EBEL KEMELING THE OPPOSITE IS ALSO TRUE 81 IDEAS THAT CHANGE YOUR PERSPECTIVE

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ARTHUR KOESTLER – EVERYTHING IS A HOLON

Compared to Arthur Koestler, my life is tremendously boring. He was born in Budapest in 1905. His father was an adventurer who had experienced several business failures but was eventually was made rich by the textile trade, and splurged his fortune by residing in hotels with his family.

Koestler attended Vienna University, where he became a Zionist and didn't graduate but instead left for Palestine to work in a kibbutz. Manual work did not suit him, so at the age of twenty, he started to write for German newspapers. He was good at it. An interview with Einstein was a fantastic scoop. And when he was allowed to travel to the North Pole in an airship, his reputation was established.

Koestler experienced the violence and grand ideologies of the 1920s and '30s close up. In Germany, he joined the Communists because he hoped that they would put an end to anti-Semitism but later became disillusioned with Stalin's totalitarian regime. In Spain, where he worked for a British newspaper, Koestler was taken prisoner by the fascists, awaited his execution for months in an infamous Sevilla prison, and in the end, was released in a prisoner exchange. After the rise of Hitler and the annexation of his native country, he moved to France where he was again taken prisoner, in 1940. He managed to escape through the Foreign Legion and fled to London where he would spend the rest of his life.

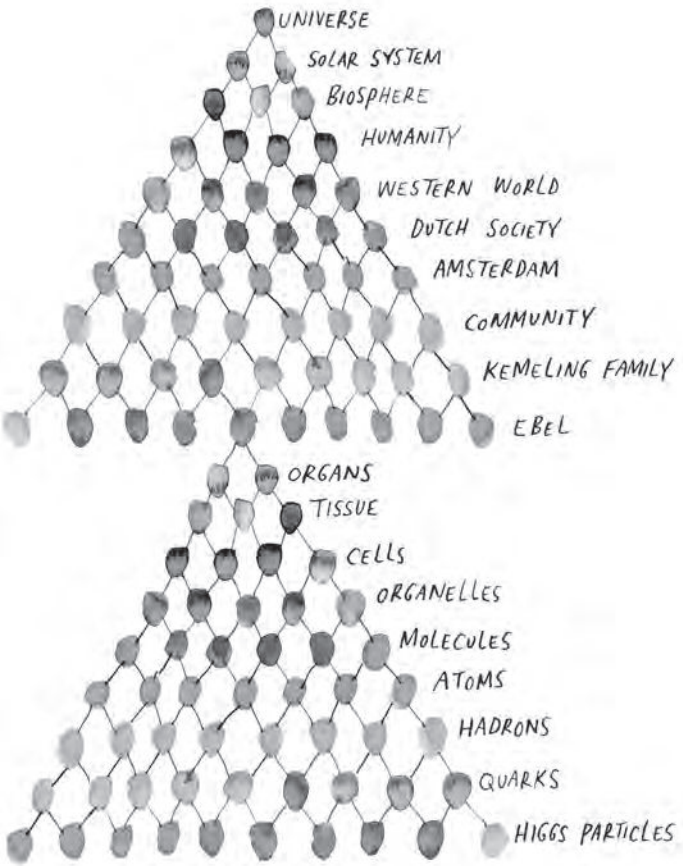
His best-known book, *Darkness at Noon,* was published in Lon-

don in 1940. It was originally written in German during his imprisonment in France – under the beautiful title, *Sonnenfinsternis* – but in the end was published in English, translated by his girlfriend at the time, Daphne Hardy. Some reviews are critical of the book's style, but everyone should read it. It's oppressive and gives you a sense of how impossible it is to trust anyone in a totalitarian regime. *Darkness at Noon* made Koestler famous, a post-war cult hero. His affair with Simone de Beauvoir may also have contributed to his star status. Or vice versa.

Incidentally, I read *Darkness at Noon* years after Koestler's more popular science book, *Janus: A Summing Up.* The latter was published in 1978 and I read it in the mid-1980s when I was about sixteen. The book is a mixed bag, 'both chaff and corn' as one review put it. But it contains one vital idea: the concept of a *holon*. Koestler had already introduced this concept in *The Ghost in the Machine,* but I read it for the first time in this book.

A holon is something that is simultaneously a whole and a part of something bigger. There's a hierarchy in the way various holons interact and are subsumed within larger holons at higher levels. That sounds abstract, but let's take a human as an example. A human is a holon. You can see them as a whole, but they also consist of smaller parts such as organs. Organs are also holons. A kidney or a lung can be described by what substances enter and leave them and how they collaborate with other body parts. In turn, organs consist of cells, which join together to determine their functionality and organization. So a cell is also a holon. And so it goes on. As you ascend the hierarchy, you see holons there too. A human is a part of a system. A family, or a team, is a holon. You can also apply this to a society or an entire economy. Each level can be looked upon as a whole, while simultaneously being composed of parts. An economy is formed by people, but the terms 'interest' or 'inflation' do not apply to a person. Koestler regarded the holon as an important concept to counter 'reductionism', in which we try to explain how things work by looking at how they're put together.

Koestler was not describing anything new. Many of his ideas were 'borrowed' from thinkers like Ludwig Von Bertalanffy, who was one of the first to come up with a general systems theory, originating from his views on biology. But Koestler's holon is a useful refinement because it illuminates the hierarchies inherent in systems. He reminds us that you can look up and down the hierarchy.



SELF-PORTRAIT AS A HOLON

The title of Kostler's book, *Janus: A Summing Up,* refers to Janus, a Roman god depicted with two faces – one at the front of his head, and another at the back. A holon is something with which you're constantly switching perspectives, from one side to the other. It challenges you, not only to look at how something is put together but also what role it plays in a greater whole. I think that's an important lesson.

2

WALTER CANNON – THE HUMAN BODY IS A FORM OF DYNAMIC BALANCE

Everyone with school-age children will have wondered at one time or another: 'Should I send my child to school today or not?' Since COVID-19, the rule at my children's school is: if they have a fever, they stay at home. Children don't have a fever very often. I'd estimate a couple of days a year, maybe 1% of the time. And even if they do have a fever, it's usually not very high. Anything above 39 degrees is rare and any deviation from the average is seldom more than 5%. Our body's temperature is extremely stable. That's quite odd.

American doctor, Walter Cannon, published the book *Wisdom of the Body* in 1932. It's not a spiritual self-help book, as the title might suggest. It's about how the body maintains equilibrium. Cannon calls this *homeostasis*, meaning roughly 'staying the same'. The concept is based on the idea that constant adjustments occur in the body to keep essential parameters such as pH, temperature, and glucose levels within a narrow range. I came across this book because several system theorists use the concept of homeostasis, and it turned out they had borrowed it from Cannon.

Cannon asks himself how it's possible that the body, which consists of parts and processes that are extremely sensitive, is still so stable:

> Indeed, the high degree of instability of the matter of which we are composed explains why drowning, gas poisoning, or electric

> shock promptly brings on death. Examination of the body after such an accident may reveal no perceptible injury that would adequately explain the total disappearance of all the usual activities. [...]
>
> When we consider the extreme instability of our bodily structure, its readiness for disturbance by the slightest application of external forces, and the rapid onset of its decomposition as soon as favoring circumstances are withdrawn, its persistence through many decades seems almost miraculous. The wonder increases when we realize that the system is open, engaging in free exchange with the outer world, and that the structure itself is not permanent but is being continuously broken down by the wear and tear of action, and is continuously built up again by the processes of repair.

What's interesting is that a system is only able to self-regulate if it can interact with the environment. For example, if you're unable to shed your excess heat into the surrounding air, you're unable to keep your body temperature stable. To describe this system interacting with the environment in a controlled way, Claude Bernard, a nineteenth-century French doctor, devised the term *milieu intérieur*. Despite the sensitivity of our cells and tissues, we have a kind of interior climate that must be kept stable.

Cannon develops this idea further, with his concept of homeostasis. He describes physiological processes such as the regulation of blood circulation, breathing, and the balance of fluids and electrolytes. He explains how the nervous and endocrine systems collaborate to monitor these processes with feedback loops. For example, the nervous system can adjust heartbeat and blood pressure in response to stress, while hormones such as adrenaline and insulin regulate blood sugar levels and metabolism. Any disruption of homeostasis leads to illnesses like diabetes or high blood pressure. But the body is a resilient system. It can recover. This ability to adjust is a key aspect of good health and doctors' focus on treatment.

Cannon's book covers the physiology of the body and the general concept of dynamic equilibrium, whereby if a system becomes unbalanced, it takes exceptional resilience to get back to the earlier equilibrium. Parameters of balance such as our body temperature should not be expected to alter along with the environment. No matter how hot it becomes outside, our internal temperature remains constant, until we can no longer get rid of our heat. And if such a situation continues for too long, we die. So a gradual change in the environment translates to a sudden change in the body. Now admittedly, an ecosystem can't be compared to a body, but there is something strange about climate predictions that the 'average temperature' will rise by 3 degrees.

3

DONELLA MEADOWS – SUSTAINABILITY IS A MEASURE OF A SYSTEM'S ABILITY TO SURVIVE IN A FLUCTUATING ENVIRONMENT

Sustainability is hip, but no more so than when I was young. My parents bought cane sugar and raffia at the Fair Trade shop and at the end of the year, my father donated a large part of his profit to organizations such as Greenpeace and Oxfam. In 1972, when I was four, the Club of Rome published their *Limits to Growth* report which explained why unbridled growth is impossible.

The Club of Rome was a prestigious global think tank of scientists and dignitaries, including the former Queen of the Netherlands, Beatrix. The organization tried to bring economic growth and its limits onto the international political agenda. Its conclusions were profound: in a world with scarce resources and a fast-growing population, the system would reach its limit somewhere in the twentieth century, leading to collapses that would stall economic growth.

The precise details of the report's predictions may not have been accurate. Indeed, these days the discussion centers around greenhouse gases and climate change, and there's no mention of them in *Limits to Growth.* But its core premise, that humanity may be pushing the Earth to breaking point, remains true.

The report and its definition of sustainability were grounded in a systems approach. That only became clear to me when I read Donella Meadows' *Thinking in Systems.* She was one of the main authors of *Limits to Growth,* together with her husband, Dennis Meadows, Jørgen Randers, and William Behrens III.

Thinking in Systems opens with an explanation of why certain kinds of problems actually exist. She says that hunger, poverty, unemployment, environmental disasters, and climate change are wicked problems that are the result of how things are organized. Nobody deliberately creates those problems, nobody wants them, and yet they're there. That is because they're *system problems*, undesirable effects of how systems are structured. We can only tackle these problems if we're willing to see the system as the source of its own problems, and if we are prepared to restructure the system. Meadows goes on to define what a system is:

- A collection of people, cells, molecules, or other interconnected things that produce their own patterns of behavior.
- These elements are organized to aim for an objective.
- A system is more than the sum of its parts.
- A system can display adaptive, dynamic, targeted, self-organizing, self-preserving, and self-repairing behavior.
- A system can change, adapt, respond to events, have goals, and heal wounds in ways that are lifelike.
- A system is resilient and many systems are evolutionary.

Every system consists of elements, interconnections, and either functions (for non-human systems) or objectives (for human systems). The elements are the most visible aspect but they rarely provide insight into the overall behavior of the system. The functions or objectives determine how a system operates, but you can only understand them if you observe the system in action. Take a company, for example. The 'elements' might be the people that work in it. But if you study them, you won't learn much about the company's overarching aims.

Donella Meadows uses the word 'resilience' to indicate a system's capacity to survive in a fluctuating environment. It's about the system's ability to adapt, to recover, and to repair itself.

The word 'resilient' is also sometimes used as a synonym for 'sustainable'. And rightly so. A sustainable system is one that stays

alive. In fact, resilience is the *only* way to define sustainability. A steak or a t-shirt can't be judged as sustainable in isolation, because the term can only be applied to a larger system. The impact of a product on sustainability depends on more than just how it is manufactured. It also depends on how it is used within the larger system. How much of it is used, how often, and in combination with what other products? As an advisor in the field of sustainability, I was constantly trying to explain to companies or investors that sustainability is a feature of a system as a whole, not of its elements. After a few years, I realized that most of the time, the best thing I could do was give them Donella Meadows' book.