

A Hacker's Teleology: Sharing the Wealth of Our Shrinking Planet

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EDITOR'S NOTE: to give you a feel for the book's scope, I've assembled excerpts from each section.

Introduction

While it's natural to mourn the end of an era, no matter how unsustainable it might have been, it's energizing to enter a new era.

While we don't know the future, we do know that the previous arrangement was failing even before the global upheavals. The unearned privileges of wealthy insiders had pushed unfairness and inequality to precarious extremes, and perverse incentives pushed over-consumption and debt to equally unstable extremes. We now have an once-in-a-lifetime opportunity to launch a new arrangement that works for everyone, not just the few insiders at the top of a corrupt heap.

The previous arrangement--our *socio-economic system* for lack of a better phrase--was not sustainable, and so its demise was inevitable. To organize all of human life around the conviction that infinite growth was possible on a planet figuratively shrinking in resources was never anything but a vain fantasy. To organize the destruction of the planet in the pursuit of infinite growth so insiders could make even more money—that scheme was disconnected from reality.

The solution will not be a grand “ism” that promises a utopian perfection that ends up enslaving us all. Nor will the solution be some version of Central Planning—by its very nature, an arrangement that favors the few at the expense of the many—under some noble-sounding slogan.

The solution will be a human-scale, messy infinity of opportunity to make incremental advances, one person and one step at a time. Not every step will be a success; many will be experiments that fail, but

since we learn far more from failure than success, this pursuit of small improvements in well-being and sustainability will be a form of progress that's open to everyone.

This will require more than a new arrangement of people, capital and governance; it will require a new set of shared values and a new definition of progress.

Stripped of niceties, the old definition of success was: we must consume more, regardless of the destructive consequences, and borrow more money to pay for consuming more, because infinite growth makes everyone happy and somebody somewhere—usually someone far away—will make fantastic amounts of money.

Infinitely increasing consumption and debt was never sustainable, and consuming more didn't deliver the promised universal happiness. The corrupt values buried in this arrangement—which we can summarize as *anything goes for the rich and powerful and winner takes all*—were equally unsustainable.

These values were artfully hidden by a vision of a utopian technological wonderland where machines and computers did all the work and we luxuriated in their embrace while the few who owned the wonderland became immensely rich. This too was doomed, for it was never anything but a shinier version of *winner takes all*.

A more sustainable and humane definition of progress is: advancing well-being and sustainability in small, incremental steps with fewer resources, not more; relying not on ever-increasing debt but on increasing productive opportunities for the many rather than just for the few.

Everyone who benefited from the old broken arrangements will naturally try to restore the good old days of more consumption making a few insiders even more gloriously rich, even as the tide has turned irrevocably against them. As a result, attempts to reform the system from within will be watered down by the entrenched interests trying to reverse the tides of time. They will fail to reverse these tides, but they will easily crush any reforms that threaten their feeding trough.

To share the wealth of our shrinking planet, we need a *Hacker's Teleology*—a set of goals, tools and values that work around all the Old Guard's broken systems to reach new solutions quickly and effectively. That's the goal of this book: to propose a new arrangement that provides a sustainable wealth of opportunities for all.

The road doesn't always go where we think it will, but fortunately the lives we've led give us sufficient tools to deal with change, both in our own lives and in our global civilization. The option to *not* change no longer exists; the unsustainable era has reached its inevitable end. A new era beckons, and with what we already have in hand we can forge a more sustainable, healthier, fairer and more productive alternative.

Section One: Connecting the Dots

The blueprint for a more sustainable, productive arrangement seems obvious to me, but since many of its features are unique to my work, it's clear that this blueprint may not be as obvious to everyone else.

Each of us has a wealth of experiences that are as unique as our fingerprints. These experiences are the seeds of our understanding and insight. Though life experiences are unique to each individual, the drives and desires that generate experiences are universal to all humans: we all want to belong to something larger than ourselves, to be valued, to contribute, and to fulfill our ambitions.

Okay, Mr. Author, you ask, just how did your experiences lead to a blueprint for *sharing the wealth of a shrinking planet*? The answer comes from Steve Jobs' timeless 2005 commencement speech at

Stanford University, in which he described how seemingly unrelated experiences gave him the tools needed to launch Apple with his friend Steve Wozniak.

Jobs' point was that *each of us shares this story*: experiences that don't seem connected—successes, major flops, dead-ends, and everything in between—actually do connect up when we've assembled the experiences needed to advance. How our successes, flops and dead-ends all tie together is only visible after they connect. In Job's words, *"You can't connect the dots looking forward; you can only connect them looking backward."*

One way to understand Jobs' point is to ask: what experiences were absolutely necessary for me to advance from A to B to C? What advances *would have been impossible if I hadn't had these specific experiences*? For Jobs, one such experience was a calligraphy / typography class at Reed College, a course that appeared utterly impractical at the time but which led a decade later to the Macintosh computer's revolutionary menu of fonts.

One of the unspoken lessons of Jobs' speech is that *unconventional experiences lend themselves to unconventional solutions*. Before Jobs co-founded Apple, no one could have predicted his astounding success based on his jumble of experiences (college dropout, working in an apple orchard, etc.). Yet that jumble was, by his own account, key to his success in impossible-to-predict ways.

This runs counter to the conventional track: earn a college diploma, add an advanced professional degree, and build a career in a specialized field. Any counselor who recommended dropping out of college to assemble a jumble of unconventional experiences would be run out of town as a corruptor of youth.

There is a thread connecting all of Jobs' experiences that he didn't mention: *authenticity*. In pursuing each experience, he was being true to himself and his enthusiasms. It wasn't a random jumble, it was guided by his inner compass of what inspired him. By his own account, he wasn't tending apple trees because he had to—he loved the work and returned to the orchard when the opportunity arose.

All of us have experienced the *rightness of being true to ourselves*. Once again, Jobs' story is *our story*: none of our successes come from living someone else's life, and few advances of human endeavor come from dogmatically following conventions. Rather, advances come from people who have *no choice but to pursue their enthusiasms with unrelenting intensity*. They do this not because somebody told them to; they literally have no other choice.

Which brings us to Jobs' final point: life is short, so do you want to spend your life doing work you don't care about? In his words, *"The only way to do great work is to love what you do. Your time is limited, so don't waste it living someone else's life. Don't be trapped by dogma — which is living with the results of other people's thinking."*

Conventions and dogma don't just distract us from our true selves; they also lead to getting things completely wrong when events don't follow the conventional script.

The Global Financial Crisis of 2008-09 is a recent example of conventional dogma being a catastrophically poor guide. Virtually all the highly credentialed economic experts got it completely wrong: their models didn't reflect the financial system as it actually functioned and so they underestimated the risks of contagion. As the wildfire spread to the entire global financial system, they continued to assure the public that the fire was contained and all was well.

The conventional dogma failed, and by at least some measures, continues to fail, as the policies of the past decade haven't fixed what's broken.

Many of us outside the mainstream recognized the risks of a crash were rising. It didn't require any special expertise to reach this conclusion; those of us with real-world experience could see the system was broken, and *doing more of the same* was only increasing the risk of a breakdown.

The current arrangement—*our socio-economic-political system*—no longer works for the many; it only works for the few. It's broken, and while the mainstream holds that it can be fixed by replacing a few bits here and there and borrowing a few more trillion dollars, it's not just the rusty bits that are broken: the entire foundation is cracking apart. Even those who aren't versed in economics feel this in their bones.

Those who are doing well don't see what's broken; from their perch, *the system works for me so it must work for everyone else*. But when the foundations crack, even the wealthy and powerful will lose. The story of the foundations cracking isn't just *my story*; it's *our story*, for we all live in the same system.

You've probably guessed that my experiences haven't followed a conventional line. Most of my life can be summarized as *fools rush in*: short of training, money and mentors, I've taken longshots, pursued impractical studies, and predictably made very little money. At nineteen I received a couple hundred dollars and a rusty Volkswagen Beetle in need of an engine rebuild, and that was my total starting capital.

Here's my dot-connecting: my experiences led me to ask big questions about how we can *share the wealth of a shrinking planet* and seek big, comprehensive answers.

There's a word for the dot-connecting Steve Jobs described: *teleology*. It's a fancy word that means *where it all leads to*. It's not just a goal, it's *the destination we end up reaching because that's where the connected dots lead*.

My teleology led me to ask: is there a better way to live, one that uses Earth's resources more wisely? What about *our system* locks us into such a wasteful, precarious, perverse, unsustainable way of life? Is there an alternative arrangement that would create a more sustainable, better way of life for everyone, and if so, what would it look like?

In the context of computers, *hacker* refers to someone who breaks into a system with malicious intent. But the original meaning of a *hack* is a work-around in a kludgy system that we don't have the time or money to rebuild from scratch; hence the term *life-hack* for a handy shortcut or work-around.

So when I refer to a *hacker's teleology*, I mean a *teleology of workarounds* in a kludgy system that can't be reformed because insiders have locked it so it can't be changed. This makes perfect sense: why would those in charge risk modifying a system that's rewarded them so well?

While the experiences recounted here are part of *my story*, this book is actually about *our story*, too, for we all inhabit the same planet, and all our experiences ultimately connect to the broken system we share.

Just as there are dots connecting our life experiences, there are dots connecting the system's broken *that-grinding-doesn't-sound-good* parts, and dots connecting my experiences to my vision of an alternative way to share a shrinking planet. And just as there is a dot-connecting teleology in our own lives, the *hacker's teleology* connects the dots of *values, processes and systems*. Let's get started!

EXCERPTS from Section Two: Belonging

The old wooden gym echoed with the sound of bouncing basketballs and I glanced up at the afternoon sun filtering through the half-open windows high above the stands. Lanai's gym was 2,500 miles and a world away from the California mountain town I'd left a few weeks before, but the initial disorientation was slowly fading, thanks to being on the varsity basketball squad.

It seemed like just another practice until one of my teammates paused the drill and shouted at me in a voice that stopped me cold.

“You think you’re better than us?”

My teammate’s accusation caught me off-guard, and as he continued in the same charged tone, I flushed under the uneasy gaze of the rest of the team. I wasn’t just the only 15-year old new kid in town; I was the only rail-thin, pale, red-haired boy on the team and in the entire high school.

Desperation is not too strong a word for what I felt. Sure, the accusation was unfair, but that didn’t matter. What mattered was that I didn’t lose the good-will of my teammates. With no friends and no other way to connect with classmates, a place on the team was the one positive in my life. Perhaps only those who have been friendless and alone can understand this desperation and the great human misery of not belonging.

The practice drifted to a stop and I knew my response could save my slot on the team or end it. My teammate had never expressed any ill-will toward me before, and I was mystified what had caused him to take my shy reserve for aloof superiority. It certainly wasn’t anything I’d said, because I’d said nothing.

Though I didn’t understand what triggered his outburst, it was self-evidently related to my pale skin. As an FOB (fresh-off-the-boat) Mainland *haole*, I knew very little of Hawaii’s history, but I’d already gathered that *haoles* (*foreigner* in Hawaiian, but now the local pidgin word for Caucasians) were privileged, a legacy of Hawaii’s colonial history, a past reflected in the town’s *Haole Hill* where the plantation managers lived.

But I didn’t live on *Haole Hill*; we lived in decrepit State teacher housing, which had enough cracks around the windows to welcome every insect from fist-sized field spiders to hundreds of the little fruit beetles that fed on the plantation’s decaying pineapples.

Looking back, my teammate’s charge was more than a little ironic: here I was, the new kid in town, hyper-conscious of standing apart from my Asian-American and native-Hawaiian classmates, with no friends, struggling to comprehend the island’s pidgin English, feeling alone and lost, and I’m accused of feeling superior? And why? For being quiet because I didn’t know any other way to be? But how could my teammates know that? Maybe *haole silence = arrogance* was a reasonable assumption.

To defuse the accusation, I stammered the only defense I could think of, saying, no, I don’t think I’m superior, I’m the worst player on the team, which was stating the obvious. Though I was a few inches taller than my classmates, compared to them I was a midget in athleticism, skills and experience. I did my best to practice hard, but I had none of my teammates’ athletic abilities.

To my relief, this cooled my teammate’s ire, and the topic never came up again; eventually my teammates began joking about their *Hawaiian haole*. But the incident stayed with me because of the irony: all I wanted was to belong, while my teammates had the *privilege of belonging* without even being aware of its value. No matter how welcoming my classmates were, a new-kid-in-town *haole* would never really belong in the same way. So who was privileged? The only privilege I wanted was being accepted by my teammates.

Eight months later the school year ended and I was the only *haole* on another team, a crew of 16-year olds picking pineapples in the sweltering summer. There’s no shade in a field of pineapples, and the tropic heat blasted us until the sun mercifully set. As a swing-shift crew, we ended our shift at night, working under eerie spot lights strung on the lumbering harvesting boom and truck....

Belonging Is an Unappreciated Form of Wealth

If we ask, “why do we want to belong?,” the short answer is “humans are social animals.” But this doesn’t really explain our need to belong or the complicated nature of belonging, so let’s look at the forms of belonging that don’t even occur to us because we take them for granted.

Following Steve Jobs’ dictum that we can only connect the dots looking back, the best way to understand belonging is to look back at times when we didn’t belong, and what became possible when we did find some way to belong.

The first thing we should note is that *belonging is a privilege, not a right*. Rights are granted to everyone, but privileges are only granted to members in good standing. Rights cannot be wiped out except by legal action, but membership is a choice both for the individual and the group the individual wants to join.

The second thing is that belonging *gives us an identity* beyond what we have as an individual. We always retain our own identity, but we gain something by belonging to a team or organization that *reflects our authentic self*: our world expands, and so does our role in that world.

The third thing is that we want to belong to *something larger than ourselves*, something with a meaningful purpose, something that *we actively contribute to* so that *our contribution is valued*. To understand this, let’s go back to my intense desire to be part of the Lanai High basketball squad.

Let’s imagine that I was offered an alternative to joining the basketball team: if I shot baskets alone at home, I’d be paid \$60 a week, the same amount I earned picking pineapple on my summer job (that’s about \$450 today.)

Obviously the money would be attractive, as it could be used to buy all sorts of stuff I might want. But consider *what the money couldn’t buy*: it couldn’t buy me what I really wanted, which was a treasured spot on the basketball team, nor could it buy me a way to advance—a process we call *getting ahead*.

So I could remain lonely, disconnected, miserable, with no way to expand my world or contribute—in other words, no way to *get ahead*—and get money that could buy stuff that couldn’t possibly substitute for what I lacked: an opportunity to become a better player and be valued as a contributor to the team.

Yes, I might get better at free throws if I took the money and shot baskets alone. But this advance would have been illusory, because we only become a better player by actually playing on a team. As the Taoist philosopher Zhuangzi (also known as Chuang Tzu) noted 2,500 years ago, shooting arrows at a target in calm conditions with nothing on the line is one thing, but shooting arrows when the stakes are high and the pressure is on is another.

Not only that, but being on the team is so much more than an occasional chance to shoot a basket. Being on a team is all about discipline, hard work, sportsmanship, sacrifice and selflessness, and learning from your coach and peers. Some poor kid shooting baskets alone gets none of this. He is impoverished, no matter how much money he gets.

Although it’s not recognized as such, belonging is a form of wealth that can’t be bought with mere money. Yes, we all need money to live, but we need more than money to live, too. We need opportunities to express our authentic selves in a group where our efforts have value and our sacrifices are respected, where we can earn dignity—something that money can’t buy. As noted above, we want an opportunity to develop our best selves and find our place in the sun, where we can fulfill our talents and interests.

Looking back at my experience in Punahou, there’s a fourth thing we should note: the kid shooting baskets alone doesn’t have any competition. There’s nobody guarding him, and nobody to notice or care whether he gets better or not. As I said earlier: *expectations of excellence and open competition bring*

out the best in us. Getting “free money” as an isolated individual doesn’t give us those opportunities to excel; only belonging gives us those opportunities.

Yet opportunities to belong to something meaningful that give us ways to get ahead are not guaranteed in our economic system. At best it’s hit or miss; misfits like myself may never find anything to belong to that offers *gainful employment* (defined as paid work that benefits both the individual and the community) and when the economy slows, opportunities vanish like mist in Death Valley. At worst, the system squanders human talent and resources that could have been put to better use, and leaves millions miserable in dead-end jobs with no way to get ahead. Why do we tolerate such a wasteful, ineffective system?

This raises a question few ask: what if we designed a workaround (i.e. a *hacker’s teleology*) that guaranteed everyone opportunities to belong to something purposeful as well as *gainful employment*—i.e. a pathway to *get ahead*?

This raises another question few ask: what if all work that *created value* was paid, rather than just the work that made someone a profit or what the government saw fit to pay for? In other words, what if we had a system that guaranteed everyone opportunities to belong to something purposeful that offered every participant gainful employment?

What would that system look like if it was a *workaround* to the wasteful hit-or-miss system we have now?

Belonging, Being Rooted, Being Yourself

There’s one more important point about the value of belonging that few (if any) seem to understand. When you feel that you belong, I mean really belong in the sense that it feels right, you feel *rooted* in the place and the organization: it all feels right because you’re being valued for *who you really are*, rather than being little more than an interchangeable human robot.

Psychologist Eric Fromm concluded that feeling rooted was essential to human happiness and fulfillment. We tend to associate this sense of being rooted with having deep ties to a place where your family has lived for generations. This is certainly one important kind of rootedness, but the kind I’m describing here isn’t dependent on a long history in one place; it’s feeling rooted in a group because you’re contributing something of your real self which is valued by other members.

In other words, we feel rooted when we belong to something creating real value in the real world—a measurable kind of value—and when we’re expressing something of our best self that *advances* the group’s work and our own development—what I’m calling *getting ahead*.

What’s important is that the positive feelings of belonging, being rooted and being yourself benefit both the individual, who feels happy being valued while making progress in their own lives, and the group, which is far more productive than organizations filled with interchangeable human robots who feel miserable because they’re not valued and they’re not getting ahead.

When we find something to belong to, we experience a feeling of fulfillment which isn’t created by “free money” (the kid paid to shoot baskets alone) or a dead-end job. Contributing to something good (and maybe even something great) creates so much more value than being little more than interchangeable human robots doing dead-end work.

There’s one final point to emphasize: *money is not a substitute for belonging and rootedness.* We tell ourselves the money is what matters because the emptiness of our work is too painful to dwell on. But just as the money paid to the kid shooting baskets alone is no substitute for belonging to a team, just making money—even lots of money—cannot create the happiness and fulfillment of being valued for what we contribute.

Why should we settle for a system with so few opportunities to belong, when belonging and being rooted generate much greater human happiness and more productive organizations?

As we set out to design a system that's sole purpose is to create these opportunities for everyone, let's first envision what it would look like.

EXCERPTS from Section Three: Getting Ahead

At 70 years of age, Colin Bell was a very old man to a 20-year old like me. Short, stocky, balding and sporting a gray goatee, Colin looked distinguished, an impression strengthened once he spoke, for his clipped English accent remained despite living in the U.S. since the end of World War II, and his voice expressed his warmth and infectious enthusiasm for life. Measured in liveliness, Colin was still young. As an English Quaker and active member of the faith's "action organization," The Friends Service Committee, Colin had volunteered to be an ambulance driver in World War II and in 1943 had made his way to war-torn China to head up a surgical team in an ambulance unit.

The Friends did not differentiate between combatants; they pursued the Christian ideal of alleviating the suffering of civilians and combatants alike. In the course of his service in China, Colin had met Chou En-Lai and other future leaders of the People's Republic of China when they were a ragged band of Communist insurgents. But more remarkable than his brushes with the future leaders of China was his survival in extremely dangerous conditions: disease took as heavy a toll as bullets.

Given his adventurous life and valorous service to Christian ideals, it was a given that I was in awe of Colin. While many of us professed these ideals, he'd actually lived them, willingly accepting danger and hardship. This was my own ideal: not to just study the world in a classroom or watch from the sidelines, but to take action.

As a newly minted subcommittee chair in the Honolulu branch of the American Friends Service Committee (AFSC), I was supposed to be early for the meeting, which was held in the old open-air carport of the Friends' meeting house in Manoa valley. A cramped white-painted room at the back of the carport served as the AFSC office, with just enough space for the director's desk (big title, poverty-level pay) and a few filing cabinets. Everyone else was a volunteer like me.

But I wasn't early, or even on time. I was late, and not by just a few minutes. The annoyed expressions of the other committee members telegraphed their displeasure with my irresponsibility, and I tried to dissipate the dour mood with a half-hearted joke about it being OK to be late sometimes.

To my mortified surprise, Colin ripped me up one side and down the other. No, it was not OK to be late, it was never OK to keep other members waiting. I'd never seen him angry, for it took a lot to burn through his amiable persona, and I reddened with shame under his dressing down. My cavalier attitude incensed Colin because I wasn't taking my work at AFSC seriously, and the work was worthy of the utmost seriousness and dedication. It wasn't acceptable to waste the precious time of other volunteers, and there was no excuse for my tardiness.

Thoroughly chastened, I mumbled an apology and started the meeting. Without even being aware of it, I'd set my work at AFSC—and yes, it was work, in every sense of the word—in a different category than my construction job because one was paid and the other was not. Since I wasn't being paid, I was cavalier about my responsibilities at AFSC.

Colin did me a great favor by breaking down that assumption. Unpaid work is just as important as paid work, even though we don't measure it in dollars. Purposeful work is valuable, whether it's paid or not. There is no difference in the positive results of good work, paid or unpaid.

Looking back, I realize that Colin’s mentoring was not just in the practicalities of running meetings and organizing projects, but in *the moral foundations of belonging and work*: there is a moral obligation to treat all purposeful work seriously, with the utmost dedication, whether you are paid or not. If your commitment to the team or group is half-hearted, you’ve let everyone down—including yourself.

Operational and Hands-On Mastery

Imagine entering a café with sidewalk tables for lunch. The white-apron-clad waiter welcomes you, and after taking your seat you glance over the counter at the chef and her staff’s fast-paced ballet of preparing meals.

While the chef is the natural focus of activity, preparing meals is only part of what it takes to run a restaurant. The other half is managing everything else that’s needed to keep the doors open: supervising and scheduling staff, ordering supplies, paying rent, utilities, insurance, etc., managing advertising, meeting with your accountant, paying taxes, arranging a cleaning service, and a hundred other managerial tasks.

The person in the kitchen has to know how to prepare what customers come for—delicious, attractive meals—and do so with a minimum of wasted motion, starting with the prep hours before the first customer is seated. This requires mastery of the *hands-on, nitty-gritty* of cooking for crowds.

But this mastery doesn’t automatically translate into *operational* mastery—running the restaurant behind the scenes. The person with the skills to operate such a complex business may not know the first thing about running the kitchen, since these two skillsets are completely different.

Good cooks are accustomed to hearing “you should open a restaurant,” as if cooking skills are what matters and everything else will just fall into place. Experienced chefs know that being a good cook is only half of the mastery needed to operate a restaurant—without operational skills, the new restaurant faces a fatal headwind.

Imagine watching a house being built. While the roofers are nailing down shingles, plumbers are installing pipes and carpenters are nailing on siding. The skills each worker needs to complete the tasks are visibly *hands-on*. Less visible are the skills required to organize and manage the onsite choreography: submitting bids, drawing up material lists, conferring with the architect, arranging for building inspections, paying all the bills, overseeing the bookkeeping, scheduling subcontractors and so on in an endless tangle of tasks, each as critical to the construction of the home as the carpenter steadying a board and driving a nail.

The carpenter who knows how to build a house doesn’t automatically have the experience to be a general contractor, and the manager running the company might have few hands-on skills: the nitty-gritty skills are completely different from the operational skills.

In observing my bosses Denny and Dan, I learned a few things about being a contractor, but I was woefully unprepared for running such a complex, demanding enterprise despite my hunger to learn. Gaining mastery of operational and nitty-gritty skills takes a long time. Both require learning from seemingly endless mistakes and painful failures. Formal training (Masters of Business Administration, etc.) can provide a structure for this learning, but there’s no substitute for real-world experience.

Gaining Agency

There is one more important component of getting ahead: gaining control over one’s life, and power over one’s circumstances. The fancy word for this is *agency*. To have agency is to control one’s circumstances. To have agency, one must accept responsibility, what many now call *ownership*, of one’s

choices, labor and skills. Rather than being helplessly swept along by river currents, individuals with agency grab the oars and steer toward their own personal destination.

When you're desperate for work because you need the money, you overlook all the warning signs that things could turn out badly.

Here's my own personal example of this:

Shortly after securing the loan to finish my first building project, I set out to find some paying work so I could make the loan payments. Due to fast-rising inflation, interest rates were shooting higher, strangling the interest-sensitive sectors of auto sales and housing. There just wasn't much building going on, and I came up empty after visiting every house under construction in town.

I got a job offer from a contractor who had *fly-by-night* written all over him. He had no office or regular crew, and had a .32 automatic in his briefcase; if everything is on the up and up, why would this guy need a pistol in his briefcase? He had a contract for a two-story house, and he offered me a lump-sum payment for hanging the drywall and doing the finish carpentry—installing the doors, trim and cabinetry. With no other prospects, I swallowed my doubts and took the subcontracting job.

Although the contractor claimed he'd submitted my invoices for payment by the bonding company—the lumber yard that disbursed the funds from the bank as construction proceeded—I never got a payment, and Mr. Fly-by-Night disconnected his phone and flew the coop.

Stiffed for a month's labor, I vowed to escape the powerlessness of being dependent on others for work—and for fair payment. I decided to get my general contractor's license so I could bid on projects and have some control over my work and income. In other words, I decided to acquire *agency*—ownership of my work and circumstances.

Agency is rarely free. It takes enormous effort to choose a destination and row toward it, especially if the currents are fighting you. In my case, gaining ownership required starting a business and getting everything that was required to obtain the license: renting an office in a commercial area, paying for liability, disability and workers compensation insurance, and posting a bond to guarantee any projects I abandoned would be completed. I also had to open up accounts to pay estimated federal and state taxes.

None of this effort and expense guaranteed me a single dollar of income; it was all a costly, time-consuming gamble that I could find people who wanted me to build their house even as the economy slid into recession.

It was a crazy bet, far too risky given the poor economic backdrop and my inexperience in handling the financial pressures as the contractor who had to front the money to get the project to the point where a partial payment would be released by the bank. But since I'd tasted the bitter fruits of powerlessness, I was willing to accept the risks to gain agency.

There is always risk in trying something new and taking responsibility for one's life. But not everyone who wants ownership/agency can afford to take such risks - and getting ahead shouldn't require such enormous gambles.

As a result, it's apparent that one major requirement of our alternative system is that it must be easy for every member to gain agency without betting the farm. All members should be able quit a project in favor of another one, or start their own project with a minimum of effort and zero money.

EXCERPTS from Section Five: How Money Is Created and Distributed

How Banks Create Money

There's an old joke about bankers. As the loan applicant is about to enter the bank manager's office, a friendly employee offered a helpful suggestion: the manager has a glass eye, and it's imperative that you look at his good eye. The applicant asks, "How can I tell the glass eye from the good eye?" The employee replies, "The glass eye has a twinkle of warmth."

As I drove through Waimea's morning mist to my appointment with the branch manager of the First Hawaiian Bank, I wasn't thinking of banker jokes; my thoughts were of windows: the driver-side window in my old VW Beetle, which had slipped down into the door panel due to the crank mechanism rusting out, and the window openings in my half-built house that were covered with stapled sheets of plastic that flapped loudly in the wind at night.

Since I'd sunk every dollar into my first building project, there was no money to get the VW's window fixed or to buy windows for the half-finished house. I needed a chunk of cash to get it done and I didn't have it. Yes, I was doing small construction jobs to earn money, but at this rate I'd be gray-haired by the time I had enough cash to complete the house, which at that time had only a roof, a kitchen sink, a barebones bathroom and little else. The floor was bare plywood, the interior walls were unpainted drywall, and our furniture consisted of a cheap folding futon bed and a peeling wood-frame sofa donated by a neighbor.

A conventional mortgage was out of the question because borrowers needed a regular full-time job to qualify. My only hope was to convince my local banker that I could finish the house with a personal loan and somehow pay it back despite being only marginally employed. It was a tall order, since I was all of 26, as green as the grass covering the wind-swept hills, had no credentials other than a degree in philosophy (try getting a loan based on that!) and a half-finished house that nobody in their right mind would put much value on. People generally want finished houses, not half-finished ones.

This was my first contact with banking, and my focus was on getting the loan, not on *where the money comes from*. That would come later, when the housing bubble in the early 2000s expanded to previously unimaginable heights. That's when I learned the funny thing about *money*: everybody's interested in getting more of it, but when you start talking about how *money is created*, their eyes glaze over, as if *where money comes from* is the most boring topic on Earth. But it shouldn't be, since it has everything to do with who gets the money (banks, financiers and corporations) and who doesn't (the rest of us), and who gets rich as a result of this system (not us).

Let's imagine a special black box with near-magical powers: it prints real money, not counterfeit bills, but real honest-to-goodness U.S. dollars. You hook it up to a computer, it creates dollars out of thin air and deposits them in your bank account.

Wait, you say; there must be a catch. You're right, there is: you can't spend any of the newly created cash, but if you buy a government bond that pays interest, you get to spend the interest.

So you create \$1 million out of thin air and buy bonds that pay 3% interest. Now you're getting \$30,000 a year for doing absolutely nothing. Definitely a sweet deal, but why not create more money and earn even more? So you create another \$99 million, and now you're earning \$3 million a year for doing nothing other than having the magic black box.

That's how money is created in our financial system.

No way, you exclaim; you're joking, right? No, that's exactly how the Federal Reserve, a.k.a. The Fed, our privately owned, quasi-public central bank, creates money out of thin air. All central banks create their currencies in the same way, and they use the new money to buy bonds and other assets.

The Federal Reserve's black box digitally printed \$3.5 trillion after the global financial crisis of 2008-09, and bought \$2 trillion in U.S. Treasury bonds and \$1.5 trillion in mortgage-backed securities, i.e.

batches of home mortgages. They created about \$10,600 out of thin air for each and every one of us 330 million Americans.

You didn't get a check for \$10,600 from the Federal Reserve. This newly issued money didn't go to individual Americans. It bailed out the banks and wealthy financiers whose frauds had torpedoed the U.S. economy. (Federal Reserve spokespeople denied this, of course, but it would hardly do to admit to the unfairness of our money system, the corruption of our financial elite or the Fed's role in bailing them out.)

But that's just central banks, you say; private banks can't create money out of thin air. Actually, they do. Here's how it works....

Excerpt from Section Six: Price and Profit on a Finite Planet

The global economy has two incentives: price and profit. Everyone wants the lowest price and the biggest profit for any activity or transaction. As a result of these incentives, price and profit are what's *optimized*: every part of the global system, no matter how small, is fine-tuned to reach the lowest price of production and maximize profit for the owners. On the global scale, everything that doesn't serve these two goals is ruthlessly eliminated or ignored. (Do-gooder non-profits don't change this optimization; as worthy as their efforts might be, they are background noise in the global economy.)

But is every cost included in the calculation of price and profit? Or does the system leave out the costs that might raise prices and lower profits?

What Goes Into the Price?

After experiencing all the tropical wonders we'd anticipated enjoying on the island off the coast of Thailand—lush forests, white-sand beaches and ripe fruit—the hellish wasteland we next wandered through was a completely unexpected shock. After several days of guiding us around his home island, our Thai friend and host B.K. had taken us down a dirt pathway from his mother's house, not far from the coastline.

Before reaching the shore, we emerged in a sun-blasted clearing stripped of the tropical jungle that covered the rest of the island. This eerily lifeless dead-zone was pockmarked with what looked like enormous bomb craters, huge round holes sunk deep into the earth that were partially filled with dark, stagnant water. Nothing grew in the black water, and the air was tainted with the stench of rot and death. To accidentally fall into one of these steep-sided black-water craters was the stuff of nightmares.

The scene looked like a warzone where defoliants had killed all the plant life and a B-52 bomber raid had left a broken landscape of giant craters that had filled with poisoned water.

But no, this was the consequence of global commerce maximizing profits. Our friend explained that these round ponds had been dug to raise shrimp for sale overseas. To keep bacteria and unwanted plant life at bay, each pond had been liberally dosed with antibiotics, pesticides and herbicides while a motorized circular blade kept the toxic brew aerated so the shrimp could survive. After a few harvests, the ponds were too toxic for further use and so they were simply abandoned.

I asked, "What happens to them now?" and our friend just shrugged. There was no plan to fill in the ponds or restore the landscape, and apparently no accountability for the damage done.

Is the cost of this wasteland included in the price of the bag of frozen Thai shrimp we buy at the supermarket? No. Our global economic system only prices in production costs at the *point of purchase*, i.e. the supermarket checkout. Production costs included: excavating the ponds, the labor and materials needed to raise the shrimp and then harvest and transport them to distant markets around the world.

All other costs—the unknown effects of the toxic brew on the nutritional value of the shrimp, the costs of cleanup and restoration of the damaged ecosystem—were not even measured, much less included in the retail price.

The same can be said for many other commercial pursuits of maximizing profits. As an example, minerals are mined, destroying the landscape, and a thin layer of polluted soil is spread over the ravaged earth as “restoration.” The enormous quantities of water needed to extract lithium for our smartphone batteries is pilfered from agricultural aquifers, destroying agriculture and rural livelihoods around the lithium mines.

All this damage is terribly expensive to remedy, and yet there’s no money in the retail price for any of what economists call *external costs*, everything that is outside the production expenses.

Tobacco offers another good example. The cost of a pack of cigarettes is based not on the long-term costs of smoking but solely on the cost of packaging the tobacco into cigarettes and marketing them. A healthy profit is of course added on top of all production costs.

Let’s do the cigarette math. The point-of-purchase price of smoking two packs of cigarettes a day for 20 years is about \$73,000: 365 days/year X 20 years X 2 packs (14,600) X cost per pack (\$5 each) equals \$73,000. For one person.

But the full price of that person's 20 years of addiction to nicotine might total over \$1 million in treatments for lung cancer and heart disease, and the reduction in life span and productivity of the smoker. (The costs of secondhand smoke and emotional losses of those who lose a loved one to a painful early death is difficult to assign an economic value but it is very real.)

If the full costs of the nicotine addiction were included at the point-of-purchase, each pack of cigarettes would cost about \$70 ($\$1,000,000/14,600$). Very few people could afford a habit that costs \$140 per day (\$51,000 per year).

No wonder corporations are loathe to include external and lifecycle costs in their products. If the full costs were included, the products would no longer be affordable.

If the full lifecycle and external costs of the shrimp-farming and lithium mining were included in the price of the bag of shrimp and the lithium-ion batteries, the price would be much higher, perhaps prohibitively higher.

The costs don’t disappear just because they’re not included in the price. The costs have been dumped on those who don’t have the power to pass the costs on to the companies reaping the profits and the consumers enjoying the products.

Once you’ve stood in the hellish landscapes left by those who scooped the profits and then left, the comfortable illusion that the retail price covers all costs is lost forever. You realize we’re only paying for a fraction of the real costs of the products and services we consume. Those costs are paid by future generations and by the residents and laborers who lacked the power to pass the real costs onto the producers and consumers.

Is this a fair and sustainable way of living? No.

The problem of what we don’t measure and don’t include in the price is at the very heart of our global economic system: we don’t measure all the costs, and we ignore what’s valuable if it can’t be measured in dollars. This blinds us to what’s actually valuable and the real costs of our way of living.

As author Daniel Yankelovich observed in 1972 (*Corporate Priorities: A continuing study of the new demands on business*):

1. *The first step is to measure whatever can be easily measured. This is OK as far as it goes.*
2. *The second step is to disregard that which can't be easily measured or to give it an arbitrary quantitative value. This is artificial and misleading.*

3. *The third step is to presume that what can't be measured easily really isn't important. This is blindness.*
4. *The fourth step is to say that what can't be easily measured really doesn't exist. This is suicide.*

This describes the problem with measuring cost and wealth only in money: we presume that what can't be easily measured (such as external costs) isn't important, when it may actually be more important than whatever *can* be measured in dollars. Even worse, since we don't even recognize many costs, they simply don't exist in our narratives of how the world works.

Believing what can't be easily measured doesn't exist is willful blindness, and that's suicidal.

What's Being Optimized?

I'd never given much thought to the tomatoes on supermarket shelves or in spaghetti sauce until I saw all the tomatoes scattered over the side of the road in a remote stretch of California's Central Valley.

It was a hot, dusty, late-summer day, and we were driving on a two-lane country road through the vast farming flatlands, heading for a rural county fair. Big flatbed trucks were hauling huge bins of freshly harvested tomatoes, and the tomatoes were piled so high that when the trucks encountered a curve in the narrow road, some of the tomatoes on the top of the pile spilled off the truck onto the pavement and gravel shoulder.

The sheer quantity of tomatoes scattered around the bend caught our attention, and I stopped to see if any hadn't been smashed to a pulp by their fall. As a longtime gardener, I reckoned the odds were low that any of the tomatoes had survived such punishment.

To my astonishment, the tomatoes were mostly undamaged. They didn't look any different than the Roma tomatoes on supermarket shelves. They weren't smashed or even bruised. After dousing one with water, I cut it into slices with my pocket knife and tasted it: not much taste. As an experiment, we gathered up a handful of the fallen tomatoes to take home and let ripen, reckoning they'd taste better in a day or two.

The tomatoes sat on our tiled kitchen counter day after day, still as firm as when I'd collected them off the gravel and still as bland. In the time that a garden-raised tomato would have rotted into a mess, these tomatoes were still unblemished and still as tasteless as damp cardboard.

It finally dawned on me that these tomatoes had been hybridized to look like a garden-raised tomato after being shipped over long distances, at the cost of garden-fresh taste. To survive handling and long truck routes to distant markets and factories, these tomatoes had been *optimized* for hardiness and durability. There's always tradeoffs in hybridization, and what had been sacrificed was taste. These tomatoes had been optimized to look good, not taste good.

Looking out at the vast landscape of bare fields, already stripped of the tomato vines, I had to wonder if the nutritional value of the fruit had been sacrificed, too. Could something that could fall off a truck and taste like damp cardboard still be as nutritious as a traditional tomato? It was an open question without any easy answer. Sometimes what's been sacrificed isn't visible.

That's the problem with *optimization*: what's been sacrificed isn't visible because the product or service has been engineered to look good on the surface. We see a shiny red tomato, but we don't see that this tomato was *optimized* to look good as an industrial product. In an industrial economy, taste is a luxury. What's profitable is produce that survives long distances with minimal losses to handling....

Excerpt from Section Seven: Fairness

I'd had a previous lesson on the complexities of bias and fairness when I was 14 and my mom and stepfather Jim took us to Detroit for the summer so he could earn a master's degree at Wayne State University.

Jim rented us a flat in a house owned by Armenian immigrants in the Highland Park neighborhood. In 1968, this was an African-American neighborhood, lock, stock and barrel. There were no Caucasians other than our Armenian landlords and their adult son. Latino, Asian and Arab residents had not yet migrated to Detroit in any significant numbers. We were the only Caucasian kids in the neighborhood.

My oldest sister Christine started working at a temp agency. My sister Connie was still too young to work. My 10-year old brother and I were worried about how we'd be treated by the neighborhood kids. Our curiosity was answered on the second day, when some boys yelled an invitation to come down and join them setting off some fire crackers. This sounded fun and the invitation seemed sincere, so we went down and lit some firecrackers. I think the neighborhood boys were as curious about us as we were about them.

Detroit had been shredded by large-scale riots the previous year, and we were naturally wary in an unfamiliar city and neighborhood where we stuck out like sore thumbs. On top of that, we were scrawny, slightly built kids. But the only sirens we heard were on the freeway a few hundred feet from our rental; the neighborhood felt unthreatening.

Soon we were walking under the freeway and the few blocks needed to reach the classic brick YMCA on Woodward Avenue. I was fascinated by the huge indoor gym with multiple basketball hoops and the wooden track that circled the gym above the court, which was tilted in the corners like a racetrack. I joined pickup basketball games with older guys, and nobody harassed or shunned me or treated me any differently as far as I could tell. If there were any other Caucasian kids around the Y, I never saw them. I went there to play hoops and run around the track, just like everyone else, and I felt accepted as just another kid who wanted to join a pick-up game. In a short time, it was normal to see African-American faces and strange to see Anglo faces.

A 14-year old Anglo outsider could never understand the experiences of the African-American residents of Highland Park. But even the 14-year old could sense the neighborhood's *social cohesion* that provided some respite from the institutional racism of the world outside. The neighborhood wasn't torn by conflicts; it felt cohesive and predictable, and I was grateful that a vulnerable outsider like me could walk to the YMCA and join some community sports in a live-and-let-live atmosphere.

I would walk past the nearby church on Sundays and hear the congregation's rousing hymns, and wish I could experience the service, obviously so much more exciting than the staid, low-key Presbyterian services I was accustomed to, but I wouldn't have dreamed of approaching the sanctuary without an invitation, out of respect as an outsider.

Let's face it, humans are prone to biased categorizations that are unfair to individuals, and human-led institutions are thus prone to treating individuals unfairly. We've now set all sorts of policies and goals to eliminate bias, but does anyone think any institution has been freed of bias because of these rules and goals? They've helped, yes, but is there some other more effective way to reduce or even eliminate bias?

If so, how do we design our alternative system to eliminate as much human bias as possible?

Excerpt from Section Eight: A Sustainable Alternative

CLIME's AI: Level the Playing Field, Empower Every CLIME Group

As I explained before, the larger purpose of CLIME's use of AI isn't to make trillion-dollar corporations even more powerful; instead its purpose is to level the playing field by eliminating privilege, treating every individual equally and providing equal access to technological tools for all CLIME members.

This is of course anathema to corporations seeking monopolies in robotics and AI. Socially useful activity has no value whatsoever in their mad rush to maximize profits by any means available.

We must also ask: when was it ordained that humans must bow down to profit-maximizing corporations' view of how technology should be used? When did we forget that humans don't have to obey the supposed dictates of technology? If technology lessens the risks of dangerous work and improves productivity, then there's certainly room for humans to work with technology. But the techno-fantasy of a workless world of leisure is one of implicit servitude to technology and those who own it, as if we have no choice in the matter.

For any number of reasons, we might choose to limit the uses of robotics and AI. Adopting robotics and AI is a matter of choice, with a great many factors to consider. Yet to the techno-fantasy true believers, humans are nothing more than consumers of technologies owned by Big Tech monopolies, consumers who will gladly trade positive social roles for the meaningless, purposeless wasteland of over-consumption.

The AI in CLIME will create income, power and equality for the many rather than profits and privileges for the few. Rather than being owned by secretive monopolies, the AI tools of CLIME will be open source and owned by the membership, for the benefit of the membership and the greater world beyond. How each CLIME group makes use of technology is up to the members; the priority isn't maximizing profits and consumption but *doing more with less* (Degrowth) in pursuit of socially useful activity, i.e. *sharing the wealth of a shrinking planet....*

An Imaginary Journey into CLIME

To get a better sense of how CLIME would work in the real world, let's imagine that CLIME is up and running, and I'm joining the system for the first time. I don't mean an imaginary individual, I mean me, the author of this book that you've come to know through my personal history.

The idea here is to give you a taste of the day-to-day experience of working in the CLIME system. There is no way I can provide a detailed account in this snapshot; it required almost 50 pages in my book *A Radically Beneficial World* just to outline the system.

The first thing you'll notice is that even though I'm the creator of the system, I don't get any special privileges. I don't control the wealth of the system or its governance. I'm just like everyone else joining the system, because CLIME has no space for privilege—even for its founder.

Here's my imagined first day in CLIME...

Thank you for reading these excerpts from *A Hacker's Teleology*. As an independent writer, book sales are a substantial part of my income. I receive no funding from a trust fund, university, foundation, think-tank or government agency. Thank you for throwing caution and rationality to the winds and buying my book. Here is the link:

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