Hill near *Puzzolo*, as distant from *Naples* on the one hand as the Hill *Vesuvio* is on the other ; so that tis more than probable *Naples* stands upon a burning Arch, through which, as a Pipe, these two furious Neighbours do reciprocally receive the abovesaid Exhalation. This seems to me a growing Evil to this wealthy and populous City, and what may possibly in time make good the Prediction of *Sanazarus*, who was born here.

*Et te, quis putet hæc è alitrix mea, durus Arator  
Vertet, & Urbs, dicet, hæc quoque clara fuit.*

Tours, &c.