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## Vertigo in the Molecular Chain

By Margarida Mendes

On the year of the opening up of the skies, with the launching of the Hubble towards its final home, our sight was enhanced by a microscopic power. The effect of zoom was distorted, outwardly just as much as inwardly, following the majestic prophecy that the Eames left us with. A trampoline of sights redefined how things became objects through the illusive perimeter of their relation, just as the doom of our separateness from the natural world would thrive, abruptly changing the oceanic feel of our senses for a positivistic crystallography of the holographic.

Our story for today is set on the molecular level of the genetic chain, and it's one of incest. It is also a vertiginous ride in time, as, after 1990, one temporality could never suffice to recount the complex history of biological entities.

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On a blood stream of a fleshy river, the code to a future fruit circulated. The pulsing glimpse of its veins was propelled by the internal roar of morphogenesis: high-speed matter in flight travelling through strata, clustering in new chemical compounds. Enzymes surged in projected frenzy, energetic vectors speeding through opaque channels. A cataract of flows, an immensity of cells driving through. Generative tension in constant flux, pouring fluids run in ferocious downfall. Billions of particles navigate in parallel routes, around them the fleshy walls inflate, as the torrent of atoms does not halt. With machinic similitude they flee, streaming through the dizzy contours of becoming. It's a vortex of sorts, a kind of contorted whirlpool that speeds savagely.

Two molecules travel side by side. Their fate was set to develop the generative tissue that would bring about the hollow cavity, protecting the nucleus of futurity they call seed. In the luminescent urge of their run, there was the pride of legacy, the ultimate condition of existence. The whole rush was driven by it: the molecular weaving of a nutrient-rich fabric that enhanced the continuation of a species.

As a matter of fact this fruit had in the end a long history, as it travelled from continent to continent, through the curious hands of experts and their grandiose orchards and private gardens, to the quotidian flows of agricultural peasants, circulating through distribution markets' big baskets and the muffled micro-packaging of local groceries. This fruit travelled with its history filled with joyful days and cinematic metaphors, passing from degustation menus to summer afternoon picnics, when it was interlaced with the ears of children. Triplets, not twins, those were the most famous conjunctures of their sorts, who'd be gulped avidly under the marches of pleasure. As I lean back in the chair in my hotel room I remember its juices dripping through the corners of our mouths, making the fingers all sticky, leaving strange bloodstains on our necks and a cherry blossom scent on our pores, which would stay for the night. These microscopic molecules embedded themselves in our skin, raising awareness to our senses that revolved in epidermal

convolution. I could feel it just now. This flickering sensation on the veins alerted us to the energetic discharge of delight, as the mineralogical flow of its nutrients poured right through us in a cataract of desire.

In the past, the arrival of this fruit had its predicted cycles. Deeply in tune with the cosmos, the secret generative force of its trees bloomed with the rise of summer and its tender heat. Its prosperity was then foretold by those who sought to read the minor patterns of their surroundings in the vespertine rhythms of the clouds, which announced both the weather of the coming days and the trees' fertile growth. At the time, the periodicity of seasons appeared still to have a stable rhythm, and the reoccurrence of rain was not given to extremes. The tempestuous character of flooding had not yet spread over the tropical lands, and the coastal regions had not sunk with the defrosting of ageless glaciers, who had until then borne witness to Lucy and her cousins, and many generations of other creatures before them.

However, since climatic patterns started to change one could no longer get a hold on any prediction for the next season, or even the next day, as landscapes would suddenly transform with the ferocious instability of the sky. The cycles of elemental transformation had also accelerated in unpredicted directions, and to the four states of matter a few extra had been added, which diverted invariably from the known ones. Molecules shifted from plasma to gas states at an unprecedented rate, quickly losing their momentum and making the most out of their conversion qualities. It was hard to declare unity to things, when borders had collapsed and the limits of singularity had all been mechanized.

The human diet and their material consumption would also shift drastically, given the scarcity of goods and the high rise in the population seen at the turn of the millennium, which would bring a third world war and provoke the rapid deforestation of lands as well as the rise of a new bronze era, that was now not named after tools but out of the metal's imprint on the unbreathable atmosphere, after centuries of resource exploitation.

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But let us go back to 1990 and to the moment in time when a certain voyage on the molecular level transformed the life of a type of fruit and of many others thereafter.

In our story, the vortex of molecules swirls faster than ever, rushing through the highways of cellular tissues that are being imprinted by electrochemical clashes. Fibres twirl, interlinking themselves in mutual growth, their density projected by the outreach of splendid juices. Enzymes are reagggregated in compounds of a novel structure, reacting to the phosphorescent glow of the fusion process. A true line of production is at stake, as the molecules in action catalyse energetic states into transmuted matter. The hollow cavity protecting the fruit nucleus was thus being built by the weave of this atomic chain, once defined by its ancestral qualities.

Today, the creation of this fruit is for the first time challenged, as a new player has been added to the game: a new gene! Through the use of the technique of gene-splicing, the ambitious minds battling for the prosperous continuity of this species have operated as divine agents desiring to enhance its longevity. Driven by the will to augment its succulent life and their own profit they invented this remarkable new technology. It used restriction enzymes as chemical 'scissors' to alter the DNA structure of the piece. To the existing genetic chain, the gene xb53 was then added, operating on the level of the fruit's constitution and immunity from its surroundings.

Inevitably, not all mutations could be predicted. As a consequence of the use of this new procedure, the adaptive muscular tissue of the fruit was enlarged and grew a thick surface layer, developing the characteristics of a protective armour. Its inner colour now resembled that of an odd albino creature, whose specimens we could not easily fit in the known biological charts. Animal plagues and other intrusive agents that had once threatened the fruit could no longer do so, as its chameleon fierceness would repel them. Not even the thickest bird beaks could penetrate the juicy walls of the fruit, once relinquished by all.

Its structural enhancement also hit its reproducing faculties, as orchards proliferated through the planet in large numbers, given the rapid growth of the immune trees. The planning of such cultivation sites had in fact to be altered, as with the years the robustness of the fruit would grow exponentially, at a rate of almost 12 centimetres per year, erasing all previous records. The small-scale farmers, who travelled from site to site to compare at such oddities, were driven to madness. Nothing like this had ever been seen, and seldom would one escape those visits without bringing injuries home, as the orchards became ever more dangerous, when the serendipity of nature could squash a random passer-by, given the weight of the balancing spheres on the twisted branches of the trees. The reports of casualties in the newspapers had increased that year, even though the geneticist committee attempted to bribe editors not to write about the events, given their positivistic take on the fruit's profitable health and their prediction of the increased success for the generations to come. But who could enjoy a fruit that no one could eat?

The unexpected mutations provoked molecules to act beyond their known state. Machines were being developed to replace human fruit pickers, as any contact with the trees became too dangerous. Whole villages started to feel jeopardized after an incident when fruit came rolling through one village and smashed two houses. An atmosphere of suspended calamity was felt, causing small states to collapse, as governments feared they could not battle the scientists over a gene they did not know how to control. They were facing a nine-headed hydra!

The scenario conjured by this biological warfare was one of fear and distrust, as eco-genetic conservative parties rivalled the neoliberal futurists in intense battles covering all media. Unemployment peaked, as companies that were taken over by delirious machines shut the workers at home behind their hazy window-screens. Looking from my hotel room to the street below, I can read the stencils:

**Can one foretell the history of nature's derivatives?**

**What can we expect of a postnatural predation of material history?**