The Other Climate Crisis

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I remember June 7, 1977 particularly well because, on that day, I fell to the floor, writhing and screaming. Just to be clear, I don't normally do this. I'm British. Our cultural response to pain is to try to ignore it and, when we do have feelings, to pretend that we don't. If I'd been able to, I would have passed the screaming off as laughter to avoid embarrassment for the person on whose floor I was doing the writhing. But that really wasn't an option. I was in agony and no amount of tortured grinning could cover it up.

This happened to be the day of the Silver Jubilee for Queen Elizabeth II, marking the twenty-fifth anniversary of her coronation. Cheering crowds packed the streets of London, with people emptying out of their buildings for a couple of hours or taking the day off entirely. As it turns out, this wild throng of patriots included my doctor. I discovered this when I tried desperately to contact him between contortions and kept getting a festive message on his answering machine. Finally, assuming I was either going to die or give birth, I stumbled with a friend through the crowds to the emergency unit of a local hospital.

I waited there for more than an hour to the sound of fireworks outside. I was at least happy that, as I was leaving it, the world was in such a great mood. Upon the arrival of the duty doctor, whom I assume wasn't much of a fan of the queen's, the pain stopped as suddenly as it had begun. I couldn't explain it, but he could. He said that I had a kidney stone. Apparently, it's among the worst pains that a person can experience other than childbirth. And frankly, it's much less useful. Eventually, I passed the stone and after a few days, doctors let me out of the hospital with instructions to drink more water in a week than I would normally get through in a year.

Over the next few weeks, I had a series of tests to find out why the stone had formed. Doctors concluded that mine was a calcium stone and that there were two possible causes and two possible remedies. Either my body was absorbing too much calcium from the food I ate or I was producing too much calcium myself. I asked what the treatment was in either case. If it was option one, they said, they'd put me on a low calcium diet. If it were option two, they'd suggest surgery to remove one of the parathyroid glands in my neck.

I couldn't believe what I was hearing. Why would they do that?

A doctor patiently explained that we have four parathyroid glands, which are involved, in various ways, in producing calcium. The reasoning was simple. If they took one out, the whole calcium production thing would slow down. I asked what else the parathyroid glands did. Quite a lot, it turns out. They told me not to worry, though; people coped perfectly well with three. I thought then, as I think now, that if I started with four parathyroid glands I probably need four and not three. I also felt intuitively that they were confusing my body with some form of mechanical contraption that would keep on chugging if someone took out one of its components, as long as most of the other bits stayed in.

We'll come back to my internal organs later. There is, as I hope you assumed, a reason I told you about them in the first place.

We don't see the world directly. We perceive it through frameworks of ideas and beliefs, which act as filters on what we perceive and how we perceive it. Some of these ideas enter our consciousness so deeply that we're not even aware of them. They strike us as simple common sense. They often show up, though, in the metaphors and images we use to think about ourselves and about the world around us.

Sir Isaac Newton, the great physicist, composed his theories at the dawn of the mechanical age. To him the universe seemed like an enormous mechanical clock, with perfectly regular cycles and rhythms. Einstein and others have since shown that the universe is not like a clock at all, and that its mysteries are more complicated, subtle and dynamic than even your favorite watch. Modern science has changed metaphors and, in doing so, has shifted our understanding of how the universe works.

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In our own time, we routinely use other scientific metaphors. I often hear people talk about the mind as a computer, about mental inputs and outputs, about "downloading" their feelings or being "hardwired" or "programmed" to behave in certain ways. The power of metaphors and analogies is that they point to similarities, and there are certainly some similarities in the ways lifeless computers and living minds actually work. Nonetheless, your mind clearly isn't a branded solid-state system housed in a metal box on your shoulders.

In the end, all analogies have limitations. Thinking of the mind as a computer has many. So does thinking of your body as a mechanism. I'm sure, though, that the power of the mechanical metaphor

encouraged my doctors to think that they could remove one of my parathyroid glands as blithely as a mechanic might take a thermostat from a car. These analytic, often mechanistic, ways of thinking about the world have deep roots in the Western view of the world and their effects—good and bad—are everywhere. In some ways, they have been spectacularly successful. In others, they've been catastrophic.

The complex relationships of living systems and our widespread failure to understand them was the theme of *Silent Spring*—Rachel Carson's hard-hitting book published in September 1962. She argued in particular that the chemicals and insecticides that farmers were using to improve crops and destroy pests were having unexpected and disastrous consequences. As they drained into the ground, these toxic chemicals were polluting water systems and destroying marine life. By indiscriminately killing insects, farmers were also upsetting the delicate ecosystems on which many other forms of life depended, including the plants the insects propagated and the countless birds that fed on the insects themselves. As the birds died, their songs were silenced.

Rachel Carson was one of a number of pioneers who helped to shift our thinking about the ecology of the natural world. From the beginning of the industrial age, human beings seemed to see nature as an infinite warehouse of useful resources for industrial production and material prosperity. We mined the earth for coal and ore, drilled through the bedrock for oil and gas, and cleared the forests for pasture. All of this seemed relatively straightforward. The downside was that, three hundred years on, we might have brought the natural world gasping to its knees.

One climate crisis is probably enough for you right now, but I think there is another one. This one is just as urgent, and has implications just as far-reaching, as the crisis we're seeing in the natural world. This isn't a crisis of natural resources. It is a crisis of human resources. I think of this as *the other climate crisis*.

Back to my kidneys and the remedies the hospital suggested to sort them out. Doctors put me on a low calcium diet. This meant that I had to avoid eating green vegetables—it turns out they are loaded with calcium—eggs, cheese, milk, shellfish and all forms of gravel and chalk. They told me I could eat red meat, other types of vegetables, carbohydrates and desserts, and that I could drink tea, coffee and alcohol.

I went along with this for a while but it seemed a bit simplistic. Eventually, a friend suggested that I go to see a different sort of doctor entirely. So I found myself in a consulting room at six o'clock one morning in a town called Reading, not far from Windsor Castle in England. I was there to meet Dr. Gordon Latto, one of the most distinguished naturopath physicians in the world and a consultant to Queen Elizabeth II. Given that the Queen's Jubilee celebrations had contributed to my agonies, it struck me as only right that one of her personal physicians should to try to put me back together again.

Dr. Latto was an impressive, acutely alert Scot in his late sixties. He ushered me into his large, book-lined study and asked what the problem was. I explained about my kidney stones and their distant association with the Monarchy. He listened hard and then asked me to do something that my other doctors had not. He asked me to keep a list of everything I ate and drank in a normal week. He also took a blood sample and asked me to come back two weeks later. When I saw him again, he checked my diet and agreed that there was very little chalk in it—and no gravel to speak

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of—and that I was not eating excessive amounts of calcium in any form. He did notice, though, that I ate very little uncooked food or fruit, and said the blood test showed that my blood was a little thick and that I was low on iron.

He suggested that I should avoid eating meat because it's high in uric acid, which can thicken the blood. He also said I should avoid foods with a lot of sugar, and that I shouldn't drink coffee, tea, or alcohol, as all of these impede the pancreas and the liver and make the whole system sluggish. This, in turn, puts strain on the kidneys, which can then silt up and form stones. He told me to eat plenty of fresh green vegetables, salads, and fruit because they are full or iron, Vitamin C, and other good things. In other words, he put me on the exact opposite diet from the one recommended by the hospital. This all made much more sense to me and I decided to try it. Twenty-five years later, in 2002, the country was marking the Queen's Golden Jubilee. This time my kidneys and I spent June 7 in quiet relaxation celebrating my wife's birthday, admittedly with a stiff drink.

The hospital understood that I had some internal problem with calcium, but its analysis was linear and mechanistic. They assumed that I must be eating too much calcium—though they never checked on that—and that I should simply eat less of it. Gordon Latto understood that the human body is a complex organic system, not a mechanical one. The problem wasn't simply that my kidneys were clogging up with the enormous amounts of calcium I was allegedly eating. The problem was woven more subtly in the overall balance of my diet and its effects on my general metabolism. He approached the issues with a different mindset – with a holistic view of human health and wellbeing.

The holistic approach to medicine has many benefits. Of course, there are some areas where it may not be as effective as conventional forms of medicine. If I'm in a road accident or catch a virulent disease, I don't want a naturopath to tell me to drink less coffee. I really do want all the skills and insights of modern medicine to deal with the immediate trauma. But for organic issues I look to organic remedies.

A living organism, like a plant, is complex and dynamic. Each of its internal processes affects and depends on the others in sustaining the vitality of the whole organism. This is also true of the habitats in which we live. Most living things can only flourish in certain types of environment, and the relationships between them are often highly specialized. Healthy, successful plants take the nutrients they need from their environment. At the same time, though, their presence helps to sustain the environment on which they depend. There are exceptions, like Leylandii trees that just seem to take over everything in their path, but you get the idea. The same is true of all creatures and animals—including us.

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People like Gordon Latto and Rachel Carson always have problems promoting their ideas to the wider medical or scientific establishments. What they see as obvious strikes mainstream opinion makers as either ridiculous or revolutionary. This is because the Western worldview is not based on seeing synergies and connections; it is based on making distinctions and seeing differences.

It's why much of Western philosophy starts from the premise that the mind is separate from the body. And it's why most people don't seem to understand that what they put into their bodies affects how it works and that that affects how they think and feel. It's why most people don't seem to understand

that the quality of their individual lives is affected by the quality of the physical and human environment on which they depend and on the quality of their own contributions to improving it.

I said that the crisis in human resources is analogous to the crisis in natural resources and that the consequences for us are just as severe. I live in California. In 2006, the State of California spent $3.5 billion on the state university system. It spent $9.9 billion on the state prison system. I find it hard to believe that there are three times more potential criminals in California than potential college graduates or that the growing masses of people in jails throughout the country were simply born to be there. I don't believe that there are that many naturally maligned people wandering around—in California or anywhere else. Of course, there are some, but they're a small minority. In my experience, the great majority of people is well intentioned and wants to live lives with purpose and meaning. However, very many people live in bad conditions and these conditions can drain them of hope and purpose. In some ways, these conditions are becoming more challenging.

The crisis in human resources is analogous to the crisis in natural resources, and the consequences for us are just as severe.

One reason is the massive growth in human populations and the increasingly intense densities in which people are living. At the beginning of the Industrial Revolution, there was hardly anybody around. In 1750, there were one billion people living on the planet. It took the whole of human existence for the world population to reach one billion. I know that sounds like a lot, but the planet is big enough for a billion people to spread out in reasonable comfort.

In 1930, there were two billion people. That means it took just one hundred and eighty years for the population to double. But there was still plenty of room for people to lie down. It took only forty years for us to get to three billion. We crossed that threshold in 1970, just after the Summer of Love, which I'm sure was a coincidence. After that came a spectacular increase. On New Year's Eve 1999, you were sharing the planet with six billion other people. The human population had doubled in thirty years. Some estimates suggest that we might hit nine billion by the middle of the 21st century.

Another part of this dynamic here is the growth of cities. Of the one billion people on Earth at the dawn of the Industrial Revolution, only three percent lived in cities. By the beginning of the 20th century, twelve percent of the almost two billion people lived in cities. By 2000, nearly half of the six billion people on earth lived in cities, and by the middle of this century, it's estimated that more than sixty percent of the nine billion human beings will be city dwellers. Estimates suggest that by 2020, there will be more than five hundred cities on Earth with populations above one million. There will be more than twenty mega-cities, with populations in excess of twenty million. Already, Greater Tokyo has a population of thirty-five million. This is larger than the total population of Canada, a territory *four thousand* times bigger. Think about that for a minute.

Some of these massive cities will be in the so-called developed countries. They will be well planned with shopping malls, information booths, and property taxes. But the real growth isn't happening in those parts of the world. It's happening in what we know as the developing world—parts of Asia, South America, the Middle East, and Africa. Many of these sprawling cities will be vernacular shanty-towns, self-built with poor sanitation, little infrastructure, and barely any form of social support services. This massive growth in the size and density of human populations across the Earth presents enormous challenges. It demands that we tackle the crisis in natural resources with urgency. It demands, too, that we tackle the crisis in human resources, and that we think differently about the relationships between these two.

We won't achieve any of this by thinking only of the material needs of people and communities. It's time to change metaphors. We have to move beyond the linear, mechanistic metaphors of human development to the more ancient metaphors of agriculture. Just as human beings are organic, so are human communities. They don't function in a straightforward linear way.

Some years ago, China decided that the population of the country was getting too large and that it had to be controlled. The government decided to do this by limiting each family to one child. So far, so good. Like eating less calcium, this seemed to make practical sense. It hasn't played out exactly as they planned, though.

To begin with, many families preferred to have a male child. They thought it made better economic sense and that providence would be good to them. Providence slipped up on this and delivered as many girls as boys. Large numbers of parents took matters into their own hands and did away with their female babies, then kept trying until they got a boy. There is now a serious gender imbalance in the country (more than 120 boys for every 100 girls) and this has serious long-term consequences for the fertility of the population and the customs of family life.

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There's another problem. When parents have only one child, they tend to have high ambitions for him—or, occasionally, her. These millions of only children have found themselves at the center of adoring parental attention and relentless pampering. This has given rise to what's now called the "Little Emperor" syndrome. This means two things. One is that some of these children are unbearably spoilt. The second is that their parents, who bestowed so many of their hopes and ambitions on their only children, don't want them to grow up to drive buses, clear trash, or wash plates in restaurants. They want them to become lawyers, doctors, or successful business leaders. This may be good for them, but as an economic proposition for the country as a whole, it's rather dismal. Linear assumptions don't always work out where human beings are concerned. Human beings have feelings, values, motivations, and aspirations where atoms, rocks, and objects do not.

All of this points to a powerful need for new ways of thinking about, and new metaphors for, human communities and how they flourish or decay.

If you work in any kind of organization, you may have seen an organizational chart. Typically, these are comprised of boxes with people's names or functions in them and patterns of straight lines showing the hierarchy between them. Org charts tend to look like architectural drawings or diagrams of electrical circuitry. These sorts of diagrams enforce the idea that organizations are really like mechanisms, with parts that connect in certain sorts of ways.

The fact is, though, that human organizations are not at all like mechanisms. They're much more like organisms. They are made up of people driven by feelings and motives and relationships. Most people who work in organizations know that it's their relationships with the other people in it that influence their contributions and loyalty (or otherwise). Organizational charts show you the hierarchy, but they don't capture how the organization really works or what it feels like to be in it.

This is why agricultural metaphors better illuminate the growth of people and organizations. Farmers base their livelihoods on raising crops. But no matter how good they are, farmers do not make plants grow. They don't attach the roots, glue on the petals, or color the fruit. The plant grows itself. What farmers and gardeners do is provide ideal conditions for growth. Good farmers know what those conditions are and bad ones, as Rachel Carson showed us, don't.

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Long before pesticides were available, gardeners also learned that planting certain plants together would help both plants grow. This is a process called "companion planting." The plants with strong odors, such as certain flowers, will keep flying insects away so they won't harm other plants in the garden. And if a plant attracts harmful bugs it will need help from a companion or a "good neighbor" plant to ward them off.

If plants are in some way aware of and respond to each other's presence, how much more true is this of fully conscious human systems? Understanding the dynamic elements of human growth is as essential to sustaining human cultures into the future as the need to understand the ecosystems of the natural world. We need the right conditions for growth, in our schools, businesses, communities, and in our individual lives. If the conditions are right, people grow in synergy with the people around them and the environments they create. If they are poor, people protect themselves and their anxieties from neighbors and the world. Good gardeners provide the elements of growth, light, shade, rain, nutrients, and whatever else is necessary. Some of the elements of our own growth are inside us. They include the need to develop our unique natural aptitudes and personal passions. Finding and nurturing them is the surest way to ensure our growth and fulfillment as individuals.

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The crises in the worlds of nature and of human resources are connected. Jonas Salk was the pioneering scientist who developed the Salk Polio vaccine. As somebody who contracted polio in the 1950s, I feel some affinity with his life's passion. Later in his life, Salk made a provocative observation, one that addresses the two forms of climate crisis. "It's interesting to reflect," he said, "that if all the insects were to disappear from the Earth, within fifty years all others forms of life would end." He understood, as Rachel Carson did, that the insects we spend so much effort trying

to eradicate are essential threads in the intricate web of life. “But” Salk went on, “if all human beings were to disappear from the Earth within fifty years all other forms of life would flourish.”

What he meant is that we have now become the problem. Our extraordinary capacity for imagination has given rise to the most far-reaching examples of human achievement and taken us from caves to cities and from marshes to the moon. But there is a danger now that our imaginations may be failing us. We have seen far, but not far enough. We still think too narrowly and too closely about ourselves as individuals and a species, and too little about the consequences of our actions. To make the best of our time together on this small and crowded planet, we have to develop—consciously and rigorously—our powers of creativity within a different framework of human purpose. Michelangelo once said, “The greatest danger for most of us is not that our aim is too high and we miss it, but that it is too low and we reach it.” For all our futures, we need to aim high and be determined to succeed.

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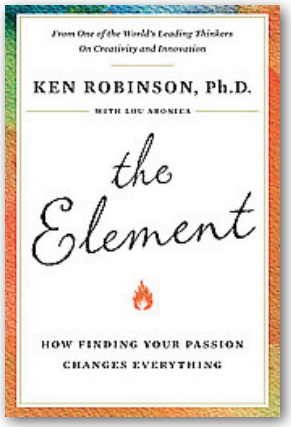

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