

TESTIMONIALS FOR

JOURNEY TO THE FUTURE

“Guy Dauncey has written an imaginative *tour de force*, blending science, philosophy, and fiction into a delightful story about how we can and must change the world, resulting in a bright green future.”

~ David R. Boyd, co-chair of Vancouver’s Greenest City initiative and author of *The Optimistic Environmentalist*

“For those of us who have a hard time making sense of the present, much less the future, Guy Dauncey has delivered a most satisfying, visionary, and practical remedy. Woven into story form that engages from the start, his newest work reveals an entirely possible destiny of justice, shared intention, and sustainable everything. As a fusion of Dauncey’s vast experience, knowledge, and prodigious energy, this story is a fascinating portrayal of how we can live if we simply do what we already know can be done. Best of all, it’s thrilling to read!”

~ Mark Lakeman, founder, The City Repair Project, Portland

“You really have to read *Journey to the Future* twice. Once in paper for the great narrative and once electronically where you can click on every footnote for the amazing amount of research and information on which every detail of the narrative is based. By the time the second read is done you will have all the education that you need to go forth and make it happen.”

~ Martin Golder, architect and mediator

“To create a better world we must first be able to imagine what such a world would be like. In *Journey to the Future*, Guy Dauncey embraces that task and presents an ambitious, detailed vision for a greener, fairer and very inviting world.”

~ Andrew MacLeod, author of *A Better Place On Earth: The Search for Fairness in Super Unequal British Columbia*

“Guy Dauncey has done it again. *Journey to the Future: A Better World is Possible* takes us to a thriving Vancouver in the year 2032. Using dialogue among characters proves a remarkably accessible way to demonstrate how a new, cooperative economy can emerge. The author’s unfailingly positive vision of democratic reform and sustainability is infectious. Richly footnoted and complete with many sources for future research, this ‘practical utopian’ has equipped us with the tools to achieve a better world. Richly detailed—an amazing *tour de force*.”

~ Murray Rankin, Member of Parliament for Victoria

“*Journey to the Future* is a creative book that will leave you full of ideas and hope. Guy Dauncey has produced a progressive *tour de force* unlike any book that I have ever read. Part creative fiction, part manifesto for the world we want and need, this book is an inspiration.”

~ Tzeborah Berman, environmental activist, author of *This Crazy Time*

“Guy Dauncey has done it again: married hope and practical reality. Most of us see obstacles; Guy sees possibilities. This is a must-read for despairing sustainability champions. Guy paints an inspiring vision of a sustainable future and shows us how we got there. Brilliant!!”

~ Bob Willard, author and speaker, *Sustainability Advantage*TM

“We need bold, visionary thinking to build a sustainable society for the common good. But we also urgently need to explore practicable steps to achieve that goal. Guy Dauncey’s new book makes an important contribution to both tasks.”

~ Caroline Lucas, MP, Green Party Leader, England & Wales

“Our species’ big brain endowed us with foresight, an ability to use our knowledge and experience to avoid dangers and exploit opportunities. Today, with all of our amplified predictive ability of scientists and supercomputers, we are blinkered by immediate issues dictated by politics and economics. Guy Dauncey’s brilliant book shows there are solutions to the climate crisis that offer a future rich in opportunity and joy. All we need is to make a commitment to act.”

~ David Suzuki, scientist, environmental activist and broadcaster

“In the tradition of Edward Bellamy’s *Looking Backward*, or Butler’s *Erewhon*, here’s a full blown and provocative account of a world we might choose.”

~ Bill McKibben, 350.org

“In making our way from where we are to where we need to be, advice from the future would be helpful. A dystopian future world might warn us what to avoid. A more utopian society could give us hope. Somewhere between the two, from future conflicts, revolution and war to a sustainable society is where Guy Dauncey charts us in his novel *Journey to the Future*. It is at one and the same time a great yarn and a call to action.”

~ Elizabeth May, MP, Leader of Canada’s Green Party

“A marvelous read, a modern-day Ecotopia.”

~ Thom Hartmann, author and radio host

“This unique book will surely inspire hope and action for a better world.”

~ Michael Marien, futurist, Global Foresight Books

“*Journey to the Future* is a wonderful way to get motivated by the real possibilities confronting us today. Put away your doubts as you follow the entertaining characters who take you into their better future and come away with loads of ideas for making it happen where you are! Helps us start living the future we dream of right now!”

~ Elisabet Sahtouris, evolution biologist and futurist

“This is a practical and fantastic guide to lead us forward to a peaceful future. Truly greenspirational. Jam packed with brilliant ideas that are do-able and attractive. Let’s get to building this vision!”

~ Angela Bischoff, 100% renewable energy organizer, Toronto

“Guy Dauncey is well known as a futurist and environmental activist but he is also a darn good educator for the possibilities for sustainability on this planet. He has encyclopedic knowledge and the educator’s ability to make it accessible. And, despite being frank about the dire environmental issues we face, he frames them within the possibility of hope with real and imagined examples and suggestions for making a difference. As a former director of the Carnegie Community Centre at Main and Hastings in Vancouver, it is fascinating for me to read about what this humanly rich and hugely challenged community might look like if the sustainability practices in Dauncey’s future world were implemented. It illustrates what can be done wherever we live, and what is on the horizon for a sustainable world.”

~ Michael Clague, community educator and social planner

“While technically a work of speculative fiction, Guy Dauncey’s *Journey to the Future* is firmly rooted in present realities. His prodigious research and astute analysis stimulates our thinking about global problems and possible solutions. But this is much more than a book of ideas. Readers following Patrick Wu’s journey of discovery will experience a rollercoaster of emotions—from outrage, pessimism and doubt to hope and motivation. Whether or not we agree with everything Dauncey proposes, he leads us confidently towards a hopeful future, but with a keener appreciation of our chances for survival. If only our political leaders would read this immensely important book.”

~ Marshall Soules, author of *Media, Persuasion and Propaganda*

“Guy Dauncey is an eco-hero whose enthusiasm for climate change solutions is infectious. Through remarkable creativity, Guy provides the reader with a glimpse into a plausible future that is vibrant, positive and joyful, while offering workable solutions to the major crises of our time. We owe Guy a debt of gratitude for his compelling narrative that fills us with hope and inspiration for a better future.”

~ Andrew Weaver, MLA, climate scientist and author

*They say we can't do it, can't fix it or grow it,
Can't change the world, kiddo, what makes you not know it?
But we've got no ears for your know-nothing blow-it,
We'll change this world ten times before you can throw it.
For this is our now time, not do the fuck-all time
We're done with your moaning and dying delays.
We say live! Live again! For it's change the world now-time
So kiss me and celebrate, show me your ways.
Kiss me and celebrate, change-the-world, elevate
Elevate higher than dirt-streets and mire
Elevate up where the highest hopes reelevate
Kiss me and celebrate, change the world now.*

ALSO BY GUY DAUNCEY

The Unemployment Handbook

Nice Work If You Can Get It:

How to be Positive about Unemployment

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The Emergence of the Rainbow Economy

Earthfuture:

Stories from a Sustainable World

Stormy Weather:

101 Solutions to Global Climate Change

Enough Blood Shed:

101 Solutions to Violence, Terror and War

(with Dr. Mary-Wynne Ashford)

Cancer: 101 Solutions to a Preventable Epidemic

(with Liz Armstrong and Anne Wordsworth)

Building an Ark:

101 Solutions to Animal Suffering

(with Ethan Smith)

The Climate Challenge:

101 Solutions to Global Warming

The Earth Anthem (We Are One)

A Modern Alphabet (poem)

ABOUT GUY DAUNCEY

Guy Dauncey is a futurist who works to develop a positive vision of a sustainable future and to translate that vision into action. He is founder of the BC Sustainable Energy Association, and the author or co-author of ten books, including the award-winning *Cancer: 101 Solutions to a Preventable Epidemic* and *The Climate Challenge: 101 Solutions to Global Warming*. He is an Honorary Member of the Planning Institute of BC, a Fellow of the Findhorn Foundation in Scotland, and a powerful motivational speaker. His websites are www.earthfuture.com and www.thepracticalutopian.ca. You can also find him on Facebook and Twitter.

SYNOPSIS

In futurist Guy Dauncey's engaging ecotopian novel, young Patrick Wu journeys to a future world brimming with innovation and hope, where the climate crisis is being tackled, the solar revolution is underway, and a new economy is taking shape. Yet enormous dangers still lurk.

Patrick has returned to Vancouver after spending his youth in Sudan, where his parents worked with refugees. After becoming deeply concerned by the state of world and prospects for its future, he finds himself time-shifted to Vancouver in the year 2032, by when it has become one of the world's greenest cities.

For four days he explores the city, interviewing people, asking a host of questions. How does a modern metropolis operate without fossil fuels? How are poverty, homelessness and affordable housing being tackled? What gave people the belief that they could change the world?

He visits a flourishing farm, discovers how healthcare and education have changed, spends time in a low-income part of the city, attends a Friday evening Song of the Universe, and learns how a new cooperative economy is being built while capitalism itself is morphing into something quite different. Politics and democracy are changing too, thanks to a popular uprising known as the OMEGA Days.

The answers he receives are practical and detailed, and give him hope for a future that can actually be achieved. Although Vancouver in 2032 is vibrant and happy, its people are still troubled that the rest of the world is not changing fast enough. In spite of the progress in switching to renewable energy, the world's climate is still in crisis.

Throughout his trip, Patrick hears references to something called syntropy, a universal self-organizing principle that operates through consciousness. Before leaving the future, he attends a dinner party where he learns what syntropy is, and how it has the potential to inspire far greater change.

On his return, Patrick writes a detailed account of his dramatic journey. If you share his concerns about the future, this book may give you hope, reason to believe in a better world, and a roadmap to help us get there.

Guy Dauncey's *Journey to the Future* presents an extensively documented, entirely plausible ecotopian vision. With a few exceptions, all of the innovations and solutions that Patrick Wu encounters in 2032 have already been described in academic and scientific journals and mainstream media. To follow the endnotes and to explore other dimensions of the book, go to www.journeytothefuture.ca.

JOURNEY
TO THE FUTURE
A Better World is Possible

An Ecotopian Novel by
GUY DAUNCEY



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www.journeytothefuture.ca*

To learn more about the book, and to view the book's over 940 endnotes, most with web-links to original sources, see www.journeytothefuture.ca

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To all of Earth's People, young and old

The future belongs to those who believe
in the beauty of their dreams.

– *Eleanor Roosevelt*

The visions we offer our children shape the future.
It matters what those visions are.

– *Carl Sagan*

We are at the very beginning of time for the human race.
It is not unreasonable that we grapple with problems.
But there are tens of thousands of years in the future. Our
responsibility is to do what we can, learn what we can,
improve the solutions, and pass them on.

– *Richard P. Feynman*

The whole future of the Earth seems to depend
on the awakening of our faith in the future.

– *Pierre Teilhard de Chardin*

TABLE OF CONTENTS

1	Hungry for Hope	1
2	June 2032: The Journey Begins	7
3	The Solar Revolution	16
4	Building a Neighborhood	26
5	Exploring a New Economy	38
6	The OMEGA Days	49
7	A for Affordable Living	68
8	A New Synthesis	76
9	The Health Revolution	86
10	Climate Compassion	98
11	The Future Café	104
12	The Heart of Poverty	112
13	Cape Danger	120
14	Climate Progress	133
15	Calling All Carbon	147
16	Ethical Entropy	154
17	Building a Cooperative Economy	164
18	Earth's Furthest Dream	182
19	Building a Circular Economy	196
20	Green Business and Love at the Tree Frog Hotel	209
21	Song of the Universe	218
22	Renovating Democracy	237
23	Taking Down the Tax Havens	255
24	Worms and Horses	271
25	Feeding the World	284
26	The Farm Village	291
27	The Demise of the Oil Industry	298
28	The Secret Garden	315
29	Telepathic Twins	326
30	Mid-Summer's Eve	335
31	Into the Forest	342
32	Hitchhiking	354
33	Sustainability in the Suburbs	363
34	The Dinner Party	374
	Epilogue: My Return	406
	Acknowledgements, Appendices	408

*It's a race. A race between the expanding reach of our empathy
as it stretches across the world, bringing love and
intelligent cooperation for the good of all, and the clutching fear
of tribal distrust, made more powerful by modern technology.
Which will win?*



Hungry for Hope

MY NAME IS Patrick Wu, and I have just spent four days in the future.

Why? Because I was hungry for hope. Because I found the world confusing and I needed something to light the darkness. And because I could.

How did I do it? I have some theories, but first you need to understand my background.

Although I was born here in Vancouver, in Western Canada, I spent most of my childhood out of the country. My family left Vancouver when I was eight and for twelve years we lived in East Africa and the Middle East, from Lebanon to South Sudan, in all sorts of conditions, while my parents worked for refugee aid organizations. By the time my younger sister Daria and I were teenagers, we had probably seen more poverty and suffering than most people will see in a lifetime. I returned to Vancouver with Daria when I was eighteen, under unhappy circumstances.

East Africa is not all brown and dusty, the way the camps are. Ethiopia has rugged mountains and lush farmland. South Sudan has tranquil villages in a sea of savannah filled with trees. And then there were those nights camped out under the thousand myriad stars of the vast deep African sky, each so mysterious, each saying ‘*Look at me—see how little you know.*’

Our parents were wonderful. My father declared himself a ‘cosmic pantheist’, and in the cracks between the refugee camps he loved to discuss the big questions with us. Was there a God? Or was there nothing? Or was ‘God’ simply a word people used to express the unfathomable vastness of it all? To my father, God was a G.O.D.—a General Omnipresent Diaphany. That’s how he liked to put it, and it took some digging to discover that the word diaphany comes from the Greek, meaning ‘to appear through.’ So the Creator is revealed by an essence that shines through every person, every leaf, every creature.

Can miracles really happen? How can I say they can’t, he would answer, when we know so little about how the Universe works and who we really are? “We are not human beings having a spiritual experience,” he liked to say, quoting the French scientist and priest Teilhard de Chardin. “We are spiritual beings having a human experience.”

My mother was more wrapped up in the lives of the people we lived among—the families fleeing violence and war; the women and children who had been

raped and terrorized, their villages burned to the ground. She was sometimes inspired by our father's musings, but more often she was impatient. "If God exists," she said, "he must be a sadist."

"No," my father would answer, "it is we who are the sadists, because we have not yet been moved by the diaphany, by the compassion that can enable us to see the love that infuses everything."

It was heady, inspiring stuff for a fifteen-year-old. I knew how many trillion stars there were and how far their light had travelled, but what did it mean that all this had been created out of a Universe that was fourteen billion years old? All the music, the love, the imagination, the hurt, confusion and suffering—that somehow it had all emerged from the same shared origin? It blew a fuse in my brain, trying to wrap my mind around it.

Why are some humans so cruel and self-centered? Why are some people so warm and kind, while others become bullies, thugs and murderers? How was it possible that a myriad disconnected cosmic particles had organized themselves into atoms, jellyfish, elephants, butterflies, humans, music and science? How could I fathom out the mismatch between the awesome *unity* of the cosmos and the awful *disunity* of poverty, war and suffering? You may think those to be teenage questions, but they were very real ones, concerning real issues.

It's not as if Daria and I were totally isolated growing up. We were able to keep up with world events and our parents had taught us how to distinguish news from propaganda. By the time I was eighteen I knew that as well as a place of incredible beauty, the world was also a matrix riddled with power, corruption and greed.

Take Somalia's pirates, who kidnapped foreign freighters and their crews, then ransomed them for millions. The Somalis were not there because they woke up one morning and said, "I have an idea—let's play pirates!" They were there because their parents had been fishermen, supporting their families as their ancestors had done for thousands of years until foreign industrial fishing fleets arrived off their coast and began massively plundering the fish, shooting at their tiny fishing boats with water cannons and firearms, making it impossible for them to feed their families. So who were the first pirates—the Somalis or the foreigners?

And then there was that awful day in Jerusalem. I was sixteen. We drove around a corner and suddenly we were in the aftermath of a suicide bombing. There were people with their legs blown off, their bodies flayed by shrapnel. Acrid smoke. People shrieking. Corpses.

A girl was still conscious. Most of one of her arms was gone but I had seen enough of my parents' triage work to know what to do—stop the bleeding. I tore off my T-shirt, tied it tight above the bloody end and pressed her matted scarf firmly into the wound while she gasped and spasmed.

As I knelt over her, she looked up at me, scared and confused. Same age as me, more or less. Wearing a black and white checkered keffiyeh—maybe Palestinian?

Sirens were wailing, people shouting warnings and orders in Hebrew.

The girl was staring at me with the deepest black eyes I'd ever seen and the darkest black hair. Then out of nowhere, *such a deep, powerful connection*. For a moment I'm sure my heart stopped. She tried to say something, but I couldn't understand her.

Then a stretcher appeared beside us, and someone pulled me aside. As she was rushed into an ambulance, I grasped her hand.

"What's your name?" I called out, but her reply was too weak.

One day, I'll go back and try to find her. If she's alive.



IT WAS MY father I was closest to. Daria took after our mother, with her red hair and her practical get-it-done approach to life. But then there was that other awful day. Daria and I were in Khartoum. Our parents had flown up to Cairo for some meetings, leaving us to look after ourselves.

We spoke to them every day, but one evening they didn't call. Time ticked by ominously. Eventually, just after midnight, there was that awful phone-call—the one you never want to receive. A bus had hit a hole in the road, veering into a fuel tanker that immediately exploded into flames. The taxi my parents were riding in had been following too close and had plowed into the inferno.

Everything they were to us—their joy, their laughter, their love, their parenting, their wisdom, their work, their nagging, their fussing, their hopes for our future—they ended right there, leaving nothing but memories.



A MONTH LATER we were back in Vancouver. I was eighteen, Daria fifteen. We had enough money to rent an apartment and pursue our studies.

As our grieving subsided, we grew to love Vancouver, especially the rain and the greenery, so refreshing after the dusty brown dryness of the refugee camps. The ocean, the forests and the mountains are so stunning. If you've been here, you'll understand. So Vancouver became our city of healing. But my teenage questions took on a new urgency as I learned about the distress that climate change was inflicting on the world. When I read about the climate crisis and all the trouble that was coming, my stomach would feel tight, and I would have difficulty sleeping. Surely, there *had* to be a better way.

I also began to understand how deep was the dysfunction at the heart of the global economy—the stuff they call capitalism. If there was anyone at the helm—and maybe there wasn't, maybe there was just an ideology that people followed—they were driving us at high speed toward the edge of a cliff, humans, elephants and orca whales alike. If we didn't embrace fundamental change, not just locally but everywhere, we were going to be in awful trouble.

But what could I do? I was studying politics and international development at

the University of British Columbia and I was active in an environmental group, but I had yet to find my path, my purpose in life.

I enjoyed playing Ultimate Frisbee, but my friends thought I was way too serious. “Chill, dude,” they’d say. But how could I, when the stuff I was reading told me we were sleepwalking towards disaster? Where was the vision we so urgently needed, that could offer us a better future?



IN 2010 VANCOUVER, led by its inspirational Mayor Gregor Robertson, announced that it was going to become the greenest city in the world. It was an exciting vision and it was Daria who suggested that we get involved, going to meetings and forums. The *Greenest City Plan* addressed many issues, including transportation, food and the green economy, but it didn’t address poverty, homelessness or the larger global problems such as the climate crisis, or the way the plutocrats were looting the planet. How could it? It was a plan for one city, not for the world.¹

‘Where do we come from? What are we? Where are we going?’ These were the questions the painter Paul Gauguin asked more than a hundred years ago, in the sensual beauty of Tahiti. Today there’s a similar feeling in the air, a sense beneath the skin that a crisis is brewing. Top hedge-fund managers are buying farms with private airstrips in New Zealand so that they can get away when the shit hits the fan. The rich are piling up their goodies, but every year millions more people are becoming trapped in poverty and debt.

We need economic growth to tackle the poverty and the hunger, but the same economic growth is gnawing at Earth’s vitals. The tropical rainforests in Borneo are being burnt and torn down to make way for palm-oil plantations. The ocean is being stripped of its tuna and sharks and filled instead with plastic. By burning fossil fuels we are melting the icecaps. The rich are getting richer but so many people are struggling, while nature’s ecosystems are being weakened, often to the point of collapse.

Wherever did we get the idea that this world is ours to treat as we like, that we are *entitled* to cut down the rainforests to drill for oil, *entitled* to catch all the fish in the ocean, *entitled* to spray pesticides over the soil, trees and hedgerows? Everything we consume seems to be tearing at the fabric of nature.

And to trump it all, so much of the destructive activity is being done on borrowed money.² It cannot be right that governments have to struggle with such massive debts, forcing them to cut back on education and healthcare, while big corporations like Apple, Google, Walmart and Starbucks pay almost nothing in taxes because their accountants have found cunning ways to game the system.³ It cannot be right that some people have become so wealthy, they have to hide their billions in tax havens.⁴

With all these troubles, there was no shortage of apocalyptic scenarios.⁵ But

who can live off that stuff? It seeps away at the soul, and makes life dimmer. I craved a future that would reflect the hopes I carried in my heart, a vision that would give me something to work *for*, as well as being against the things that caused grief and pain.

We needed to shift to 100% renewable energy, to replace all fossil fuels—but how was that possible? Our entire system of transportation depended on oil. We needed to transform the world’s economy—but what were the alternatives?

Daria and I were talking these things over with some friends one wet February evening, in our Vancouver apartment. The rain was pelting down on the street outside and we were enjoying a cozy home-cooked curry when Daria posed the innocent question that was to change my life: *if the future is so important, what if we could find a way to visit it?*

After the inevitable laughter and the jokes about what she was smoking, she persisted. “We know Vancouver has set a goal to become the greenest city in the world. What if we could somehow travel to that future and see what it looks like twenty years from now, when it has actually *become* the greenest city? And not just the greenest. What if people had also discovered how to end poverty and homelessness? What if they had built a culture that was rich and fulfilling? We could learn how they did it, and use their knowledge to start building that future today.”

It was a crazy idea, but once I had thought about it, it got its hooks into me. I found myself dreaming about it. For sure, we need to say ‘NO’ to the many things that threaten us, but we also need to say ‘YES’ to a vision so positive that people will yearn for it, and spend their lives working to make it happen. If we want change, the power of our vision must be so much stronger than the power of our fears.

Then late one evening a week or so later, when it was just Daria and me in our apartment together, I felt a strange and sudden sense of lightness.

I sneezed.

Daria said, “Gesundheit!”

I sneezed again.

“Bless you!” Then she laughed.

And again.

I shook my head vigorously to clear my mind.

“Did you know there’s an ancient superstition about sneezing, how it opens a crack to the spiritual dimension?” she continued....

To this day, I don’t know how it happened. All that I know is that I suddenly found myself in the future, just as if I had been dreaming.

Maybe it was my father who made it possible—who knows what’s possible once you are dead? I’ve thought about it over and over, but I’ve not found any plausible rational answer. So now I just accept it for whatever it was.

The words you are about to read are my recollection of the four days I spent in the future in June 2032, and the many conversations I enjoyed.

But before you begin, let me say one thing. Even though this book is set in the future, it is not really a work of fiction. It is simply an account of the myriad things I experienced.

So if it's not fiction, what is it? It's about the way the future world is tackling the climate crisis. It's about solutions to poverty, debt and homelessness—and a new economy that is no longer capitalist. The people I met talked to me about food, farming and our health; about transportation and street life; about community organizing and education. They also talked about protest—lots of protest, and about politics and democracy.

It's also about spirituality, philosophy and science—the big ideas my father loved to discuss. Maybe that's why he made it possible, if that's how it happened.

To repeat, I really don't know how it happened: it just did. I found myself sitting on this bench, in the future, with an inner knowing that I had just four days to explore things and learn as much as I could, after which I would return. When I tuned into my father, as I often do, I felt that he was smiling contentedly.

ENDNOTES www.journeytothefuture.ca

Journey to the Future contains over 940 endnotes, almost all of which have web-links referencing the original material on which the novel is based. You can find the endnotes on the book's website, and many other resources. You will also be able to subscribe to Guy Dauncey's newsletter *A Better World Is Possible*, that tracks progress on the many things Patrick saw and learned.



June 2032: The Journey Begins

IT WAS GETTING dark, but the late evening air was fragrant and entralling. I was sitting in a cob-earth shelter on a quiet residential street in what felt like Vancouver, but instead of rows of parked cars I was looking out onto a sea of trees, shrubs and plants.

The road was still there, but it was narrower than it was in my time, and it was meandering instead of straight. On the wall of the shelter I read these words, which someone had painted beautifully:

*Forget not that the earth delights to feel your bare feet
and the winds long to play with your hair.* – Khalil Gibran

I took a deep breath, to see if I was real. Check. I pinched my thigh. Check. I stood up and looked around. Check. This was too weird. I peered out of the shelter.

And then I panicked. Where was I? What was happening? My heart beat faster and my breath grew short, but then I remembered a trick my father had taught me. *Pause, breathe. Go inside and picture yourself surrounded by a circle of light. Then say quietly, 'I am here to serve. Please help me and guide me.'*

I did as he'd taught me, and a familiar voice inside me said, "Relax. Enjoy." I took a deep breath, and looked around.

Down the street to my left three women were walking towards me arm-in-arm, laughing and joking as if they'd had a good night out. As I watched, two of the women said goodnight and peeled off into one of the houses. The third woman continued down the street. Black, medium height, well built. Shock of frizzy orange hair.

"Hello—who do we have here?" she asked, looking at me.

I needed to answer, but my brain jammed up.

"What's up—cat got your tongue?" She placed her hand on her hip.

"Er, no. Sorry. I must have been daydreaming," I fumbled. "My name's Patrick. Patrick Wu. I've been living in Sudan, in East Africa, and I'm visiting Vancouver on a research project. I don't suppose you know if anyone around here offers bed and breakfast?" Where did *that* come from? Don't ask me.

"Sudan, you say? You don't look very Sudanese to me."

“I grew up in East Africa. I must have spent too long in the laundromat to get this pale skin of mine.”

“The laundromat! Is *that* how you folks got so white? I never knew. After all these years! But you said ‘Wu.’ Sounds Chinese.”

“True - but I’m a true Canadian. My father had Chinese ancestry; my mother’s Irish. They died in Egypt six, almost seven years ago.”

“I’m sorry to hear that. May the blessings be. So what brings you to our neighborhood on such a lovely night, Patrick Wu?”

Relax. Enjoy. Invent.

“I’m a member of a student society at the University of Khartoum and we’re very troubled about the future. So they sent me to Vancouver to learn how you had become the world’s greenest city.”

“One of the greenest. We don’t like to boast.”

“I’m sorry. I’ve got four days to learn what I can before I go on to Portland, and I need a place to stay. That’s why I asked about a bed and breakfast.”

“Well, you seem like a decent young man. But you’re leaving it a bit late, aren’t you? It must be your lucky night, since I offer rooms myself. That’s my home across the street. You’d best come in and tell me all about it. I’m Dezzy. Dezzy Brooks.”

She led me through some shrubs and up the steps to her porch. I recognized the heritage style, no different to houses I knew in Vancouver from my time. The door wasn’t locked, and a teenage girl came running down the staircase.

“Hey there, gorgeous!” Dezzy said, giving her a hug. “How’s he been? Is he asleep?”

“Yes—and he’s been great. We played pick-up soccer in the park and I helped with his school project on gravity waves. He understands so much more than I do! Then we went to watch the sunset to see if we could detect any gravity wave clouds. And we did! At least, we think we did. Jake says that when he grows up he wants to crack the secret of gravity.”

“That boy. I expect he’ll do it, too. You’ve been great, Miranda. How much do I owe you?”

“Thirty dollars. Half in cash, half in Deltas, please.”

Dezzy reached for her phone, pressed a few buttons and tapped Miranda’s phone, giving the babysitter the money. Then she gave her a kiss and said goodnight.

It all felt so normal: that was the weirdest thing. Throughout my journey things like ‘Deltas’ or the way she paid by tapping her phone would feel normal, as if I’d known them forever. But then I suddenly thought, ‘Money! How am I going to cope in this future without money?’ I reached into my pocket, and was surprised to find a plastic card. *Phew! Thanks, Dad.* Now I would be able to pay for things I needed, and not worry about being dragged before some strange bankruptcy court in this unknown world of the future.

“She’s a great girl,” Dezzy was saying, oblivious to my flash of panic. “Daughter of some friends of mine.”

“How old is Jake? I take it he’s your son.”

“Yes. He’s eight. I try not to push him in his studies, but there’s no stopping him. It must be his dad’s genes.”

“His father? Is he....”

“We separated three years ago. Teaches physics at the University of British Columbia. Long story. But come on in. I’ll show you to your room.”

It was neat and tidy with too many cushions on the bed, the way bed and breakfasts often are.

“Do you need a bite to eat? Perhaps a nightcap?”

I wasn’t hungry, but I accepted a cup of chamomile tea. Two cats appeared and Dezzy picked them up.

“Meet my babies, Chloe and Indigo.” The white cat squirmed in protest while the black cat nuzzled her chin, purring loudly.

“It’s just me and Jake who live here, plus a young couple in the laneway house. So tell me again—what brings you here? I’m originally from South Africa. I was adopted as a baby by my parents, who are white. They were anti-apartheid activists who emigrated to escape imprisonment.”

I told Dezzy about my parents’ work with refugees in East Africa, and I invented a story about how my fellow students had crowd-funded the money to send me on this trip.

Dezzy stared at me, and her expression became intense.

“It’s unreal,” she said. “You remind me so much of my brother Derek. Here—come with me.”

She led me into her living room, where one of the walls had been turned into a shrine. In the center there was a photo of a man sitting cross-legged, wearing a dark red robe. He had short black straight hair and his eyes were closed in meditation. It was true; he did look a bit like me. Other photos showed him surrounded by friends and family, speaking in public, kayaking on the ocean, dancing, and, at the bottom of the shrine, his body draped in white, surrounded by people meditating.

“What happened?” I felt shocked.

“He was assassinated during one of our big demonstrations during the OMEGA Days. That was fifteen years ago, but the police have yet to find who did it. My friends say I should take this shrine down, but it reminds me that his spirit is still with us whenever we work to make a better world.”

“But he was assassinated? In Vancouver? Your brother?”

“Yes. And his shrine will remain until the police find his killers. But we succeeded, and they’re on the run, whoever *they* are. Our enemies are still powerful, but we’ll win. My parents didn’t raise me to be a wallflower.”

“So it seems I’ve come to the right place to learn about all the changes Vancouver has made?”

“You could say that,” she chuckled. “Where do you want to begin? On second thought, let’s leave it till the morning. I’ve had a good night out and it’s a bit late to be talking about changing the world.”

“Who’s this?” I asked, pointing to a photo of Dezzy arm-in-arm with a tall, handsome black man.

“That’s Thaba, my husband. Jake’s father. He’s South African, same as me. He is rather good-looking, isn’t he?”

“How’d you meet?”

“We met at a seminar at the Perimeter Institute in Waterloo, Ontario. It’s one of North America’s leading centers for advanced physics and cosmology. Thaba had been invited to speak about his work on dark matter and its relationship to gravitational waves. In college he was really good at math so he was recruited to study at the African Institute for Mathematical Sciences founded by Neil Turok from the Perimeter Institute. Neil dreams that the next Einstein will be an African. If our Jake carries on the way he is progressing, maybe it’ll be him. Does Afro-Canadian count, I wonder?”⁶

“How did you come to be at the Institute? Are you a physicist too?”

“No. I’m just a humble computer scientist. I work with Embryo. We’re competing with Google to build the world’s fastest quantum computer. I spent a year at the Institute trying to understand quantum physics.” She smiled proudly. “You’re probably wondering what a black woman like me was doing at the world’s top cosmology center? I thought the same until I met the other Africans. My god, they’re smart! And so good at physics and math, both men and women. It was like a big dark cloud lifted. All my self-doubts, the feeling that I didn’t deserve to be doing what I was doing—they vanished, just like that.”

Cosmology? Quantum computers?

“We were young, and head-over-heels in love. Thaba Mabaleka. That’s his full name. Our son’s name is Jake Azisa Mabaleka Brooks. I married Thaba because we loved each other, and so that he could immigrate to Canada. He got a job in the physics department at UBC and we’d go for long evening walks on the seawall around Stanley Park, and up Grouse Mountain on the weekend. When Jake arrived, we took him with us everywhere. But Thaba found me increasingly difficult to live with. He didn’t know how to handle an independent woman, and I can be pretty stubborn at times. He felt entitled to dominate, believing I should ‘fit in’. So we argued relentlessly, and in the end I left him. I still love Thaba, and we’re the best of friends, and he’s a great dad for Jake. We just don’t live together anymore.”

“Can you explain how a quantum computer works?” It seemed a big question, and the hour was getting rather late, but I had to ask. How often do you meet a quantum computer scientist from the future?

“Well, you’re a sucker for punishment. How long do you have?” she laughed. “I’ve been studying them for fifteen years and even I don’t understand them totally. But let me try to explain. In classical physics, a thing was always a thing. Space

and time were absolutes, and matter had a comfortable solidity. And ever since the earliest days scientists have used math to unravel the secrets of the Universe. Okay? But math is digital: zero, one, two, three, four. We use calculus to study the flow of change between the units, but calculus is still essentially digital.⁷

“Quantum physics developed because when you get down to the tiniest level of matter the digital approach fails. It turns out that reality is rather *slippery*. You can’t pin it down to a one or a two, on or off. Everything in life keeps oscillating between a digital reality and something else that can’t be pinned down. We call it a *probability wave*, and quantum math gives us incredible precision when we incorporate the uncertainty into the math.

“Essentially, reality isn’t digital. It’s analog. Continuous. Time doesn’t flow in bumpy discrete units. Everything in the Universe is a continuum, and in a continuum the space between two digits can have an infinite number of expressions. In a digital computer, a gigabyte of memory gives you a billion bytes to store your games and videos. Today’s fastest digital computer can do 5,000 quadrillion floating point operations a second. Are you following me?”⁸

I didn’t know if I was following, but I was fascinated.

“In the quantum world, we dive into the continuum where there are no points until an entity of some kind chooses to express itself as a discrete particle. The digital world emerges out of the continuum. Now imagine that you can take the space between two digital units, containing an infinite number of possible quasi-positions, and build a computer that uses quantum math to calculate in the world of the continuum. Within every byte of digital information a quantum computer can find infinite possibilities, making it vastly faster. The trick is to pin the possibilities down to quantum bits, using the quantum properties of something fundamental like a photon. Our quantum computing is being used in the human neurome project to map the neurons of the human brain.⁹

“We are within striking distance of creating a computer that will have the same processing capacity as the human brain,” she continued, “and mimic the brain in the way it operates. One of our partner companies is working on a project to create a BioBot with a brain that will self-organize and learn at the same pace as the brain first of a human embryo, then of a baby, a child, and finally an adult. They are deliberately making it *not* seem human, to avoid triggering robophobia—the fear some humans have of robots that resemble humans, but its mental capacity will be the same as an adult human.”

“Isn’t that rather scary?” I asked. “And what about the ethics—is it okay to do that?”

“It depends whether the BioBot is conscious, the way you and I are. There are some who say that’s impossible, that it will still be just a machine. But there are others who argue that if the core of all reality is conscious there’s no way to prevent a BioBot from being conscious too. It’s a very lively debate. Moore’s Law has been delivering incredible capacity, which makes it theoretically possible to build a BioBot with a human-size brain.”

“What’s Moore’s Law?” I felt like an endlessly curious five-year-old.

“It’s the prediction made way back in 1965 by Gordon Moore, the co-founder of Intel, that computing capacity would double every year.¹⁰ The doubling has slowed to every five years, but the implications are enormous, especially when you consider the deep future.”

“The deep future...?”

“Yes. If we survive the climate crisis, and barring an unexpected massive meteorite strike, humans should be able to inhabit the planet for more than a billion years. After that, and counting, the Sun will grow too hot and we’ll need to migrate to a cooler planet. That’s what I mean by ‘deep.’ A billion years is a hundred thousand times longer than the history of civilization so far, and every year, our science, technology and understanding will improve. Hopefully our wisdom will too, and our relationship with nature. It’s going to happen. No-one has ever suggested that it’s possible to stop time.”

I was floored.

“Cat got your tongue again?”

“That’s what I like about cats,” I replied cheerfully. “They’re good listeners—or they are just ignoring us. Getting back to what you were explaining about time, I’ve often been amazed at how long the *past* is, but I’ve never thought about the future that way.”

“Don’t worry: that happens to all of us. We’re not equipped by our primate ancestry to think about the deep future. Even the immediate future is a challenge for most people. As long as consciousness exists in the eternal present, the future will be an eternal mystery.”

“Well, I suppose that’s reassuring. Is there a connection between your quantum computing and your work to make a better world?”

“Straight for the jugular, eh? Why not start with a *really* difficult question? I can try to answer, but you’ll have to put your thinking cap on. It concerns the nature of the continuum, and the fundamental story we tell ourselves to explain why we’re here, and what we’re doing. In reductionist science, everything was material and measurable in a digital form. Most scientists now accept that time, space and the universe are a continuum, not a digital reality. That’s why pi, 3.14159 etcetera, is an irrational number with an infinite number of digits after the decimal point. It’s because a circle can only be truly measured using quantum math, which captures the essence of the continuum. The connection is consciousness, which is as real at the core of reality as it is in you and I. In the old reductionist story, science didn’t have much to say about the human adventure, apart from how fascinating it was. In the new story, consciousness is an unfolding reality that allows us to reach ever more deeply into the fundamental unity of existence, both scientifically and through social and political change. In other words, our efforts to build a better world and our efforts to build a quantum computer are expressions of the same deep syntropic drive, as units of existence self-organize to achieve greater harmony and wellbeing.”

What? My dad would have *loved* this stuff. But could *I* understand it? That was the question. And what was this ‘syntropic drive’ Dezzy had just mentioned?

“Cat got your tongue again?” she teased.

“No—I’m taking it all in. I think I get it,” I lied. I wanted to ask about the ‘syntropic drive,’ but I decided to leave it. Maybe later. “Do the other people where you work think this way?” I asked.

“Some do, some don’t. Most of my fellow quantum workers don’t think much about the big picture: they’re happy to crunch the numbers and get the work done. We do have one guy who’s really into it, however. Rajendra Choudhury. He even named his children after famous quantum scientists—Max, Erwin and Emmy. When he was seeking the perfect woman to marry he took genetic samples from his various lovers and had them analyzed. He was looking for the genes for intelligence and empathy. He wanted his children to be smart, but not at the expense of empathy and social skills.¹¹ And it worked! He married the woman whose genes showed the best results, and they’ve been happy together ever since. The irony is that his son Max became a hockey player, his second son Erwin runs a restaurant and his daughter Emmy, the youngest, named after Emmy Noether, the famous German Jewish mathematician, she’s a pole dancer! He was most upset when she told them what she was doing. He blames his wife for the fact that they did not all become quantum scientists, but she just smiles and quotes Stephen Hawking, who apparently said that God not only plays dice, but that he sometimes throws them where they can’t be seen.”

“That’s hilarious! It’s maybe fate playing a joke on people who choose their partners that way. But can I ask you something else? I’m thinking about your brother Derek. When was he assassinated? And what was going on?”

Dezzy stopped laughing. “It happened the year after the financial crash. Life got pretty crazy then—even crazier than during the OMEGA Days. The media calls that decade the Terrible Twenties, but I prefer the Transformative Twenties.”

“I was a young teenager at the time,” I said (or rather, I lied). “What was it like?”

“Well, on one level, life continued. People still went to concerts and dances. We still invited friends to dinner and people still had to pay their rent or mortgage. But almost everyone had their challenges, and their tragedies. I had baby Jake to keep me busy. Thaba was struggling to find work, and my grandmother was beginning to go senile. So, yes, it was hard.

“There was a constant feeling of crisis,” she continued. “I had friends who were actively engaged, some locally and some on the global level, but many people had a hard time just coping with the food crisis, the carbon rationing, and finding money to pay the bills.”

Food crisis? Carbon rationing?

“Did *you* have personal tragedies to deal with, as well as Derek’s death?”

Dezzy paused.

“Yes, I did,” she finally replied. “Thaba and I had two daughters before we

had Jake. Gabriela's in Montreal now, studying anthropology, and then there was Anna. She would have been thirteen this March. She got an ear infection, and there was nothing the doctors could do. It was resistant to every known antibiotic, and it took over her whole body. She was five."

"I'm so sorry—that must have been awful." My mind flashed to a memory from the Melkadida refugee camp in Ethiopia, and the searing grief of the parents of a young Somali boy who had just died from a lung infection. "I saw a lot of children die in the camps where my parents worked. I saw how much parents grieved."

"Yes. It was a difficult time," Dezzy replied. "We really loved Anna. Then a year later my father was killed in a food riot in Capetown. He was walking to work, same as everyday. He'd gone back to South Africa, determined to help. He just happened to be in the wrong place at the wrong time."

She was silent.

"What happened?" I asked.

As Dezzie looked across the room, her whole being filled with sadness. "The riot was happening outside a supermarket that had just been sacked. He was a white man wearing a suit and tie, so I guess they thought he was management. They beat him unconscious, doused his body with gasoline and burned him to death. He never had a chance."

"Oh my god. That's awful." My stomach turned over, and I thought I might vomit. I turned away and put my head between my knees.

"Are you okay?" Dezzy asked.

I made a conscious effort to breathe deeply, as my parents' death flashed before me.

"What just happened?" Dezzy asked, coming over to help. "Did that trigger something for you?"

I told her how my parents had been killed, and I was about to explain my whole true story when something sealed my mouth. She wrapped her arms around me, comforting me.

"It's okay," I said after a while, wiping my eyes and blowing my nose.

"Life can be hard," she said, slowly sitting down. "And it can be very cruel."

"Yes," I replied. "How did *you* cope when your father was killed?"

"I was angry. I was distraught. But what can you do? There were tens of thousands of people who were killed in food riots around the world. Some were crushed to death; some set on and murdered. My father had a PhD. He worked for an engineering company developing safe drinking water for the townships. But so what? There were thousands of black kids whose mothers scratched a living raising chickens, who might have earned a PhD if given half a chance. Plenty enough of them were killed, too."

It was painfully true. I had met many children in the refugee camps who wanted to become a doctor or an engineer—if only life would give them half a chance.

“What about your mother?” I asked.

“She’s never been the same since. But there’s no point dwelling on the negative. There’s a lot we’ve achieved that she’s very proud of. But look now, Patrick Wu from Khartoum, I need to get to bed, since Jake’s an early riser and I expect he’ll be bouncing in at six in the morning. We can talk more tomorrow. I’ll see if I can set you up with some meetings that might be useful for your research project.”

“You’re very kind.”

She gave me another hug, and I took myself off to bed.

As soon as I turned out the light, my mind replayed the hours since I had arrived. Dezzy’s brother Derek. The OMEGA Days, whatever they were. The food riots. And so much death: Dezzy’s father, Dezzy’s daughter, my own parents.

And then the girl in Jerusalem. *Relax, breathe*, I heard inside my head.

So as I so often do, I imagined her happy and healed, with an intricately patterned artificial arm. I held her close. If she was alive, I hoped she would feel it.

 3

The Solar Revolution

WHEN I CAME down the next morning Dezzy was sitting at the kitchen table with her son Jake, getting him ready for school.

Jake looked up and gave me a lively grin. “Mom says you’re from Africa and you’re really interested in physics! Can you help with my project on gravity waves?”

“Well,” I replied. “It’s true that I come from Africa. But Dezzy’s exaggerating if she thinks I know enough physics to help with your project.”

But Jake wasn’t daunted. “Do you think we’ll be able to develop an anti-gravity machine that will, like, enable us to fly through space at the speed of light?”

“Who knows what’s possible? But if I remember rightly, Einstein proved that if we were able to travel close to the speed of light, time would slow down. So if you went on a longish trip, when you came back your friends would be decades older, perhaps even dead. If you were gone for a year, when you returned the world would be millions of years older.”¹²

“Whoa! That would be really wicked,” Jake replied. “Maybe there’d be another kind of machine that would let me, like, travel back in time to get back to my friends! Like, an anti-anti-gravity machine!”

“Maybe you’ve already been a million years into the future and just come back, but you don’t remember.”

“Okay you two,” Dezzy said. “Maybe you can focus on some time travel right now, Jake, so that you’re not late for school.”

“I’m going to make a gravitational wave attractor for my bike, so that I can get there like, *Zoom!* and I’m there.”

As Jake readied himself for school Dezzy offered me a glass of veggie juice, followed by porridge with honey, hemp seeds and homemade pear sauce. Her kitchen was at the back of the house, overlooking the garden. The windowsills were full of jars of sprouting seeds, and she had window boxes full of herbs and salad greens.

“So tell me again,” she asked me when Jake had left, “what brings you here?”

I repeated my invented story about studying at the University of Khartoum, and how I was here to learn how Vancouver had become one of the greenest cities in the world, so that we might have more confidence in the future and not feel so besieged by worries and fears. I had four days to explore Vancouver. Then I had

a night ride to Portland on Sunday followed by a trip to San Francisco. I figured that would explain my late-night departure when the time came to leave.

“I want to learn all sorts of things, like, are you still using fossil fuels? How do you get around? Have you made any big social and political changes? And what gave people the confidence to believe that Vancouver could become one of the greenest cities in the world?”

“That’s a lot of questions. And you want to do all this in just four days?”

“I was thinking that if I could travel around and meet enough people I could learn a lot.”

“That’s pretty ambitious. Where do you want to begin?”

“How about here in your home? Where do you get your energy from, for instance?” I knew that the oil and gas used to heat buildings in my time was adding to the climate crisis, so it seemed like a good place to begin.

“Okay. I’ll give you a tour before I leave for work. If you take a look around the garden, I’ll be with you in ten minutes.”

The garden path led to a seat inside an arbor wreathed in honeysuckle, surrounded by vegetables. The sun was warming the soil after the overnight rain and the garden was steaming like a jungle—and buzzing with bees, I was happy to see, considering the trouble they were in back in my time due to the use of neonicotinoid pesticides.

There was a fruit tree in each corner of the garden, and the paths were lined with fruit bushes. Tucked in the back there was a small two-storey cottage, blue and white, pretty as they come, and over the fence I could see that the neighboring gardens were also creating havens for insects, birds and wildlife. In the heart of the urban jungle, the city was being rewilded. Dragonflies were flitting around a pond. I’ve always been fascinated by the way they spend most of their lives underwater and then, by the miracle of metamorphosis, put on wings and become things of such beauty. There’s a sustainability leader in Portland, Oregon, called Darcy Hitchcock who wrote a book titled *Dragonfly’s Questions – A Novella on a Positive and Sustainable Future*.¹³ To create a positive and sustainable future, she wrote, we must first envision it.

“Where shall we begin?” Dezzie asked when I walked back into the kitchen. “The house was built in 1922. It used to have an oil furnace, but the owner before us converted to gas. We did our upgrade ten years ago, increasing its efficiency, installing the heat pump and adding the solar.”

“How much did it cost you?”

“It was \$20,000 for the building upgrade, \$6,000 for the solar PV and \$4,000 for the solar hot water. We got a 100% tax credit for everything we spent, which was handy, and Vancity—our credit union—gave us a low-interest loan, which I’m repaying through my BASE account.”¹⁴

“Your BASE account?”

“It’s a separate bank account that I use for all my energy costs. When we took out the loan we used the BASE account, and the savings cover the repayments. If

I was to sell before the loan was paid off the new owner would take over the payments. That's what BASE stands for: Building Attached Sustainable Energy."¹⁵

"That's pretty smart. How much solar did you install?"

"Four kilowatts. It produces around 4,500 kilowatt hours a year."

Four kilowatts of solar PV for \$6,000? Back in my time solar cost \$3 to \$4 a watt to install, so four kilowatts would have been more like \$14,000.¹⁶

"Only \$6,000 for your solar?"

"Yes. It was \$1.50 a watt, which comes to around five cents a kilowatt-hour. Regular electricity is far more expensive, at almost twenty cents. Over thirty years it will save me far more than the cost of installing it. No wonder everyone's doing it. The power from the large utility-scale solar plants is even cheaper, at around \$1 a watt."¹⁷

"Did other people do the full building upgrade, the way you did?"

"Absolutely. Everyone was scrambling to reduce their carbon footprints because of the carbon rationing. It may not have affected you if you were living in East Africa, but here in Vancouver it was huge. Every year we had to slice ten percent off our use of fossil fuels or buy additional carbon rations from someone who didn't need them—and they weren't cheap. When I flew to South Africa for my father's funeral I had to pay two hundred dollars a tonne since my rations were maxed out for the year. The flight itself was amazing. The plane had no windows, and instead it projected footage of the passing world onto giant screens. Not that many people fly much these days, since it's so expensive, and most airlines have yet to go renewable."¹⁸

"When did the carbon rationing start?"

"Soon after the global carbon cap was imposed. There was a panic as people scrambled to reduce their use of fossil fuels. Carsharing, ridesharing, cycling—anything that reduced your footprint. Our house had gas central heating, so we were in a hurry to replace it with a heat pump, but so many people had the same idea that the installers were pushing up the prices. That was when the street organizing took off, since people realized that if they got together they could get a better price, and better service too. We used the Vancouver Renewable Energy Co-op, who took a thermal heat-loss photograph of each building and then did everything from the efficiency upgrades to the solar. We set up a tent where they took their lunch breaks and when they finished we organized a big party."¹⁹

"What other upgrades did you do?"

"Let me show you around." We walked through her kitchen to the living room, a comfy space filled with the normal clutter of everyday living, except for the shrine.

"We wanted to get as close as we could to zero net energy, generating as much energy as we use. So we covered the outside walls with rigid foam insulation and we sealed up all the cracks, using an infrared wand to show where heat was escaping. We doubled the attic insulation, and we replaced the gas boiler with a solar heat pump."

“A solar heat pump?”

“Yes—it’s called an Eco Cute.²⁰ They used to be called air-source heat pumps, but solar heat pump is a better description, since the air is heated by the sun. They sell more with that name, too.

“Then we changed the windows to triple-glazed and put in a heat recovery ventilator—you can see it up there on the wall. We followed the Enerfit Passive House guidelines for retrofits, which ensured that we got the greatest possible efficiency.²¹ We installed timer-thermostats that adjust the heat according to our schedule and we changed all the lights to LEDs, which use very little power.²² Then we put our appliances on a hard-wired home energy scanner that tells me where I’m using power, and we signed up for a home energy management program that lets me monitor the house from wherever I am. I say ‘we,’ because it was me and Thaba at the time. Now it’s just me. Then we installed the solar PV, using the roof-integrated SunStation system,²³ and we backed it up with a Tesla PowerWall battery.²⁴ We got all our supplies from IKEA, who have made a specialty in serving the zero carbon market.²⁵ The graphene solar shingles are more efficient, but by the time mine need replacing who knows what might be on the market. Have you seen the new solar membranes? They’ve got them on BC Place, Vancouver’s big sports stadium. Maybe in twenty years there’ll be a solar membrane that will cover the entire south face of a house, and we’ll be able to do away with panels altogether.²⁶ Speaking of solar, there’s a huge floating solar installation on the ocean off English Bay. It’s a square kilometre in size—they say it produces enough power for 18,000 homes. You can boat out to it and tie up—people use it to swim from. It’s a scaled-down version of the absolutely massive installation the Chinese have built on the East China Sea, ten thousand square kilometres in size, which produces enough power to meet a quarter of China’s electrical demand, or so they say.”²⁷

Floating solar? Ten thousand square kilometres? That was crazy. There were so many things I was longing to ask.

“How long does your battery store power for?”

“About nine days. We got it after the earthquake. Most people have them now that they’ve become so cheap.”²⁸

“You had an earthquake? A big one?” I knew Vancouver was in an active earthquake zone, but nobody worried about it much back in my time.

“Yes, but not the big one, luckily. Magnitude 6.9. It did a bit of damage, but nothing that couldn’t be fixed. I try not to imagine what might happen if the big one struck in one of our really dry summers, when the forest fires spark so easily. It would be absolute mayhem, like something out of the Book of Revelations. As it was, there was an old hospital that took quite a battering and some of the high rises lost their windows, but luckily it was at night when the streets were empty.²⁹ The amazing thing was that the scientists knew it was coming, and they were able to warn us several days in advance.”

“How did they know that? I thought earthquakes were something no-one knew how to predict.”

“They’ve got a new system that combines three methods. The first monitors the behaviour of ants, which stay awake at night and refuse to go into their mounds in the days before an earthquake; the second uses camera traps to monitor the behaviour of small mammals in the forest, which stop moving around in the days preceding a quake; and the third monitors the airborne electric charge caused by the subterranean grinding of rocks in the days before an earthquake. It ionizes molecules in the air, which can be picked up by a very-low-frequency receiving station up to two weeks before a quake hits. When you combine the methods they give a very high rate of successful prediction. We had a week’s notice of a possible quake and three day’s notice of a probable quake. Most people chose to leave the city, which got pretty wild, but almost everyone knew what to do. It was a very crazy time.”³⁰

“I can imagine. It must have been pretty distressing. But getting back to your home, when you were renovating, did you worry about the paints and resins off-gassing toxic fumes?”

“No. You can’t buy that kind of paint any more. I used a smart-smell app to double-check, just to be sure.”

An app to test for fumes? Interesting.³¹

“So anyway, for the house, the installers finally gave me a switch that lets me turn everything off when I go out, except the fridge and freezer. The solar panels will be good for 50 years, with a gradual decline in performance, and when the loan is paid off my energy costs will be zero. And I mean that—zero. My home insurance has gone up because of all the climate disasters, but my utility bills will be zero.”³²

“Zero?”

“Yes. It’s all laid out here.” She picked up her screen, tapped a few keys and showed me a chart.³³

“I’ve reduced my electricity use to 4,000 kilowatt hours a year, which is about how much the solar generates. Having an electric car would increase my demand, but why bother when there are so many shared vehicles in the neighborhood?”³⁴

“So the solar revolution has finally arrived?”

“Totally. It’s rare to see a roof that’s not solar these days.³⁵ I have a friend, Li Wei-Ping, who was telling me how fast things are moving in North Africa and the Middle East. In Egypt, he says, almost every car is electric and they’re getting the extra electricity they need for the cars from a solar farm in the desert outside Cairo that’s eighty-five square kilometres in size—just a tiny fraction of Egypt’s total area. He says they’re building similar solar farms elsewhere, with the goal of generating all the power they need for the entire country. He says the same thing is happening throughout the Middle East, and in many other countries.”³⁶

“What about storage? What do they do when it’s dark?”

“Batteries. They’re also building solar thermal generation plants which

capture the heat of the sun and store it in vast tanks of molten salt. That way, they can keep the lights on twenty-four hours a day.”³⁷

This was really positive news, which made me feel hopeful.

“How much power does solar provide here in British Columbia?”

“About ten percent. The rest comes from a mixture of hydropower from the dams, wind, tidal energy and the new geothermal plant. Our tidal plant is small, nothing like the big new one that’s been built on the Bay of Fundy, which doubles up as a marine sports centre. It’s quite amazing.³⁸ And it’s all zero-carbon. America’s the same for solar—they’re getting ten percent of their power from it.³⁹ They say that by 2050 solar PV could cost as little as two cents a kilowatt-hour—can you imagine?⁴⁰ The price of wind energy has been falling steadily too. There’s a big project going on to electrify all of Canada’s railways, with solar along the tracks. Lots of surface car parks are getting solar roofs, and every commercial rooftop is being covered—it can save the owners up to \$10,000 a year.”⁴¹

“Is the solar revolution proceeding fast enough to make a difference to the climate crisis?”

“Is anything? It’s like a cage match, Solar Revolution versus the Climate Monster, each trying to take the other out. The Climate Monster has the laws of physics on its side, alas, thanks to all the carbon that’s accumulated in the atmosphere, and it keeps hitting us. It’s like BAM! A megadrought here. BAM! A massive forest fire there. BAM! BAM! BAM! A super-typhoon, a monster deluge, an unprecedented heat wave. BAM! Another chunk falls off Antarctica. BAM! Another freezing Arctic Apocalypse, like the one they had on the east coast two winters ago.

“On Solar Revolution’s side, using the term very broadly, we have to achieve five major victories. We’ve got to knock out every carbon producing fuel source on the planet. They’ve all got to be driven down to zero and substituted with renewable energy. We’ve got to stop every last bit of deforestation, both here in North America and in Africa, Asia and the Amazon. We’ve got to transform farming and forestry so that they start sucking carbon out of the atmosphere, weakening the Climate Monster’s power. We’ve got to put a bung in the methane, which includes persuading people to eat far less meat because of all the methane that’s being burped by a gazillion cattle. And we’ve got to pour billions of dollars into climate aid to mend the damage the Climate Monster is inflicting, so that people in the developing world don’t feel abandoned and lose the will to persist. So who’s winning? It’s hard to say.

“There’s a huge offshore wind farm being built in the Gulf of Mexico, along with a massive floating solar installation. That’s the kind of thing we need. As well as producing loads of renewable energy they are protecting the Gulf Coast, taking the bite out of the hurricanes and reducing their impact.⁴² China’s doing the same, combining offshore wind and floating solar to create a buffer against typhoons. And they’re doing a great job on the Salton Sea in California, with a massive floating solar installation that’s reducing the water temperature and

slowing evaporation. It's win-win, since the high water temperature was causing algae blooms that killed the fish and evaporation that increased the salinity, which was bad for fish and wildlife. It's things like that that make me feel hopeful. It might be fifty years before we get a clear result, however, because we can't undo the impact of three hundred years of fossil fuel craziness overnight. It's going to be a long drawn-out battle."

Wow. This was a lot to take in.

"That's really impressive," I said. "So I'll need to come back in fifty years if I want to find how the story ends?"

"Something like that. Maybe longer. It will depend how successful nations are at sucking the carbon out of the atmosphere, and how fast they can make it happen. It's unlikely that we'll be able to stop the temperature from rising by two degrees Celsius, and that will move us into territory the climate scientists say will be highly dangerous. But who's to say? Twenty years ago almost nobody thought we'd make such rapid progress. There's a reason why people call it The Great Turning."⁴³

The Great Turning? Maybe better left till later.

"Changing the subject," I said, "do you know everyone on your street? I get the feeling that you do."

"We certainly do now," Dezy replied, "but we didn't when we started. You'd best talk to Betska about that—she lives down the street. I'll send her a message to see if she's free. Maybe she'll have time to meet you."⁴⁴

Dezy picked up her screen and touched a button. "I love my Streetlife connection.⁴⁵ Here's Jonathon, for instance, one of my neighbors, asking if anyone wants a ride to Victoria. And here's someone telling me that my weekly food box will be late because of a hold-up in the depot. And here's a neighbor who's got a load of composted leaf-mulch to spare."

She touched a few buttons and typed a message. "If Betska's in she'll get back to me shortly. I don't want to call in case she's with a client."

"Are there other things you use that for?"

"Yes. I can click here to update my shopping list, here for anything to do with the house, here for the street, and here for concerts or events I'm interested in. It also gives me a daily reminder of bills due, street activities, public events and so on. I don't know how I'd cope without it."

"Does it use Wi-Fi?" I asked.

"No—I'm all done with that. Most people have switched to Li-Fi these days."

"Li-Fi?"

"Yes. You see this lamp? It transmits information directly to my screen, eliminating any risk of EMF pollution. I can use a laser pointer to send the information wherever I want."⁴⁶

"Does it work for your cellphone too?" I asked. "And is electromagnetic radiation still a concern?"

"Yes. It's good wherever there's a transmitting light source. And as to the

cellphone danger—yes, it’s a huge problem. They tried to cover it up, but you can’t suppress the science forever. I’ve a cousin who used her cellphone all the time, ever since she was a teenager. She used to carry it in her bra. She even slept with it switched on under her pillow. Five years ago she was diagnosed with a breast tumor in the exact spot where she carried the phone. Direct cause, the surgeon said. So now she’s had surgery to remove her breast and she’s on a host of drugs to stop the cancer from spreading. She says the side effects are really unpleasant. But she’s lucky. She could have had a brain tumor, like a friend of mine. He says the surgery has totally wrecked his libido, and it’s ruining his marriage.”

“It’s that bad?”

“There’s been a big increase in brain tumors among people who used their phones a lot. So why take the risk? At Jake’s school we banded together to get the Wi-Fi removed and go hard-wired. It can also reduce male sperm count, so you’d best be careful. I know we need population control, but that seems a bit extreme.”⁴⁷

It was a lot to absorb. Back in my time, cellphones were everywhere. Maybe one person in a hundred was aware of the danger. I wanted to learn more about Derek, however.

“Last night you showed me Derek’s shrine. Is that something you’re okay talking about?”

“It’s kind of you to ask,” she said, turning to look out of the window. “And yes, it’s fine. I know I’m adopted, but he was my brother. My parents were committed activists. They named me after Desmond Tutu, the South African priest who was a close friend of Madiba, Nelson Mandela. All we were doing was walking down the street, demanding a better world. That’s no reason to kill someone.”

“How come the police have been unable to find his killer, after all this time?”

“That’s what we ask ourselves every day. They were very persistent for the first year or so, but then the police chief changed and they seemed to lose interest. They say they had very few leads. The shooter used a high-powered long-distance precision-guided sniper rifle that combined facial recognition with a laser-lock, so Derek never had a chance.⁴⁸ It was a ghost-gun too, so there was no trace of it in any system.”⁴⁹

“What’s a ghost-gun?”

“It’s a home-made gun that’s printed on a special machine. Not one of those cheap crappy 3-D printed guns, but a really sophisticated affair. The bullets were purchased across the border in Washington State. I received a hand-written note shortly after he was shot with words about God, Justice and the Judgment Day, but it was almost certainly from a crank. Derek didn’t have any personal enemies—just people who were opposed to what he was trying to achieve.”

I said nothing, just listening.

“He was really involved with the OMEGA Days. So was Lucas, who lives in the laneway house. He’s a good person to talk to. But Derek was one of the leaders. He wrote the manifesto, *The New Conscience*, which was one of the

inspirations for the OMEGA Days. He wanted the bailed-out banks to be taken over and turned into public banks. He wanted mandatory pay ceilings for the rich, the closure of the tax havens, and prison sentences for the big tax evaders, including the bosses at Goldman Sachs, who he said were pillaging the world. He wanted a Citizen's Income for all citizens. He was a vocal supporter of a woman's right to choose and physician-assisted suicide, and he said that only the police and bona-fide hunters should be allowed to own a firearm. So he upset a *lot* of people, from the fundamentalists to the gun owners, the bankers, and anyone who was hiding money in a tax haven. There were probably a *lot* of people who were happy to see him dead. But this is Canada, for goodness sake. We don't do political assassinations. They aren't part of our culture.

"We know someone was after him," she continued. "Derek used to ride an electric motorbike and in the week before the rally there were three occasions when he was buzzed by a drone. He was sure they were trying to force him off the road. But he had resisted buying a helmet-cam and the street-cams had been hacked, turned off at the very time Derek was being buzzed, so it was just his word."⁵⁰

Dezzy sat silently, cradling her coffee. Indigo jumped up onto the table and pushed under her arms, nuzzling her face.

"It wasn't just Derek they were after. It was all of us. It was a crazy time. The tax authorities were picking on every activist who was self-employed, subjecting them to punishing audits. And they had no scruples about playing dirty. Someone went out of his way to pick on me, knowing I was Derek's sister and was active in my own right. We were renting a unit on the 25th floor of a condo building, Thaba and me, and we thought we had privacy. But one morning I had just come out of the shower, so I was completely naked, and I pulled up the blinds and there was this drone, hovering there. It was filming me, and within an hour the photos were on the Internet. They were trying to shame me, make me shut up. Close your big black mouth, they said, and we'll take the photos down.

"Was his assassin a gun nut?" she continued. "Was it a right-to-life fundamentalist? Was it someone who wanted to make sure their tax-cheating was never exposed? Was it someone hired by the big banks that were fighting the campaign to create a public bank that would threaten their monopoly on the creation of money? There was a minister in the government who had a survivalist brother who had made a crazy video about the OMEGA movement's leaders, naming names and telling everyone where we lived. He got a year for uttering death threats, but they never found any evidence that he was connected to the shooting. None of the leads went anywhere. I still receive comments on his Facebook page from people expressing love, but there has been no progress on the file for years."

Dezzy looked at me.

"It's so weird. You're so like him. Are you sure you aren't adopted? Maybe you're his twin brother and none of us ever knew."

“No, I’m pretty sure my parents are who they said they were. It’s just me and my sister Daria now.”

“That’s how it was with me and Derek. He wanted to take care of me.”

Dezzy was silent, and then she said, “Look, I’ve got to slip down to The Hive to meet a friend who works there. It’s a very popular shared workspace.”⁵¹

Her screen went ‘Ping!’ and she looked at it.

“Betska says she’s free at 10:30 and she’d be happy to meet you. After that, why don’t you wander around a bit and take in the local streets? I’ll be back for lunch and if Lucas is home maybe he’ll come over and tell you about the OMEGA Days. They’re a critical part of the story, if you want to understand how we were able to make so many changes. So, Patrick Wu from Khartoum, make yourself at home, and have a great time with Betska.”



4

Building a Neighborhood

THE SUN WAS shining, and I had time before my meeting, so I went back into Dezzy's garden. Looking up, I saw all the solar panels on the neighboring houses. Some had a smaller system where a tree shaded part of a roof and some were covered with solar shingles instead of panels. Glancing at my watch, I realized that it had been less than twelve hours since I'd arrived.

I opened Dezzy's door and looked out onto the street. Last night it had been getting dark, but this morning I was able to take a better look.

Instead of three lanes on the road there was just one with passing spaces. The rest of the street looked more like a garden. The sidewalks were lined with borders filled with fuscias, hollyhocks, marigolds and young tomato plants, a creek ran down one side, and there was a play area next to the shelter.

I crossed the road and sat down in the shelter. It was built from cob and its rounded walls were decorated with the shapes of birds and animals—a snake, a frog, a heron. Some bicycles passed, and the occasional car did so slowly, negotiating the speed bumps. The creek seemingly collected storm water from people's roofs, allowing it to trickle into the ground. It felt both wild and homely.

At the end of the street there was a large house carrying a carved wooden sign that said *The Marigolds: A Radical Rest Home*. A brass plate listed several names, including *Anna Betskaya Yureneva, Therapist and Healer*. I rang the bell, and a woman's voice invited me to come on up. At the top of the stairs a pleasant elderly woman with black and white striped frizzy hair smiled at me.

"So you must be the famous Mr. Patrick, from Africa!" she said.

I blushed, and said something incomprehensible.

"Well, come on in!" she chirped in a singsong voice. "I'm sure we'll have lots to talk about." Her living room had deep brown velvet curtains, beautiful antique furniture, a richly colored Kazak carpet, oil paintings, Russian icons, and two deep, luscious armchairs.

"What do you say to a coffee, with a drop of the good stuff?"

I was speechless, but I nodded at her suggestion and made myself comfortable in the planet-swallowing armchair she waved me into. When Betska returned with the queen of all coffees she plumped herself down in the other chair.

"Do you believe in synchronicity?" she asked. "I do. I had a client who was due at 10:30. But just before Dezzy sent me the note about you, he called to

cancel. The Universe works in mysterious ways. So what's this research Dezzy says you're doing?"

I explained that I wanted to learn how people in Vancouver had been able to turn their city into one of the greenest in the world—and what was the story they carried in their hearts when they decided to take it on?

"You want to study our souls! Now there's a smart young man. If only the quantum physicists had thought that way a hundred years ago, when they first understood that reality was inseparable from consciousness. All those years wasted on dualism. We're all one—that's what I've always felt, ever since I was a child in Russia. You can't separate the physical from the spiritual. Our inner wealth is as real as our outer wealth. That's what happens to some of my clients. They lose their inner wealth. But as soon as they realize that losing is part of the larger journey, they begin to reconnect. You have to be willing to lose your way if you want to find it. Isn't that so? But you didn't come all this way to listen to me chattering on. You wanted to ask about our neighborhood, right?"

"Er, yes," I replied, feeling overwhelmed by her wisdom and warmth. She seemed like the kind of woman I could open my heart to. I wished I could tell her what I was *really* doing, and about my parents, Daria, the girl in Jerusalem, and the bottomless pit of grief that sometimes overwhelmed me. I had transported myself to this future, but I had brought my present with me. There were times back in my own time when I had to catch myself because the desire to abandon myself and curl up in the arms of an imaginary mother would appear out of nowhere and threaten to drown me with a longing to love and be loved.

"But I *am* interested in what you are saying," I continued, as though these thoughts had never happened. "It's part of our research to figure out what went on in people's minds as they worked to make Vancouver so green. What was the story people told themselves? What motivated them not to give up when there were difficulties?"

"Well now you're onto something," Betska replied. "I'm beginning to take a shine to you. I'm in my late seventies now, so I've lived through a lot. When we started out on this path many people were either in despair or apathetic, living their lives in quiet awareness of the disasters that were unfolding and feeling generally worried about the future. I've lived here on Bunchberry Street for twenty years—fifteen in my home and five in The Marigolds. What a great decision that was, enabling old people like me to live together while keeping our independence.

"I hope you don't mind me chatting away. It's one of the pleasures of old age. I moved here with my mother when I retired from my job as a psychiatrist in Montreal. In those days, almost none of our neighbors spoke to each other. Mama said it was like living in Russia in the old Soviet days. She often went out walking alone. One day, she told me, she saw a furniture van across the street with lots of coming and going so she went over and said, 'Welcome to the neighborhood!' And you know what they replied? They said, 'That's very kind of you, but

we've been living here for seven years and we're just moving out!' We've been chuckling over that for years."

I laughed, knowing how true it was.

"But seriously. On her bad days my mother used to mutter that life here was worse than it was in the gulag. At least people there spoke to each other, she said, and the prisoners looked after each other. Admittedly, she didn't make much effort, but that's what she said."

"The gulag? Your mother was in one of Russia's gulags?"

"We both were. I was born in one. I spent the first year of my life there before we were released. Not that I remember anything of it. My mother spent seven years there, from her arrest in 1949 to her release. That's where she met my father."

"What was she imprisoned for?" And there was me, thinking my problems were significant.

"What was anyone imprisoned for? Someone must have filed a complaint, maybe at the hospital where she worked. She was always independently minded, which was not very wise in those days, under Stalin. She was made of iron, my mother. She lived through the 900-day siege of St. Petersburg when she was a teenager, nursing the wounded, the starving and the dying while Hitler was trying to bomb the crap out of the city so that he could raze it to the ground. She lost all her family, every single one of them. She was very bitter about being arrested when the war was over, after sacrificing so much for Mother Russia.

"She was very nervous when the OMEGA Days began, because she had seen what happened to Russia's revolution. But when she saw all the good that came out of it she changed her views, and became one of its biggest supporters."

The OMEGA Days... there it was again.

"And your father? Was he in the gulag too?"

"Yes. He served in a tank regiment in the Russian army and was captured by the Nazis. He was held in a German prison camp for three years, where he almost died. He was lucky. If they had discovered that he was Jewish he wouldn't have lasted long. When the Red Army invaded Poland and liberated the camps, the Russian prisoners were treated with suspicion in case they had been traitors. Most were released, but because my grandfather had been arrested for counter-revolutionary activity at the start of the Russian revolution, they sent my father to a gulag. He died when I was six, a few years after our release."

"I'm so sorry," I said. "Don't you sometimes despair of the human condition?"

"I probably should, but I've come to understand that despair is not a natural part of the human condition. It's a choice that people only make when their primary choice—to be purposeful and optimistic—is taken away, torn away, or knocked out of them. As soon as people find something to believe in they generally grab it with both hands. The instinct to optimism is incredibly deep, irrationally so. Here, have an oatmeal and blackcurrant cookie. One of my neighbors made them."

I did so with delight, for the cookie was as delicious as the coffee.

“How did you start working together on the street?” I asked, changing the subject. “And how did it become the wonderful place it is today?”

“You like our street? That’s always nice to hear. It began in the Terrible Twenties, as they call them, soon after I moved here. That was a difficult time. I had worked all my life as a doctor in Montreal and I thought I had a good pension. Little did I know that most of my investments were in the worst possible places: oil and banks. My oil industry shares fell to a fraction of what they had been before the global carbon cap and carbon rationing, and my bank shares—well, we all know what happened to the banks. So almost overnight I found myself relying on my basic old age pension and my Canada pension, plus a few thousand in solar RRSPs, which didn’t even cover the mortgage, and there was my grandson Leo struggling to get through college.

“Anyway, you don’t get yourself a fancy brass plate on the door without having learned a thing or two, so I took one of my learnings and I applied it to myself. ‘A trouble shared is a trouble halved,’ I told myself, so I girded up my loins, as they say, and went out to meet my neighbors. Well, *that* was an interesting experience. Troubles? I thought *I* had troubles? I had neighbors whose gas had been cut off, neighbors whose rent was months overdue, neighbors who were eating day-old bread and baked beans. There was a middle-aged mother, Galena, who had two teenage girls she was raising on her own. She was lucky—she still had a job with an insurance company. But her ex had lost his job and he could no longer pay child support or his share of the mortgage. Both of the girls were staying out late, bringing home boys, getting into drugs and all sorts of trouble, and nothing she said was having any effect. When I listened to her she burst into tears, she was so relieved to have someone she could talk to.

“That was nothing compared to some places, mind you. I’ve a sister in Atlanta, Georgia, and you wouldn’t believe what they’ve been living through. Last summer the temperature hit forty degrees Celsius and the roads started to melt. The vehicles got stuck in the tar, causing the entire highway system to grind to a halt. It was an unbelievable mess. They had to use helicopters to evacuate people who were trapped in their cars in the appalling heat. Back in the Twenties she told me the suicide rate in Atlanta was going through the roof as people struggled with debt, foreclosures and evictions. They’re doing a lot more carsharing now, she says. Whatever our difficulties are here, we’ve had it easier than most places.”⁵²

“That’s pretty incredible,” I replied. “But maybe they enjoy carsharing?”

“Maybe! So anyway, there was a group called Village Vancouver—part of a global movement called Transition Towns. They were encouraging neighbors to get together and start a thing called Transition Streets. I liked what they were proposing, so I talked Dezzy into helping me organize a street party. I do wish she’d not broken up with Thaba, her husband. He’s a good man. A bit controlling, but a good man.”⁵³

“So we knocked on everyone’s doors and invited them all to a potluck. We closed the street, put up balloons and got the beer out, and afterwards we talked

about how we could help each other, and make our street more friendly. Social permaculture, someone called it.

“The city had just launched a contest with a prize for the street with the best plan to become more sustainable, so we entered. The contest was fun, because it brought people together to share ideas. We didn’t win, but we worked on our ideas anyway. The cob shelter—have you seen it? That was the first thing we built. There’s this group in Portland called City Repair that encourages neighbors to reclaim their streets.⁵⁴ They inspired us to build the shelter, and to paint the mandala across the intersection. Have you seen it? Then we organized our first White Dinner and had our first street wedding.”

“What’s a White Dinner?”

“Oh, my! You haven’t lived, young man, if you’ve not been to a White Dinner. We hold one every August during the annual Block Party weekend. We close the street and everyone dresses in white and brings a table, a white tablecloth, candles, and food to share. It’s *so* romantic! And since nobody has to go home we can sing and dance the night away. Talk about a great way to get people friendly with each other.”⁵⁵

“I really like the way you help each other,” I said. “Dezzy showed me her Streetlife page. Does every street have one?”

“I expect so. It’s got so many benefits. I do so prefer it to the phone. I remember when young people of your age used to walk around with their noses stuck to their devices, not even seeing each other. NoFace-book, I used to call it. Anyway, I’m rambling.”

“What kind of things did you do to help with people’s difficulties?”

“Well, at first we simply created a space where people could talk. Every Tuesday night, in my living room, people would drop in and know there’d be someone who would listen. It was mostly women, but a few men, too. That’s how we started the knitting circle—and the babysitting circle, which is a way for old folks like me to help the younger families. Some grandparents live far away and the young parents have no-one they can turn to.

“Then in the spring a group formed to grow as much food as possible. Out of that came the Community Tool Library, with its power tools, ladders and equipment, and the Bunchberry Urban Farmers. They organize workshops on seed saving, canning, raising chickens, things like that.⁵⁶ Last winter they did a course on how to skin and cook a raccoon. Ugh! Not to my taste. And last summer they got together and built a community root cellar in an old swimming pool the owners were no longer using. And every Saturday morning in summer we have our community produce stand. I’m getting too old to garden seriously, but we keep our yard full of food. I bake cookies, which I sell at the produce stand. They earn me some useful Dandelion Dollars.”

“Is that a local currency of some kind?”

“Yes. I keep forgetting that you’re visiting from far away. We have Dandelion Dollars for the street, Diva Dollars for the neighborhood and Delta Dollars for

the region as a whole. They were a godsend after the financial crash, when all the credit seized up. They were like a backup economy that kept things going when the mainframe went down. Resilience—that’s what it’s about. Not being held hostage to a system that requires so much central control and coordination. You’d have thought they’d have learned from the collapse of the old Soviet empire. But no, the banks had to persist with their ever-more-complicated schemes, their derivatives and their high-risk insecurities, continually expanding the debt bubble until they hit the perfect storm and the whole thing came crashing down....”

I made a mental note to learn about the financial crisis—which might be due soon back in my time. “It’s great!” I said. “You have so much going on.”

“Everything is so much more advanced today,” Betska replied. “In those days we had no Village Councils, no Citizen’s Income, no free college education. We had municipal elections where most people didn’t bother to vote and a healthcare system that was falling apart at the seams. Not like today—most things are so much better. And I forgot—there’s also Freda’s Friday StartUp group for teenagers who want to start their own business. That’s really important, helping young people learn the skills they need to run a business and look after themselves. Leo—he’s my grandson—I tried to persuade him to join, but he says it’s not his cup of tea. He’s happier with his books and his big ideas.⁵⁷

“Then let me see, we have our monthly potluck, our annual street party, and a big get-together after Christmas when we celebrate our successes and consider what else is needed. We celebrate our failures too, for you can’t expect success unless you also expect a number of failures.⁵⁸ And I nearly forgot! Last year the young people organized a community work bee to repaint Mrs. Wilson’s house. She’s getting old and couldn’t afford it, so they got it done over a weekend.”

“Who’s behind all this? Do you have a paid organizer?”

“My goodness, no. We’re just neighbors, doing what we can. But I will admit, some of us do have a secret weapon. I’m one of several people on the street who are members of the Sustainable Living Co-op. It came out of Transition Streets. We each pay \$10 or \$20 a month into a central kitty, depending on what we can afford, and we use the money to hire a coordinator who helps us share our skills and support each other. It’s such a simple idea, but it’s been responsible for so many new initiatives, including the community currencies, and the expansion of the carsharing and bike-sharing co-ops. The Carbon Reduction Circles were one of the Co-op’s initiatives. Most people were very confused when the carbon rationing started, especially since the rations shrank each year. That really freaked some people out. The Circles helped people analyze their use of fossil fuels in a rational manner, and find ways to reduce them. Paying \$10 or \$20 a month actually saves us money, since the Co-op helps us participate in the sharing economy. And twice a year we have a Neighborhood Swap, when people put out things they’re happy to part with.”⁵⁹

The sharing economy—it was something I wanted to learn more about. It sounded so much more fun than the private economy.⁶⁰

“How many people belong to the Co-op?”

“When it started there were just thirty. They each put a thousand dollars in to get it going. By the time I joined there were several thousand, and today I believe there are forty thousand members in the region as a whole. That’s less than two percent of the population, but it’s a powerful force for change, with a budget of three million dollars a year. That pays for fifty part-time staff, based in the OMEGA Centre for Sustainable Living. When we wanted to convert three of our houses into The Marigolds we could never have done it without the Co-op’s help. There were so many legal, financial and regulatory barriers to overcome, but they’re trained in that kind of thing.”

“How do you find time for all these activities?”

“Well, I’m retired, so what else would I be doing? But for other people, the four-day week helps. And I think many people are less stressed than they used to be thanks to the Citizen’s Income, the sharing economy, the tax and benefit changes, and all the other community changes. The Citizen’s Income takes the edge off the worry, knowing you have a guaranteed income you can depend on each month.”

Whoa! So many changes! But this one I had to explore.

“Is that like welfare?”

“Yes and no. The important thing about it is that it’s not conditional on anything apart from being a resident Canadian citizen who has lived here for ten years or more. Everyone gets it, rich or poor, no other conditions attached.”

“How much do you get? And how is it financed?”

“Every adult gets \$700 a month, on which you pay tax if you’re earning at a taxable level. It’s not enough to live on, but it’s enough to take the precariousness out of life, and to end the constant fear that poverty used to bring. It’s financed by a general increase in taxes, including raising the tax level for the super-rich to 65%. There was a lot of change that happened after the OMEGA Days, and the Citizen’s Income was part of it. You’ll have to ask someone else if you want the details.”⁶¹

A guaranteed basic income for everyone... yes, that would make a difference.

“Going back to when you reclaimed the street—was it easy to get everyone on board?”

“Well, there’s always someone,” Betska replied, topping up my coffee. “There was one man, Jan, from Slovakia. He was convinced that the climate scientists were in league with big business and that carbon rationing was part of a conspiracy to establish world government. There was no persuading him on rational grounds. He’d been listening to those crazy late night talk-radio shows and all his thoughts were scrambled. But he started to change when his wife joined the knitting circle. Through her, he got involved in the community tool shed, and now he helps the kids with their carpentry. It seems to have mellowed him. He’s a nice man, really.”

“This has been fantastic, Mrs. Yureneva. Can I ask what it cost you to redesign the street?”

“Call me Betska, please. As far as I remember, the mandala and the cob bench cost us nothing, apart from a few headaches with the city planners until the people at City Repair in Portland came up and spoke to them, which changed their attitude. You wouldn’t believe the things they’ve got going on down there in Portland. They have an annual Sustainable Streets Contest in which streets compete with each other to see who can achieve the highest overall score for things like sustainability, growing food and local happiness.”⁶²

“With a prize for the winner?”

“Yes. Everyone on the winning street gets a reduction in their property taxes for a year and they get to represent Portland at the West Coast Sustainable Streets Championship.”

“What’s the prize for the street that becomes the West Coast Champion?”

“They get an even bigger tax-break and everyone gets a ticket to the Sustainable Planet Expo at Disneyland. But you’re distracting me. You were asking about the cost of the street reclaiming. After the mandala, we wanted speed bumps. The engineers said they’d cost \$1,500 each, but we persuaded them to let us do it ourselves using a kit we found on the Internet. They ended up costing \$1,250 for the two.”⁶³

“Then someone passed a video around by an American called Jason Roberts on how to build a better block, and people started talking about a much larger retrofit, which led to what you see today. That cost \$40,000. It would have been \$200,000 if we had used the city’s workforce or hired contractors, but we offered to do the landscaping ourselves, and after a bit of negotiating with the union, the city agreed. Shared among forty homes, it adds just \$60 a year to our taxes. But here’s the thing! Not long after we’d done it the city published a study on the cost of upgrading the storm drains to carry the increased volume of run-off from the monster rainstorms we’ve been having, thanks to climate change. Tremendous deluges. A million dollars per street! That’s what it came to. But on our street we don’t need new storm drains because of the swales. And all for \$40,000. So the city got a real bargain. We were one of the first streets to do it. People liked it so much that whenever one of our houses came on the market it was snapped up immediately.”⁶⁴

I was impressed. It was such a change from the car-dominated streets of my time.

“It’s been invaluable for building our sense of community,” Betska continued. “When there’s busy traffic it’s hard to make friendships with people on the other side of the street. Having a stronger sense of community also builds a stronger sense of ethics, to tell you what’s right and what’s wrong. I’ve seen what happens when people lose that, and I can assure you, it’s not pretty.”⁶⁵

“Who maintains the boulevards? You’ve got a lot of food growing here.”

“We all do, under the city’s Green Streets program. I used to do more when

I was a bit more nimble.⁶⁶ I've got this nifty new electronic walking stick, mind you. It even tells me where to go if I get lost!"⁶⁷

"What exactly is The Marigolds? The sign says it's a Radical Rest Home. What does that mean?"

"It means we live together and support each other in our old age, while retaining our independence. You have to be over sixty to live here, and we've a spare room where the grandchildren stay when they come to visit. There's a whole network of Radical Rest Homes across Canada, with at least ten more here in Vancouver. I used to own the whole of this house, but I sold it to the Rest Home. I now own shares in it and I live in these two rooms. There are twenty-four of us who live here. We joined the three houses together and added some extensions. We have a common living space and a kitchen where we sometimes eat together and where we can have meetings, film nights and parties. It's so much more fun than living alone, and far, far better than going into a home."⁶⁸

"What happens if someone gets sick, or begins to go senile?"

"We have an arrangement with the Community Health Centre, and a nurse comes in once a week. She's like our family doctor. Most of us like to go for a morning walk, and we spend time in the Seniors Playground doing our balance and strength exercises.⁶⁹ We also make a big effort to get our Omega-3 fatty acids and our greens, to keep our brains agile. Our nurse has drilled into us the foods we need to eat and what to avoid if we are to stave off the dreaded Alzheimer's, like reducing our consumption of meat and dairy. We have a daily Scrabble and crossword bee after breakfast, and in the school holidays we run a weekly story-telling morning for the children, which keeps our brains active. We must be saving the healthcare system millions. There's a new system in which people who volunteer to help people with dementia get paid in Time Dollars, which they can trade for other kinds of service. It was developed in Japan, and now it's working here."⁷⁰

"How did you afford to buy the three homes and renovate them? It must have been very expensive."

"It was, but we had some serious help from the Sustainable Living Co-op who helped us get grants from the city and the Ministry of Health in lieu of all the costs we're saving them. They own half the building with non-voting shares and we're free to run our lives the way we want. The main condition is that a quarter of the residents must be low-income. They didn't want us being exclusionary."

"This is really impressive, Betska. There's one more thing I'd like to ask. All these changes seem to have happened quite quickly. What happened to make them possible?"

"Well, that's a much longer story. To understand that you need to go back twenty years, when not so many people had a positive vision of the future. All the news was bad, and everything seemed to be getting worse. I'm talking the big issues now, things like climate change, financial collapse, and the collapse of ocean fishing. Most people felt powerless to make a difference. Even many

greens were cocooning, growing their vegetables and riding their bikes but feeling powerless about the larger crisis that was looming closer every day.

“But then some people started stepping up and making things happen, like the street reclaiming and the local food markets. And Vancouver made its commitment to become the greenest city in the world, and to get all its energy from 100% renewable energy.⁷¹ It was an exciting vision, and people put a lot of energy into it. And then of course, we had the crash, followed by the OMEGA Days with all their excitement, and the Terrible Twenties, or the Transformative Twenties as most of us like to call them. What a time! My, those were the days! After that, everything was different, and it became normal to do what we’re doing today. There were leaders stepping up all over the place. It was like people slowly fell in love with the future. Slowly and beautifully.”

“What do you mean?”

“Ah, you’re so young—all thunderbolts or nothing at all. As more people took up cycling, growing food and building the sharing economy, people liked what they saw. So while their heads were telling them things were hopeless, their hearts had them engaged. I remember being invited to a wedding where everyone came by foot or bicycle and there were no physical gifts at all—only gifts of time. Best wedding I’ve ever been to. It took away the families fretting, the mountains of stress and the strained bank accounts. People gradually fell in love with the changes. They ceased being so negative. Does that make sense?”

“Yes, it does. But don’t the global difficulties still make people feel hopeless?”

“What’s in your coffee, young man? Did I give you the wrong mix? You seem stuck in the gloomeries. For sure, there’s a world of change still needed, but once you’re on the journey it doesn’t worry you so much. Think back to World War Two. Did the British feel hopeless when they had been thrown out of France by Herr Hitler? Did the Russians feel hopeless when they were being besieged by the Nazis in St. Petersburg and Volgograd? Far from it. It made them all the more bloody-minded and determined.

“Once you’re determined, everything feels different. Now that we’ve achieved so much locally, people are putting more effort into global change. There’s a group two blocks over working with a village in Costa Rica, helping rebuild their school after the terrible mudslide they had last summer. I read that there are three hundred groups here working on one project or another, all with a global connection. They’re the Changers, these young people, born in the early decades of the century. Me, I’m an old-fashioned Boomer. Dezzy—she’s a Millennial. But my grandson Leo, and the young folks like Lucas and Aliya who live in Dezzy’s laneway-house—have you met them? They’re all Changers. That’s what the world needs: Changers.

“That makes me remember,” Betska continued. “Leo—my grandson—he’s been telling me about a scientist called Elisabet Sahtouris. Must be almost ninety by now. She’s a biologist at the forefront of the new science of syntropy, and I’ve been reading her latest book.”⁷²

Syntropy? This was the second time I had heard the word. Little did I know how significant it would become.

“We’re all part of a single living system, she says, from the furthest galaxies to the tiniest microbes, even the atoms and particles. At every level, the system is conscious and self-organizing, right down to the atoms and below. That’s how bacteria evolved into multi-cellular organisms, and then into humans. Within every unit, they both cooperate and compete as they juggle the pressures around them and seek to evolve to a higher level of order that gives them more freedom, more ability to express their potential, and more cooperation instead of conflict.

“Sahtouris believes that the Earth Harmony Movement, as she calls it, is evolving in the same syntropic way that the early bacteria did, with each cell of the movement finding its own function, then combining with other cells to form a larger organism. In the beginning, she says, groups formed around particular tasks like community gardening, or campaigning to stop a pipeline. They knew of each other’s existence, but they didn’t really cooperate.”

The Earth Harmony Movement? Atoms being conscious? These were things I had to file away and hope to learn more about later.

“But then they started linking up, helping each other and developing a shared vision. They used their consciousness to feel out their surroundings and they created the new intentions that would shape a different future. As the cells of the new society emerged they began to envision a new future and to work together to make it happen. That influenced the surrounding cells, the traditional functions of the old order—things like banking, law and accounting—and they formed change-cells too until the whole function supported the emerging new order. People changed their investments and their banks. They changed the things they bought and the places they shopped. They started buying fair trade goods. Sometimes they left their jobs and developed new careers.

“Eventually, Sahtouris says, the process will extend to Earth as a whole. That’s how the E-70 Group of Nations emerged, as nations started working together.”

The E-70? Something else to learn about.

“Symgaiagenesis, she calls it. Isn’t that a wonderful word? It combines the Greek words *sym*, meaning working together, with *gaia* for Earth and *genesis* for evolution. Symgaiagenesis.”

“Symgaiagenesis,” I repeated, “The Irish poet James Joyce would have loved it.” And then the Irish coffee must have kicked in:

*“Symgaiagenesis, some guy with a Guinnessis,
brown lagered froth of bacterial genesis,
brewing new life in the bowels of our synthesis,
New worlds-a-simmering, shining and shimmering.”*

Where the hell did *that* come from?

“Well, young man,” Betska responded. “You are full of surprises! Are you a poet as well as a traveler?”

“No, not at all. Must be my grandfather’s influence, on my mother’s side. He loved Joyce. It would be a good word for Scrabble. Too many letters, though.”

“This has been delightful,” Betska said, getting up. “I hope it’s been some use. You must come again if you’re staying with Dezzy for any amount of time.”

I thanked her, and she saw me out onto the street, tucking a bag of cookies into my pocket. My mind was spinning, and I hadn’t even been here a full day.

 5

Exploring a New Economy

I HAD AN hour before Dezzy returned, so I decided to explore the neighborhood. There was a creek that ran along the footpath, and halfway down the street a pond was covered with lilies. Eat your heart out, Monet.

As I took in the scene I spotted a pair of ducks hiding behind a cluster of reeds. A small willow tree had sunk its roots into the bank and was shading half the pond. There were water boatmen, pond skaters, and brilliant blue dragonflies. A pair of violet green swallows swooped over the water, looking for insects.

For most of human history we have lived in closely-knit villages where everyone knew each other. Even when we started building cities, the streets remained social places where people would talk, and then talk some more. It was only after 1920 that we surrendered them to traffic and some bureaucrat invented the crime of ‘jay-walking.’ But here was a future where the residents had reversed the flow of history and reclaimed their street.

A mother arrived with two small girls to play at the water’s edge. On one side of the pond there was a pale-colored rock onto which someone had painted these words by the Chinese poet Lao Tzu:

Stand before it—there is no beginning.

Follow it and there is no end.

Stay with the Tao, move with the present.

Knowing the ancient beginning is the essence of Tao.⁷³

A heron arrived with a noisy flapping, taking up watch on a stone in the pond. The mother hushed her children. Far out in space, the universe circled. A cyclist passed, calling a friendly hello. I got up, nodded to the mother and continued walking down the street.

Several houses had hand-made mosaic signs that showed their number, or said ‘Hilda lives here,’ and the intersection had been transformed into a vivid mandala painted red and yellow, as Betska had said. It was empty, but I could easily imagine the neighbors meeting here for a party.⁷⁴

I turned down the adjoining street, with its single winding lane. Along with the shrubs and vegetable beds the liberated space had been converted into a play area, with a basketball hoop and goals for street-hockey. Only one of the houses had a fence, and most were growing food in their front yards.

Halfway down the street I turned into the alley that ran behind Dezzie's street. The asphalt had been removed and most of the fences had been taken down, creating a rambling footpath, a ribbon of greenery. On a bench under a tree two young fathers sat chatting as their children played, greeting me as I passed. Several new homes had been built from converted garages, but since they had no car access the alley remained quiet, almost rural.

At the end of the alley I passed under an arch and found myself in a new development with a semicircle of five townhouses on either side of the street. The road was closed to through traffic, and the area between the houses had a play area and barbecue pit. But when I came to the end of the street I was shocked to discover that the next street over had a large expanse of asphalt with a few parked cars, the same as the streets were back in my time. The houses had solar roofs and many were growing food, but it felt as if the street had become trapped in the past.

"What happened?" I asked Dezzie, when she returned for lunch. "Why did that street miss out?"

"It's sad," she replied. "Most of the residents wanted to follow our example, but they needed the signatures of seventy-five percent of the residents to do so. Several houses were being rented from owners who lived abroad, and the tenants couldn't vote. Unknown to the organizers, some of the residents contacted the absentee owners and persuaded them to vote against the change. They said it was the increase on their taxes, but in reality it was to protect what they saw as their freedom to drive. Without the votes of the absentee owners, there was nothing they could do. And here's the crazy thing: the property values on that street have fallen. Who'd want to live like that, when you could live the way we do?"

Dezzie picked up a remote and some soul music came out of the wall. She started dancing.

"Life is good!" she called out. "Come and join me!"

I stumbled to my feet, and she took my hand. My feet tripped from self-consciousness, but she said, "No worries. Enjoy! Life is good!"

Later, collapsing into an armchair, she asked, "So, are you single? Or do you have someone special tucked away?"

I blushed. "No. There's no-one. Maybe I'm still waiting." It wasn't true, but I didn't feel able to say so. In truth, there was no space in my heart because I had already given it to the girl in Jerusalem—the one who might not even be alive.

Dezzie got up to make lunch, tussling my hair. "You won't be short for company, a good-looking young man like you. Don't you worry."

"This is a great kitchen," I said, eager to change the subject. "What's the screen above the stove for?"

"It gives me recipes for the food I have available and tells me what's good for me and what will help me keep my weight down. Here—I'll show you how it works."

She pulled up a menu that said 'salad' and touched the word for each ingredient she was using: red leaf lettuce, arugula, spinach, kale, chopped almonds,

mushrooms, flax seed, peas, goat's cheese, grated apple and chopped ginger, topped with a ginger honey dressing with pepper and garlic.

"It lists the nutrients and phytonutrients for each ingredient and tells me how many calories I'm getting. If I use it every day it gives me a running total for the week. If I press this button, it tells me what nutrients I'm missing and suggests recipes to fill the gap. This salad will turn you into a superman: it's loaded with everything you need."

"That's really cool. Does everyone have one?"

"They're becoming quite common, especially with the new healthcare system. Can you shell these peas for me and then bag them? I've picked more than we need so we can freeze the rest. You see the screen on the fridge door? If you tap the letter P you'll see 'peas' and you can enter how many bags we're doing."

"What do you want me to do with the shells?"

"They go in the composting chute, which empties into the bin outside."

"What about rats and raccoons? Don't they go for the compost? And do you get a lot of wildlife here?"

"With all the food people are growing? We've enough wildlife to fill a zoo! The compost bin is tightly sealed and I keep a spray bottle laced with cayenne pepper and chopped habanero chilies, which usually puts the raccoons and skunks off for a while. We've also got crows, herons, frogs, grass snakes, bald eagles, squirrels, bats, and the occasional coyote."

We sat down at the kitchen table overlooking the garden and enjoyed the salad. The early afternoon sun was pouring in, and her black cat Indigo was sitting on the path in the garden gazing at something.

"Can you tell me more about Derek?" I asked, when Dezzy had poured the coffee.

"How far back do you want to go? He was my big brother. He always took care of me. Even when he was at school he was trying to save the world. When he left school he took off travelling for a couple of years, volunteering on organic farms in Europe and the Middle East and then in Australia.⁷⁵ When he came back he worked for a while to earn some money and then spent three years getting his economics degree at UBC. He was in his last year when the first financial melt-down happened in 2008, so you could say he had a front-row seat.

"When he finished he could have gotten a job with any big company, but instead he worked at a soup kitchen in the Downtown Eastside, Vancouver's poorest neighborhood. Then he got a job as a neighborhood outreach worker, completed the certificate program in Community Economic Development at Simon Fraser University and got involved with the Occupy Movement, which started out so hopeful."

The Occupy movement: something from my time.

"We were fairly depressed when so little came of it. People didn't know what they wanted. They knew what they were opposed to, but not what to replace it with. Not just here, but everywhere: London, Wall Street, Toronto. That was when

Derek realized that if we were going to make a difference in the world we needed a much clearer vision of the kind of future we wanted.

“I remember Derek coming round one night. He was upset that Occupy had so little to show for itself, apart from some great memories. It was winter, but he took off to stay with a friend in Tofino on Vancouver Island, where he spent three weeks walking the beaches and taking in the storms. When he came back he announced that he was going to tour the world to visit places where they were building a cooperative economy. The financial meltdown had shown what a disaster the current system was, and there had to be a better way.”⁷⁶

“Where did he go?”

“It’s been a while, but it’s fresh in my mind, since I helped write his biography. He had been impressed by a book titled *The Public Bank Solution*, by the American author Ellen Brown, so he took a Greyhound bus across the prairies in midwinter to learn about the Bank of North Dakota, the only publicly-owned bank in America. There are countries all over the world that practice public banking, including many European nations, but here in North America there has been a taboo against it. The bank was created in 1919, following a political upheaval when the local farmers organized successfully against the Wall Street banks and got themselves elected into the state government. The bank has been creating new money and supporting community banks in their lending ever since, making a huge success of it: so much so that North Dakota is still the only state in the US without any debt. Derek took the lesson to heart, and from then on he put public banking at the heart of all the changes he saw to be necessary. Whenever a bank creates money, he realized, the interest goes to the bank’s owners. When a bank is public, the interest goes to the government where it can be used to pay for education and healthcare, things like that. It seems so straightforward when you put it like that. Little did Derek know how determined the banks would be not to let go of their monopoly on the creation of money, and all the profits it brought.”⁷⁷

“Next he travelled to Minneapolis, where he visited the Institute for Local Self-Reliance, one of the first places in North America to focus on the local economy and the value that can be obtained when a city puts its mind to generating its own energy, recycling its wastes and supporting local stores instead of big-box retail stores, things like that.”⁷⁸

“He continued on to Cleveland, Ohio, where he saw how they had developed worker-owned co-operatives by tapping into the purchasing power of local hospitals and universities. He visited coops that were providing solar services, laundry services and food, and he saw the motivational energy that worker-owned enterprises released.”⁷⁹

“From there he took a flight to Brazil, and the coastal city of Fortaleza in Ceara State, where a man called Joaquim Melo had set up a system of community banking called Banco Palmas and a thriving co-operative currency called the Palmas, which inspired the formation of fifty community banks. Their goal was to democratize credit, so that ordinary people would no longer depend on the

big banks to provide them with loans and microloans.⁸⁰ Whenever Derek flew, he offset his carbon by donating to the Solar Electric Light Fund, which helps rural villagers around the world replace the use of kerosene with solar energy.⁸¹

This was a lot to take in, but I had the feeling that it would all come together, so I encouraged her to continue.

“From Brazil he flew to Lisbon, in Portugal, and he took the bus to a place called Mondragon in the Basque region of northern Spain. In the 1940s, after the misery and destruction of the Spanish civil war, a Jesuit priest, Father José María Arizmendi, had been searching for ways to put the church’s social doctrine into practice. He asked the question, ‘What is the Jesuit way to develop an economy?’ and that led him to the work of the 19th century British socialist Robert Owen, who pioneered the world’s first workers’ co-operatives. Father Arizmendi went on to found the world’s most successful cooperative economy, which employs some 100,000 people in 300 co-operative businesses. They have their own co-operatively owned bank, their own university and their own welfare system. Almost every worker is a member-owner and their wage differential is only 6.5 to 1, compared to as much as 1,000 to 1 in North America, as it used to be. Mondragon survived the financial meltdowns with far less damage than other companies in Spain. When the second crash happened, and the market contracted by 20%, instead of firing 20% of the workers everyone reduced their working hours by 20%.”⁸²

“That seems like an intelligent way to handle a crisis.”

“Yes—but it takes a business that is owned co-operatively and managed democratically to come to a decision like that. When decisions are made by the few whose personal incomes depend on what they decide, it’s easy to see why the people who are shut out get to suffer.”

“Anyway, from Spain Derek travelled overland to the Italian region of Emilia-Romagna, south of Venice, where he spent six months learning Italian and studying their cooperative economy, which has made their region the most successful in Italy. In a population of 4.5 million, two out of every three citizens belongs to a co-operative, and co-ops make up 30% of the economy. But even among the private businesses there is cooperation and self-organization that doesn’t happen elsewhere. The businesses and coops belong to various regional networking organizations, to which they pay a portion of their proceeds, and in return they get help with everything from training to product development. There’s a clear reason for their success, Derek discovered, and it’s to do with cooperative self-organization, instead of the private competitive approach.”⁸³

“How did Derek even know about these places? I’ve not heard of any of them.”

“He was a member of the New Economy Coalition,” Dezzie replied. “Their members know where all the important innovations are happening, and they have their fingers on the pulse of change. They helped him organize the trip and gave him introductions.”⁸⁴

“While he was in Emilia-Romagna he bought a bike and from Italy he cycled north into Austria, to a town called Güssing on the border with Hungary where they had turned their local economy around by making it the world’s first 100% renewable energy region, using solar and biomass energy to generate all their heat, power and fuel.⁸⁵ Everyone’s doing it today, but it was new at the time. Then he cycled across Austria to Switzerland, where he learned about the special system of Swiss banking known as WIR—that’s German for ‘we’—in which 60,000 small and medium sized businesses share a mutual credit network. By providing a parallel source of credit they are able to balance the ups and downs of the business cycle and provide stability for Switzerland’s economy. It’s one of the secrets of Switzerland’s success, along with their local savings banks.”⁸⁶

“This was quite the trip,” I said. I was envious. What a great opportunity he created for himself!

“Yes. And he was blogging and filming wherever he went, making videos that he’d post on YouTube. He had tens of thousands of followers on Twitter, Foible, Village, YouTube and Facebook, so all these people were learning about new ways of running an economy along cooperative lines.

“From Switzerland he crossed into Germany and spent a few days in Freiburg, Germany’s solar city. Then he cycled to the small town of Prien am Chiemsee in southern Bavaria, where Christian Gelleri, a school economics teacher and his students had launched Europe’s most successful local currency, the Chiemgauer, named after the region. It’s pegged to the euro and can only be used locally. It loses two percent of its face value every three months, which gives people an incentive to use it. We use the same system with the Delta Dollars, our regional currency here in Vancouver.⁸⁷ In Bavaria he was invited to a private house party with some of the biggest names in co-operative currencies and banking reform—people like Bernard Lietaer—and all the time he was pondering how the ideas could be applied in Vancouver and the world as a whole.⁸⁸

“From Germany he crossed into Denmark, where he rode around Copenhagen and experienced their cycling revolution first hand. At the time, something like thirty percent of the people rode a bike to work or school. Today, it’s more like fifty percent. It’s amazing what they’ve achieved, and all because local people organized to make it so over a period of fifty years.

“Then he crossed the bridge to Sweden and cycled to the town of Skövde, where a co-operatively owned bank known as the JAK Bank (pronounced *yok*) provides mortgages and loans to its members by charging a small fee instead of interest. At the time, they might have been the only bank in Europe not charging interest, but it’s quite common now.

“I’d never thought much about interest until Derek started blogging about it,” Dezy continued. “I had no idea how much it increased the cost of everything we buy. Derek used to repeat a question that a German woman called Margrit Kennedy used to ask. She was one of the cooperative economy’s founding inspirations. If an employer offers you a choice of two different pay-raises, she would

ask, which would you prefer? You can have either an extra \$10,000 a week, or you can take a one cent raise the first week, two cents the next week, and double again each week for the rest of the year. What's your choice?"⁸⁹

"I'd take the \$10,000 a week. That would be amazing."

"That's what everyone chooses, because we don't understand the power of compound interest. If you took one cent and let it double every week, by the end of the year you'd be earning \$45 trillion a week. Not bad, eh?"

"Whoa! I had no idea."

"That was Derek's reaction too. Margrit had calculated that in Germany, if you removed interest from the price of everyday goods and services the cost would fall by forty percent. That's the power of interest when it compounds on itself, which it does whenever you miss a payment. That's one reason why Derek became so interested in co-operative currencies and new ways of banking.⁹⁰ The JAK Bank uses a fractional reserve ratio of 5:1, meaning they keep \$20 in the bank for every \$100 they lend out, whereas some Wall Street and European banks had been lending on ratios as high as 60:1, which is one of the reasons they collapsed."⁹¹

"While Derek was in Sweden he also went to the city of Växjö, which, like Güssing, was working to become a 100% renewable energy region using biomass, hydropower, geothermal, wind and solar energy. He was always seeking solutions to the climate crisis as well as the economic crisis."⁹²

"From Sweden he crossed to Helsinki in Finland where he met a group of people who were promoting the idea of a guaranteed Basic Income, or Citizen's Income. So many people were living precariously, either because they had no work or because they depended on part-time jobs, and they argued that a completely new approach was needed in which every citizen would receive a guaranteed monthly income, no conditions attached, financed out of taxes. That was where he learned about the Basic Income Earth Network, in which people around the world were collaborating to develop the best models, in readiness for change. Canada adopted the Citizen's Income seven years ago."⁹³

"That must make quite a difference in people's lives."

"Yes. It has reduced the fear and desperation many people were feeling. Not eliminated, but certainly reduced. Everyone gets it, children too. I've got a good income in my current job, but when I left Jake's dad and became a single mother it was really hard. Now that we have the Citizen's Income, the four-day week and \$20-a-day daycare it's a lot easier for parents, both working and single."

"Was daycare another of the changes that happened after the OMEGA Days?" I still didn't know what they were, but it felt like a safe guess.

"Yes—that and a lot of other things. It's one of the things Derek went on about when he got back—how subsidized daycare was so normal in places like Mondragon, Emilia Romagna and Finland, and how it contributed to family stability as well as economic stability. It was in Finland too that Derek became

obsessed with saunas. He was convinced they were the secret to Finland's egalitarian culture."

"Saunas? How come?"

"His theory was that the Finns had learned to see each other as equals, since in traditional Finnish culture everyone has a sauna at least once a week, men and women separately, and always in the nude. When you're naked, he said, it's hard to pretend that you're better than someone else. He wanted to form a co-operative sauna when he got back, but he never got round to it.⁹⁴

"From Finland he took a boat to England, where he spent a year doing an internship with the New Economics Foundation in London. That gave him a chance to get to know some of the country's leaders in green, community-based, cooperative economics,⁹⁵ and to get his mind around the role of the government in building a cooperative green economy. He was very impressed with two people: Mariana Mazzucato, Professor in Economics at the University of Sussex, author of a book titled *The Entrepreneurial State*, and Ha-Joon Chang, the Cambridge economist, author of a book titled *23 Things They Don't Tell You About Capitalism*. Mariana Mazzucato persuaded him of the need for the state to play an active entrepreneurial role by investing in new ecologically sound developments, and Ha-Joon Chang persuaded him of the state's importance in guiding and controlling trade and capital flows—the complete opposite of what the neo-liberal economists had been preaching.⁹⁶

"He also visited a number of innovative projects, including the birthplace of the Transition Town movement in Totnes, Devon,⁹⁷ and the Findhorn Foundation, a spiritual and ecological community in northern Scotland whose members had the lowest carbon footprint in Europe. He helped build a solar-cob house in their ecovillage, and he participated in a global conference on Visions of the Future.⁹⁸ Somewhere along the way he fell in love with a girl named Jenny and he moved to the small Yorkshire town of Todmorden where she lived, which had become well-known for a project called Incredible Edible Todmorden, where the townspeople were growing all their own food."⁹⁹

"How did he support himself while he did all this travelling?"

"Before he left he raised some money by crowdsourcing on Indiegogo, and he worked on organic farms. The Indiegogo connection was great, since the people supporting him followed his travels.¹⁰⁰

"When he came back he brought Jenny with him. They were inseparable, and she supported him while he spent the next year writing his book, *My Love Song to the Planet*, which played a big part in inspiring the OMEGA Days, alongside his manifesto, *The New Conscience*. It was published just before the financial meltdown. She was a lovely woman. Very spiritual. Believed in angels. Jenny said she could sometimes see angels sitting on people's shoulders. She told me once that she saw my father, who wanted to tell me he was always there for me. He used his pet nickname for me, and there's no way she could have known about that.

Other people had the same kind of experience with her. Don't ask me to explain it: I believe it's real, but it's beyond any rational explanation."¹⁰¹

"That's fascinating," I replied. "I sometimes have the feeling that my father is looking after me, too. I have so much to learn," I said. "But tell me, what was it like in Vancouver during the meltdown?"

"It was nowhere near as bad here as it was elsewhere. The regions that depended on just a few employers and the big manufacturing centers—they took it really hard. The bottom fell right out of the money market and businesses that depended on credit found it impossible to function. Unemployment hit 25%, and a lot of people lost their homes because they couldn't pay the rent or mortgage. It was far worse in the States, because Canada's bankers were better regulated and had not been allowed to take the big risks they took south of the border. But with Canada being so closely linked to the US, and our banks being so invested in the carbon bubble, everyone was affected."

"What was Derek's response?"

"To organize. His biggest concern was that there would be an old-fashioned social revolt, a repeat of the Occupy movement. It was important what they achieved first time round, he said, but it wasn't enough. This time round we had to be really clear in our vision and strategy. Luckily he wasn't the only one with this concern. There were some small demonstrations, but the global movement as a whole was able to hold its fire until it was ready with the OMEGA Days."

"What happened then? I was nine at the time, living in east Africa." It was a lie, but a convenient one.

"I'll ask Lucas to come over when he gets back from work. He was very involved, so he'll give you a better story. Meanwhile, do you want to see the video Derek made when he got back from his trip?"

And so it was that I found myself sitting in Dezzzy's garden watching Derek's video. Six and a half million hits—that was big for a talk. His manner of speaking was confident, and he had a charisma and charm that was quite magnetic. His video was titled *My Love Song to the Planet*, the same as his book, and it was organized in seven chapters, or verses, using Italian for the titles, a language he said he'd fallen in love with. My notes are just the briefest summary.

VERSETTO UNO: MIRACOLO

In the first verse he expressed his deep love and wonder for the Earth, the ocean, and the cosmic, biological and spiritual evolution that has brought us to where we are. Our existence is a miracle that gives us the ability to dream, to choose, and to make a difference. In spite of all the terrible things we have done to each other and to the planet, he still had faith in humanity and in our ability to build a better world.

VERSETTO DUE: EGOISTICO

Over the last five hundred years we have built our economy as if all humans were

selfish and opportunistic, and everyone was a dominator. But we are not—we are also cooperators. The global economy was on its last legs, he wrote, and about to collapse. It would be brought down by the weight of selfishness, expressed in the sheer magnitude of investments and debts that lacked any substance. But we must not fear its collapse. We must understand it, and use the opportunity to build a new economy that would reflect the cooperative, caring side of our nature.

VERSETTO TRE: MADRE TERRA

In our self-centeredness we have treated Earth as if she existed purely for our benefit. The earth and the oceans give us so much, yet like a mother, they never send us an invoice. Our entire existence depends on air that is safe to breathe, water that is safe to drink, soil that is safe to grow food in, ocean plankton and forests that produce the oxygen we breathe, and an atmosphere that protects us and regulates Earth's temperature.

Earth gives us eight million species to share the planet with. We can't continue to mine Earth's resources and harvest her creatures as if she were a cookie jar, there for the plunder. We need to join hands with the First Peoples of the Earth and rethink everything we know about the way we treat the Earth and her ecosystems. We need to craft a new way of living that is in harmony with nature, as well as with ourselves.

VERSETTO QUATTRO: EMPATIA

As Martin Luther King said, the moral arc of the Universe is long, and it bends towards justice. But it does not bend on its own. It bends because people put their hands on it and work to bend it in the direction of justice and compassion. We need to continue to bend it, extending our empathy not only to our fellow humans but also to our fellow species, and to Earth as a whole.¹⁰²

VERSETTO CINQUE: NUOVA ECONOMIA

We need to build a new economy that will reflect our ability to be kind and cooperative as well as to compete and be entrepreneurial. An economy based only on competition and opportunism will always create misfortune and unhappiness, just as it does in our personal lives when we behave selfishly. We need to recreate the way we create money, the way we trade, the way we run our businesses, the way we bank, the way we own land and housing, and the way we develop our economies. Capitalism was built block by block over several centuries, he said. We needed to build the new cooperative economy in the same practical way, block by block.¹⁰³

VERSETTO SEI: NUOVA GOVERNO

We need to reflect our caring for the Earth and our need to live cooperatively through new laws and new methods of governance that take bold steps to advance

a cooperative, sustainable economy that can flourish while protecting habitat, restoring damaged ecosystems, and paying for nature's many services.

VERSETTO SETTE: SPERANZA E DETERMINAZIONE

We need to have hope and determination to overcome the bastions of power whose supporters delay, obstruct and prevent progress. We need to be passionate and positive about the future we are about to create. He ended by reciting a poem:

*Our world will be changed by love, not anger,
By the creativity of hope, not the sadness of defeat.
Come with me now: your birthright calls.
We are ancient, we are proud,
We are as old as existence, as determined as the stars.
Find hope, where once you found despair,
Find determination, where once you feared defeat.
Come with me, let us build a better world;
It is not I, but your own soul that calls.*

“It’s very inspiring,” I said to Dezzy when I had finished watching.

“It all seems so long ago. It’s good to know that it still resonates. By the way, there’s an event tomorrow night you might be interested in.”

“What’s that?”

“It’s called *Song of the Universe*. It’s for people who like to think and dream both spiritually and scientifically, without any religion. Does that interest you?”

I assured her that it did. There was not much in the religious belief systems I had come across that I liked, but neither did I like the cold materialism that so often went hand-in-hand with science. I didn’t believe in God but I didn’t believe in materialism, either. There had to be more.

“Okay. We’ll go together. And I’ll see if I can rustle up some meetings to help you learn how Vancouver has been progressing.”



The OMEGA Days

AS WE WERE talking there was a rap on the door and a young man with long blond hair came in wearing a cut-off T-shirt and jeans, bearing a big tattoo on one arm.

“Hi Lucas,” Dezzy said. “We were just talking about you. Meet Patrick. He’s visiting. He wants to learn about the OMEGA Days.”

“Happy to meet you,” Lucas said, grasping my hand warmly. “Lucas George.” Then turning to Dezzy, he asked, “Did you get the tickets?”

“You bet I did,” Dezzy replied. “How often do you get to hear Crocus in full holoconcert? But you’re such a contradiction, Lucas. One day you’re all simplicity, boycotting plastic and living off raccoon roadkill and the next day you’re holotechnology’s biggest fan.”

“Who’s Crocus?” I asked hesitantly. “And what’s a holoconcert? You must excuse my ignorance. I’m more used to campfire singing.”

“Hey—that’s cool! I love campfire singing,” Lucas said. “I wish we had more of it. Crocus just happens to be a megastar. She’s from Brazil. And yea, I know the holotech stuff seems like a contradiction. But holograms use almost no energy. They’re pure creative expression. And it’s not as if Crocus is flying here, burning scarce biofuel.”

Now I was really confused....

“So how is she getting here?” I asked naively.

“Skypogram. High-definition hologram with a great local band. Some of her vocals give me the chills.”¹⁰⁴

“They’ve lined up a pretty impressive show,” Dezzy said. “The Vancouver Ballet’s putting on a holographic performance with dancers flying over our heads and they have two poets doing that travelling words thing with lines of poetry that move through the air. Crocus will be using projected holographs to enrich her songs and there’s full harmony sing-along for several pieces. We’re going to have to learn our parts.”

“So what was it brings you here?” Lucas asked. “I’m sorry—I got distracted.”

I explained my reasons for coming, and he replied, “Well, if that’s your interest, you should have been here fifteen years ago. That’s when we really had some fun. I still think of them as the best years of my life.”

“I was hoping you could tell Patrick about the OMEGA Days,” Dezzy said. “You spent half the year in juvy, if I remember right. Here, have a coffee.”

“Thanks, Dezzy. Yes, juvy was where we dreamed up some of our best protests. The joint has great advantages if the keepers let you keep your connections. We had such good face-time, and we didn’t even have to pay!”

“What were you in jail for?”

“Oh, blocking the streets, meditating on the sidewalk, singing in the police station. You name it.”

“Our Lucas was quite the hero,” Dezzy said. “Derek said he could trust him with his life.”

“So much for trust,” Lucas interjected. “It wasn’t much use when it really mattered, was it?”

“You mustn’t say that. I doubt there was anyone who could have prevented it. Let’s not go there.”

“But how can we not? And let them get away with it? There had to be an insider. Someone in the Vancouver Police Department, I think. How else could his assassination have gone unsolved for so long?”

“Let’s not go there, Lucas.”

“Okay, but he was my buddy as well. I keep thinking about all the people who had a motive to kill him.”

“But Chief Constable Liu Cheng was one of the best. I can’t believe he’d hide anything from us.”

“That’s what all the best con artists are like. They’re likable. You’d never guess they were up to something bad. Besides, it’s a big department. There were plenty of others. Maybe someone sympathetic to that American group, the Sons of Heritage, who hated everything we stood for.”

“Lucas, once again, let’s not go there. Please.”

“What else happened during the OMEGA Days?” I asked, hoping to change the subject.

“Well, we had our Twenty-Five Solutions plastered all over the city,” Dezzy replied, turning to face me. “Everything was linked through the new synthesis. In the end, the politicians were tripping over each other to implement the solutions.

“OMEGA,” Dezzy continued. “The O stood for Occupy Democracy... M for Meaningful Work... E for a New Economy... G for a Green Future, and A for Affordable Living. Whenever people saw the OMEGA sign they knew what it meant. And we were all such aptivists, as well as activists, spreading the word in a host of different ways.”

“And raptivists,” Lucas added. “We had some wicked lyrics.” He stood up, shook his body and launched in:

*They say we can't do it, can't fix it or grow it,
Can't change the world, kiddo, what makes you not know it?
But we've got no ears for your know-nothing blow-it,*

*We'll change this world ten times before you can throw it.
 For this is our now time, not do the fuck-all time
 We're done with your moaning and dying delays.
 We say live! Live again! For it's change the world now-time
 So kiss me and celebrate, show me your ways.
 Kiss me and celebrate, change-the-world, elevate
 Elevate higher than dirt-streets and mire
 Elevate up where the highest hopes reelevate
 Kiss me and celebrate, change the world now.*

We applauded, and Lucas laughed.

“See what I mean?” Dezzy said. “You were one of our heroes—and Derek’s too. Give me a minute—I may be able to find an old poster.”

My mind was bubbling with questions. What was this new synthesis? And what *were* the OMEGA Days?

“Was it just in Vancouver that the OMEGA Days happened?” I asked cautiously while Dezzy was out of the room.

“For sure it was—not. Where have you been? In a coma?” Lucas stared at me incredulously. “Oh, sorry, I forgot—Timbuktu, wasn’t it? No—it was pretty much global. London, New York, Hamburg—almost everywhere. Paris, Rio, San Francisco, Portland, Toronto, Cairo. Even Shanghai and Beijing, before they were suppressed. It was like the Occupy movement, but far more advanced. They didn’t all have the success we had. That’s why we need another big global effort to get us over the tipping point—and soon.”

“I, uh, you’ll have to forgive me,” I improvised. “I was only nine at the time, and where we lived most people were concerned with finding enough food to eat.”

“I’m sorry. I didn’t mean to speak so harshly. The OMEGA Days were pretty big out here, and it’s easy to forget that it wasn’t the same everywhere.”

“Here, I found it,” Dezzy said, returning with a beautiful poster featuring a large OMEGA sign created by two people kneeling opposite each other with their heads together.

“Each of the five themes had five solutions,” she said.

“It’s thanks to the A for Affordable Living that we’re able to live in Dezzy’s laneway house, our Little Palace,” Lucas said. “Back then, Vancouver was so expensive your parents had to be multi-millionaires before you could even consider buying a place. Even renting cost an arm, leg and your friggin’ firstborn. I had been living in Prince George with my family but I couldn’t take the fighting, and my father constantly picking on me. My mom had a good job with the credit union and my father was a logger but he lost his job when the company cut back due to the timber shortages—thanks to the pine beetle, another climate impact. He was using drugs, and I’m pretty sure he was dealing them too. That’s what the fighting was about.

“So Julie and me—she was my older sister—we walked out. Lovely sunny

day. I was fifteen. Hitchhiked to Vancouver. Didn't know what to expect—bright lights, excitement maybe. But there were homeless people all over the place, living in bus shelters and stairwells. For three years I lived rough and the worst thing is that one day Julie disappeared. Fuck it, I'm still so pissed at myself.”

“What happened?”

“She just disappeared. There's no way she'd have gone for more than a few days without telling me. We were so close. I did everything I could, but we couldn't find her. The police response was pathetic. She's still on the list of missing women, but I've given up. I expect they'll find her remains one day, stashed in some horrible place.”¹⁰⁵

“Oh my god. I'm really sorry....”

“My mother came down from Prince George and we spent a month searching, but it's all so long ago now. I've created a Shine-On with all her favorite music, so it's like she's still there. And it's true; it does help.”¹⁰⁶

“What's a Shine-On? I'm sorry, I've not heard of that before.”

“It's an online shrine, that's there, like forever. It's got photos and videos and poems she wrote, memories from her family and friends, and her favorite music. So like, my kids will be able to see who their aunt was and know what a wonderful person she was. Here—I'll show you.”

We were sitting at the kitchen table, the sun filtering in through the trees, and just by Lucas talking about his sister Julie and showing me her photos I could feel her presence.

“So, anyway,” Lucas continued, closing his device, “I was in with a great crowd and we were all making do—couch-surfing, sharing rooms, living on the streets. We were proud of who we were. ‘The Love Liberationists,’ we called ourselves. I'd have gone to Europe to join the street revolutions if I'd had the cash. That's where we thought the action was. We never thought it could happen right here in Vancouver. I did go to New York for the uprising, but that's another story. Some of us had degrees but couldn't find work. Some had jobs but hated the dreariness. There was one girl who was a great artist but couldn't sell her work. And some were aboriginal, with ancient souls.

“We were a great mix, and no-one judged us. That was when I got the idea to go to college, but there was no way I could afford it, and anyway, I'd quit school at 15 so I didn't have the exams. So I started watching TED lectures and joining MOOCs, those on-line courses in politics, social change, things like that. I was, like, 18, and doing all these courses at Stanford, Harvard, Udemy, Coursera and the Khan Academy.¹⁰⁷ We had these great discussions going late into the night as we tried to piece it together: our personal lives, the story of civilization, why it was all going wrong. And what to do? We read the European Manifestos, like *Indignez-Vous!*—which was great—and *The Coming Insurrection*—which was crap. We thought we wanted to create a street revolution, but we weren't getting anywhere. Something was missing, but we didn't know what.¹⁰⁸

“Then the financial crash happened and things got crazy, with demos being

organized by anyone with a Twitter account—big demos organized by the labor unions, small demos organized by the nurses, school kids, and old folks who were angry that their savings were disappearing and they couldn't afford to buy food. And then there were the crazies who would come in from the suburbs looking for windows to smash, dressed in black, wearing old Anonymous masks. They grabbed the media attention and made it difficult for the rest of us. I still think they were infiltrators. It was a mess, and who were we? For all our grand discussions, we weren't getting much done.

“Be realistic—demand the impossible. That was one of our slogans. We tried all sorts of things, like occupying a Starbucks to protest their tax avoidance; occupying a Safeway store to protest their sale of junk food; occupying those automatic neighborhood grocery stores that used to have no staff; occupying a bank to protest their profiteering on student loans. And after, when we'd been dragged off to jail, we felt so alive. *Fall in love, not in line.* That was another of our slogans. *Every great dream starts in the darkness of sleep.* The trouble was, we were confused. We didn't know what our dream was. We wanted things like the end of capitalism, the protection of nature, things that would stop climate change and the continued use of fossil fuels. But we didn't want anyone organizing us or telling us what to do. We wanted to do it ourselves. We didn't trust other people's ideologies or political agendas.”

“I didn't know all this,” Dezy said. “Was this before the OMEGA Days?”

“Yea, before. But then I met this guy called Jim, from the labor movement. He got to know us and he taught us how to organize in a completely different way. He gave us a name. Said we were part of a new social class, ‘the precariat,’ and there were people like us all over the world, people whose lives were precarious who were learning how to organize.

“It was important to learn from the Occupy movement, he said. The most important lesson was that you've got to have a positive vision and practical solutions. It wasn't enough to criticize. We had to build the politics of paradise, he said, taking his cue from a Brit, Guy Standing, who did a lot of work on the precariat and the need for a Citizen's Income.¹⁰⁹

“Jim got us together in a community center one day and gave us a lecture I'll never forget. He told us about the French Revolution in 1789, Europe's street revolutions in 1848, and how they achieved a lot of great things but how they triggered a huge right-wing reaction, out of fear. It was the same with the student protests in 1968, which led to the revenge of the right. It was all very heroic, but for what? If you're lucky, the government might fall and you'll get a change of regime, but then what?

“A lot of people are willing to embrace change, he said, but they hate uncertainty; it makes them fearful. People don't like being taken by surprise. If it's a choice between being pushed into a new dark place and retreating to a familiar place most people will retreat, even when it's against their better interest. That's why fascism can get a grip at times of crisis, and why right wing politicians get

support for their calls to bring out the riot police and jail the troublemakers. We had to inspire people with a vision, he said. We had to offer practical solutions that would address the problems while also speaking to people's need for security and control.

"The European model of street revolution was so old-school, Jim said. It can maybe overthrow a government, but it's like the world it wants to replace. It polarizes the imagination down to just two options—win or lose, fight or surrender—and unless you're careful it can become macho-aggressive, by both men and women. It pushes people into an us-versus-them mindset that encourages violence, which is what the state wants because it knows how to respond to violence. Unless you've got the army on your side the state is always going to win. The old dualism of left versus right, workers versus business owners—that was part of the problem, he said. The real duality is between those who want community and harmony with nature, and those who want individualism and consumerism. That's what it boils down to, not right versus left. There were thousands of businesses that supported the new direction, but the old dualism shut them out.

"Jim said we had to do things differently. We couldn't go on repeating the same old ways, even if we did it with tweets and videos. As well as being a labor organizer he was a Buddhist. He taught us how to be mindful, how to meditate, and how to listen from the heart. Deep listening, he called it. He became my real father, the one I looked up to.

"*'Action, not anger'*—that was the motto he drilled into us. 'Anger will destroy whatever you're trying to do, whether it's personal or political,' he said. 'Whatever you do, do it with love. Be the solution, not the complaint. Treat everyone you meet with respect, the way you'd like to be treated.'"

Just then there was a knock on the door. "That was Laszlo," Dezzy said when she returned. "Can you feed his cats on Saturday night, Lucas? He's got a trade show he needs to attend. I'm away and Jake's staying with his dad."

"For sure. How's he doing?"

"Amazingly well." Dezzy turned to look at me. "Laszlo's a new immigrant from Hungary and he's starting a business helping children to write and illustrate their own stories. He's very creative."

"Tell him I'll be happy to do so," Lucas said. "Maybe I can trade it for some great Hungarian goulash."

"You were talking about Jim," I said. "It sounds like he was a pretty special kind of guy."

"He was. He used to teach a weekly class on the Zen of Higher Purpose. 'What is it that you are called to do with your life?' he would ask. 'You've only got one life and then it's back to being dirt, so the sooner you find out what it is the less of it you'll waste.' If we didn't know, he'd send us off on a wilderness retreat way up on the Sunshine Coast. He also introduced us to a friend of his, the Vietnamese Zen Buddhist monk and peace activist Thich Nhat Hanh."

“Holy crap! You’ve met Thich Nhat Hanh? My parents used to have his photo in our tent.”

“They did? That’s really cool! His Fourteen Precepts of Engaged Buddhism are my practical guide to everyday living. *‘Do not maintain anger or hatred. Learn to penetrate and transform them when they are still seeds in your consciousness.’* Precept #6. I used to have a lot of anger. Still do, I’m afraid. I blamed it on my father, but it became a habit, an indulgence that stopped me from growing. Precept #2: *‘Do not think the knowledge you presently possess is changeless, absolute truth. Avoid being narrow-minded and bound to present views.’* I used to be pretty opinionated, too—thought I knew everything. Aliya says I still am—she’s my sweetheart. But it was all a sham, a cover for my fear that really I knew nothing, that I would always be an ignorant bum. Thay (Thich Nhat Hanh) cleared all that away, left me free as a bird. Mindfulness, that’s what it’s about.”¹¹⁰

“Was he involved in the OMEGA Days too?”

“I’ve no idea. It was Jim who brought him here. He must have been almost ninety, but he was still very spirited. He never told us what to do. That was up to us, he said. We had to learn to listen, and let our hearts be our guide.

“Anyway, Jim was a good friend of Derek’s, which was how I met Derek and the beautiful Dezzzy. This was, like, in the middle of the second financial meltdown, when banks all over the world were either being taken over by the government or closing their doors. There was no more appetite to bail them out, and even if they’d wanted to, the money wasn’t there. So the credit dried up and the businesses that survived had to lay off half their workers.”

“You were saying how confusing it was with all the demonstrations and street protests. But earlier you were explaining how positive the OMEGA Days were. What happened to change the sense of confusion?”

“More tea either of you?” Dezzzy said. “This is quite the trip down memory lane.”

We offered our mugs. Mine had a design of a Thunderbird on it and Lucas’s had a moose design, both painted by Norval Morisseau, a First Nations artist from Ontario.¹¹¹

“They were given me by a friend,” Dezzzy replied when I asked. “But do continue, Lucas. Tell Patrick how the OMEGA Days emerged out of the confusion.”

“We were about six months into the financial crash. There were so many people who shared the frustration that nothing constructive was happening, and there was a feeling that we were in danger of missing the boat. I didn’t know it at the time, but Derek and Jim were part of a global network of people who were working hard to piece it all together and come up with a strategy that would deliver a similar message in every city and every country. That’s where the idea of the OMEGA Days came from, with its five themes, each with its five solutions. The strength of the idea was that it covered all the bases, but it allowed local groups to come up with their own solutions.

“The challenge was to create a synchronized global launch, but people needed

time to research the solutions and build the coalitions that would be so important. It was all done very publicly. It was announced to the world as The OMEGA Quest and we had six months to do everything—assemble the best solutions, build a broad coalition, raise funds, organize the launch. There was a global website where you could read the best solutions and vote on the ones you liked, and connect and form groups. Each of the five themes had an on-line course where you could learn about the solutions. It was like a global university, with millions of people researching the best solutions in a host of different languages. There was a whole series of gatherings here in Vancouver as people worked to come up with solutions for the city, the province, and Canada as a whole.”

Just then Dezzy’s son Jake burst in with a friend, fresh from school and bubbling with excitement.

“Hi, Mum! Can Ali come and play?”

“Not until you’ve given me a kiss,” Dezzy replied. “How was school? Nice to see you, Ali—you’re looking good!”

Jake gave his mother a quick kiss and then asked, “Can we play on Ben’s trampoline across the street?”

“As long as Ben’s there it’s fine by me. Ali, do your parents know you’re here?”

“They’re at work until five o’clock.”

“Okay—but can you text them to tell them where you are? Here—use my device.”

Ali texted his parents, and both boys ran tumbling out of the house.

“What a pair!” Dezzy said. “You’d never believe that just a few years ago Jake used to be sluggish and overweight.”

“What happened?” I asked.

“We cut most of the sugar out of our diet, and I gave him an Ubooly,” Dezzy replied. “I was overweight too, and my doctor had diagnosed me with Type 2 diabetes. That was a pretty big wake-up call. So we got seriously involved with the Community Health Center. They helped us develop Personal Health Plans and I joined a peer support group to help with diet change, exercise and weight loss. It’s amazing what cutting the sugar out did. With that, the change of diet and taking up cycling, it totally cured my diabetes. And you’ve seen how Jake is. But anyway, where were we?”¹¹²

“No, wait!” I said. “What’s an Ubooly?”

“You’ve not seen one?” Dezzy replied. “Oh, have you got a treat in store.” She left the room and came back with a purple cuddly toy, tossing it to me.

“Patrick, meet Ubooly. Say something.”

“Hi, Ubooly.”

“Hi, Patrick. What shall we play at?” the toy replied.

“What!” I was surprised. Then I asked it, “Can we play chase?”

“Yes! Let’s run into the kitchen,” it replied.

“It’s a smart toy, packed with games and learning adventures,” Dezzy said.

“They keep getting better. Jake uses his to chase around the house, learn Spanish, do physics experiments, all sorts of things. I used it to get Jake and Ali running around the neighborhood, trying to break records and generally getting fit. But I’m sorry. Where were we?”¹¹³

“Lucas was taking part in a global university,” I said, “getting ready for the launch of the OMEGA Days.”

“Right,” Lucas said. “I wasn’t in Vancouver for the launch. I went to join it in New York.”

“How was that? It must have been amazing.”

“If you can call being crushed, kettled, pepper-sprayed, jailed and fucking strip-searched amazing. It depends on your taste, I suppose. The police completely over-reacted, and everything went sideways. The plan was for a million people to parade down Broadway and circle Wall Street. It was intended to be celebratory, but there were too many groups with different agendas and too many extremists and evangelicals intent on blocking our progress. I didn’t know how crazy America was until I went there. I was arrested the very first day and spent a week in jail before I was deported. It was *awful*. They tied my hands behind my back with those plastic cuffs, which were really painful. It wasn’t at all like my jail experiences in British Columbia. It was just generally nasty.

“So anyway, in the days that followed, things in New York really deteriorated. There were people throwing Molotoff cocktails into police cars, smashing windows and attacking the banks. I saw the videos, and it was brutal. The police used pain-rays and sonic weapons to force people to disperse, and they were spotting people with their drones, fixing markers on them. There were thousands of arrests. It wasn’t at all how it was meant to be.”

“That’s too bad. What happened in other cities, and other parts of the world? And what about here in Vancouver?”

“Vancouver’s launch went off like a treat,” Dezzie said. “We didn’t do any big marches or parades. Instead we held a thousand house parties, engaging friends and neighbors all over the city. Everyone had one of the OMEGA flags, the same as all over the world, and on the day of the launch the flags appeared everywhere. At night everyone had green light bulbs in their front rooms and porches. That really made an impression.

“Every city did its own thing. Some went for a big demonstration, like New York, while others were more creative. In Berlin they organized a week of non-stop concerts celebrating their twenty-five OMEGA solutions. In Paris they did a 24-hour bicycle ride with 100,000 people circling the city center. In Beijing they organized teach-ins all over the city to avoid a showdown with the authorities in Tiananmen Square. They were still crushed in the end, but for a few months it was really promising.

“It wasn’t just the groups and meetings,” Lucas said. “It was the incredible sense of commitment. OMEGA Shanghai dreamed up a concept called ‘Global Acupuncture.’ They created a model of the Earth that showed her as a patient in

need of care and attention. They showed all these pressure points and they encouraged everyone to choose a pressure point and get stuck in. If we each chose one point, they said, we would have an impact.

“I chose the forests, and I’ve stuck with them ever since. It’s a great feeling, really getting to know what you’re doing. You can actually accomplish something and make a difference.

“We could have done it before if we’d had the vision. Before Jim came along people had forgotten that people on lower incomes could organize too. He inspired us to take control of our destinies, and make things happen.

“If it hadn’t been for Jim I might still be in jail,” he continued, “and not for blocking the streets. I’d been doing drugs, and occasionally stealing to support my habit. It’s not something I’m proud of. But Jim cared. He made me feel worth loving. He taught me to believe in myself. He showed me how to reprogram the negative self-images that had wrapped themselves around my brain and convert my anger into action. Negative energy drains the heart, he said.”

“So what changed to create the political will?” I asked.

“Everything. There was such a sense of crisis what with the financial meltdown, the government cutbacks, the credit freeze, the unemployment, people losing their homes, and the growing number of people who identified with the precariat. There were so many people who’d had it up to here with the plutocrats and the corporations not paying their taxes while concealing their wealth in tax havens. Friggin’ trillions they hid. Trillions. The governments always seemed to care more about the bankers and the one percent than they did about ordinary people like me and Aliya who had to put up with crap jobs, crap housing and huge personal debts, and all the while the climate crisis kept getting worse. We blockaded the routes of the pipelines that were being planned to ship the tar sands bitumen to China and the railways that were shipping coal to Asia. We had a pretty good time of it, but the elections they came and went. The politicians, they made their promises, but nothing changed. And all the while the climate crisis kept dumping more extreme floods and igniting ever more extreme forest fires while the fossil fuel companies were laughing all the way to the bank.”

Lucas was in full stream. I could see why people found him inspiring.

“But it was *our* future that was going down the tubes. Me and my friends, we were young. We had our whole future ahead of us but everything was conspiring to take it away, and away from the creatures we shared the Earth with—the forests, the oceans, the salmon, the grizzly bears. I used to go ballistic each time I saw a photo of some hunter gloating over the corpse of a beautiful grizzly bear he’d just shot—or she, for it wasn’t just the men. When we say a green future we mean green, not polluted brown or day-glow pink all fucked up and given back to us stuffed on a wall or in a friggin’ shopping catalogue.”

“You’re the man, Lucas! Viva la revolución!” Dezzy laughed. “But Patrick was asking what made the difference. What was it that enabled us to succeed?”

“Oh yeah. Sorry about that. I get carried away. Jim said it was three things.

First, he said, we learned how to organize and build a broad coalition. I don't know how, but we managed to get the unions, the youth organizations, the eco-groups, the social change groups, the First Nations, the seniors, the churches and the green businesses on board as well as the precariat—people like me and thousands of others who never normally had a voice. Jim says it was because we had learned how to listen, which made people respect us, and not feel that we were just pushing our own ideas at them. We also learned from books like *Why It's Still Kicking Off Everywhere*, by the British journalist Paul Mason, who showed how the lack of a broad coalition had been the downfall of previous breakouts.¹¹⁴

“We also learned from two other Occupy mistakes. It's not leadership that's the problem—it's non-transparent, non-responsive, non-democratic leadership. We needed to be proud of the impulse to lead, Jim said, not suppress it. If you've got any passion in you, you've got it in you to be a leader. We needed to trust our inner leaders, he said, and bring them out. That was really important in building the coalition. If we had turned away every potential leader as soon as they showed up, as some of our anarchist friends wanted, we'd never have been able to build a coalition. That was the politics of *disempowerment*, not success. And we decided to scrap trying to make every decision by consensus. It took far too long, it got people tied up in knots over trivial things and it gave disproportional space to people who were disruptive who might actually have been provocateurs, trying to disable us from doing anything. We reverted back to the use of strong majorities, which made decision-making a lot easier.¹¹⁵

“So once we had our twenty-five solutions in place we used social media to organize mini-protests at very short notice with rules on how to communicate, following Jim's insistence on action, not anger. And we trained in non-violent protest, learning from people like Gandhi and the civil rights movement.¹¹⁶

“At the street protests, the office workers and waitresses would stop work and join in the singing. Then after five minutes we'd disperse and show up somewhere else the next day. We kept it up for months. One day we'd hold a philosophy discussion in the middle of Howe Street. The next day we'd be out in the burbs planting tomatoes along the boulevards. Then we'd be up at the university, burning the documents that symbolized the student debts we'd paid off.”¹¹⁷

“You were paying off student debts? How on earth did you do that?”

“There was an OMEGA group at the university buying up the debt for pennies on the dollar to keep it out of the hands of the debt collectors and the vulture funds, using crowd-funding to gather the cash. They called it a Rolling Jubilee, after the name of the group in New York that dreamed it up. They were an offshoot of Occupy Wall Street. That's all history, since higher education is now free, in effect.”¹¹⁸

“Free? So there's no more student debt?”

“Correct. Students pay for their education with a three percent deduction on their income for twenty-five years. If you have a really low income, you pay three percent of your really low income, and if you're a billionaire you pay three

percent of your billions, which strikes me as fair. For shorter courses it's less, and students who graduated before the program started have had their interest capped at two percent to drive out the vulture funds."¹¹⁹

No more student debt. That would be a huge burden off young people's lives.

"That's really impressive. So the original Occupy movement wasn't just complaining?"

"The Occupy movement never died. It morphed and transformed. It turned from a caterpillar into a butterfly. The activists who stuck with it developed a positive approach and did some really great things."

"That's very cool. What was the second thing that made a difference?"

"Oh—right. The media. We paid a lot of attention to the conventional media, building good relationships, always trying something different so they'd get a good story. Social media was great for organizing, but conventional media still mattered for influencing public opinion, especially among the older people. Once we laid out a fancy picnic complete with tablecloths and wine glasses right across the road—but no food, to highlight all the people who were hungry. Ten minutes later we were gone, quick as we had come. On another occasion we organized fifty jugglers. The crowd was huge, which gave us a chance to talk to people. And then there was the time we got inside the buildings on either side of Hastings Street, slung a cable between them and had acrobats tightrope walking across the middle of the road. We ran a banner across saying WE NEED TO BUILD A BETTER FUTURE. Humans pay more attention to something new, Jim told us, so every day we needed to dream up something new to keep people's attention."

"Is that what you got arrested for? The street protests?"

"That, and other things. They got good at picking off the leaders. We'd given up trying to organize anything in secret; they were monitoring every phone call, tweet and email. You could hardly *think* something without them knowing. If you bought a book about social change from Amazon they had you listed immediately. But the arrests started to work in our favor, because people saw how we were arguing for practical solutions. So, it built and built. Then in July we organized the Festival of Hope in the Downtown East Side. That was when Derek was assassinated. It was our most powerful moment, which became our greatest fucking tragedy."¹²⁰

Lucas fell silent. Dezy too.

"We never believed it would come to that. Prison, yes, but not that." Dezy stared down at the table. Then she looked up and smiled.

"Look... Derek would be so proud of what we've achieved. So why don't you continue with your story?"

"It would be easier if we'd nailed whoever did it. It sticks in my fucking craw to know that someone's out there laughing about it with his friends over a gin and fucking tonic."

"Don't go there, Lucas. It'll eat you up."

“Okay, okay. But I’m not giving up. I still think it was someone connected to the Alphas. They were so cocky the way they mocked us.”

“Who were the Alphas?” I asked. “But before you answer, what about Jenny, Derek’s girlfriend, who came back with him from England?”

“Oh, Jenny. Dezzy, you tell him.”

“Jenny was another tragic story,” Dezzy said. “She was right beside Derek holding his hand in the front row of the march, radiant as a little bee. She even managed to swat one of the nanobots when it flew too close, bringing it down. What a cheer that produced!”

“Nanobots?”

“Yes, the micro-drones the police used to track us. That one got too low, and Jenny downed it. We were going down Hastings towards the intersection at Main at the center of the Downtown Eastside. There were about twenty of us in the front row; Jenny was right beside Derek holding his hand when he was shot. He collapsed, and there was a second bullet that might have been aimed at Jenny. It hit a girl behind her, Chanandeep Singh. She survived, luckily.”

After a pause, Dezzy continued. “There was pandemonium. People tried to scatter, but there was nowhere to run to—no-one knew what was happening. Then something incredible happened. I was down on the ground with Jenny trying to help Derek and Chanandeep and people started forming a circle around us, then others joined in so there was this complete circle of people holding hands around us. What courage that took, since no-one knew where the shots had come from, or if there’d be more. And then someone started singing, not one of our new songs, but that old one from the civil rights movement: *We Shall Overcome*. My god, what a moment that was as the song spread down the street and tens of thousands of people joined in. Soon after, the police arrived, sirens screaming, and they took control, trying to get us to disperse. I’ve got to give it to them—the Vancouver police were amazing. They were well trained for non-violent protests, and they always carried body-cams.¹²¹ They never used tasers or pain-rays, the way the cops did in Toronto and New York.¹²² They tried to make us disperse, but people just stayed there, singing. Some were praying and meditating, down on their knees in the midst of it all. I think Derek died while they were singing, so that would have been his last memory if he was conscious. He never said anything. The paramedics rushed him to hospital, but it was too late.”

I was silent, taking in Dezzy’s story.

“I think I knew then that we’d win,” she said. “Sitting on the ground holding Derek’s hand while Jenny was so desperate, all the people singing, I heard a voice inside me that said we were going to win, that it would all be okay. I could really feel that the power of the people was with us.”

“And the funeral,” Lucas said. “That was stupendous. It was a huge procession, so many people sharing the same vision, the same determination, the same love.”

“What happened to Jenny?” I asked.

Dezzy sighed. “She was so deeply traumatized; we couldn’t pull her out if it. She tried sharing in our OMEGA Circles, but it just made things worse. I’ve never seen anyone so deep in grief. Eventually, she left Vancouver and went to Ecuador, where a friend had asked her to help build an ecovillage. I still hear from her occasionally. She has a new partner and she seems happy; I doubt she’ll ever return to Vancouver.”

“What were the OMEGA Circles?” I asked.

“They were our support groups,” Dezzy replied, getting up and staring out of the window. She looked wistful.

“I’m sorry,” she said. “I haven’t thought about Jenny for a while. I still feel that we should have done more. We were such good friends. I miss her.

“But you were asking about the OMEGA Circles,” she said, turning back to face me. “The Circles were our support groups. It’s like Lucas was saying about Thich Naht Hanh. We have to practice love at the personal level as well as the political.

“We needed a support network to help with our various issues and fears. We’re none of us perfect; we all sometimes act selfish or stupid when we’re under pressure. It’s the little things—the self-importance, the defensiveness—that can screw up a group’s effectiveness and rob it of its joy. How to speak honestly when you know you might hurt someone? That’s the difficulty.

“The answer is with love. It’s the only way it can work. The OMEGA Circles were our buried gold. They held us together. Every Sunday night we would share a meal, meet in a circle and then listen to music together lying around on cushions, holding hands or cuddling. The things Lucas said about what helped us succeed are all true, but I doubt we could have done it without the Circles. I’ve seen so many campaigns lose their effectiveness because they leave no time for love and connection. They’re dominated by the big talkers and the workaholic activists, and without meaning to they can rob a campaign of its spirit because everything feels like work. It’s so important to celebrate the bonds you form when you work on something you believe in. But I’m getting distracted. You were asking about something else....”

“Yes, the Alphas. But it’s important, what you’re telling me,” I said. “I’m taking it all to heart.”

Dezzy smiled.

“The Alphas,” said Lucas. “We never knew who they were. They had a website, but they had it on encrypted P5, the highest privacy setting, and we were never able to hack it. They were totally opposed to everything we stood for. They used to joke that Omega came at the end of Greek alphabet, so we represented the scum of humanity, while Alpha came at the beginning, so they were the real leaders of the free world, protecting it against the socialist dictatorship we supposedly wanted to impose. That’s typical of fascists, accusing you of the very thing they want to do themselves. They were probably a front for the oil industry, or the gun lobby in America. Or it could have been people who were freaked out

by Derek's statements about tax havens and his calls for transparency laws that would have revealed their hidden wealth, with talk of jail time for the big evaders.

"Anyway, within a month of Derek's assassination the public response was so overwhelming that the Alphas began to weaken. We organized an OMEGA Roadshow that toured the province, visiting all the small towns in the conservative heartland, winning people over to our solutions-based approach. There was a massive petition to the Premier, urging progress on a package of legislation that supported the changes we wanted. Here in Vancouver we had people going house to house in every neighborhood getting people to sign. So many of the people we contacted signed and gave us their support, and many followed up by phoning the Premier's office. As the weeks went by we built a really strong coalition, including young people, students, labor unions, retired people, the urban poor, small businesses, and some of the province's most prominent scientists, academics, First Nations leaders, musicians and sports stars. With that much support the politicians started lining up to join us, and the government could see which way the wind was blowing.

"In the end they agreed to our request to create five Citizens' Assemblies, one for each of the five OMEGA themes, each with a hundred delegates chosen at random to hold hearings around the province. The Assemblies were to be truly open as they envisioned the future they wanted and researched the best solutions. The organization that ran the Assemblies even gave them a list of common brain traps to steer them away from confrontational thinking.

"When they reported back six months later they supported most of our proposals, with some small changes and improvements. It was such an amazing feeling. We had done a massive job of getting people involved. We had organized a Festival of Solutions, inviting people to post their best ideas to the website, organized into categories so that all the poverty solutions could be seen in the same place, for instance, and people could make comments and give each idea a rating. That's how the best ideas emerged."

"That's fantastic!" I exclaimed. "It's amazing what you achieved." I looked at Dezy and Lucas with deep appreciation.

"Well, it's interesting to look back on it," said Dezy. "And yes, we did accomplish a lot. Derek would be proud. But there's so much more that needs to be done before we're out of the woods."

"At first it seemed like we were dragging a huge weight along the ground, a sack of ideas all jumbled together and crashing against each other," Lucas said. "Then it gathered momentum, like an airplane on the runway, and started to fly..."

I nodded. "So going back, Lucas, you said there were three things that made a difference. What was the third? Or the fourth, if you include the OMEGA Circles."

"Oh, the music!" Lucas responded. "We had the best music: singing, dancing, everything. The Belgian climate activists had taken the World War II classic song

Bella Ciao about Italian partisans leaving to fight the fascists and they had set new words to it—‘*Do It Now*’—and it became our anthem.”

Lucas sang the words quietly, with a determined emphasis on the words *now*, *now*, *now*.

*We need to wake up,
We need to wise up,
We need to open our eyes
And do it now now now.
We need to build a better future,
And we need to start right now.*¹²³

“It was amazing to be part of a thousand people singing it together. We developed some great harmonies, and we put all our songs on YouTube so that people could learn them. We took songs like John Lennon’s *All we are saying is give peace a chance* and gave them new lyrics like *All we are saying is give us a home*. Even the Vancouver Bach Choir got involved, if you can believe it. One of their singers wrote a new verse for Oh Canada....”

Lucas stood up, cleared his throat and started singing:

*O Canada! Protect our future now!
Give us the strength to guard these seeds we sow.
With glowing hearts we see them rise,
Our future green and free.
From far and wide, O Canada, we sow these seeds for thee.
Earth keep our land, fair, green and free!
O Canada, we sow these seeds for thee,
O Canada, we sow these seeds for thee.*¹²⁴

“Everyone knew that the seeds represented the work we were doing to build a better future. When the politicians finally voted to approve the package of legislation that made the OMEGA solutions a reality the public in the balcony of the Legislature in Victoria erupted into song, singing the new verse. Then the politicians joined in, led by the Premier himself—the Green Party’s first ever Premier—and afterwards everyone sang *Do It Now*, with the Premier himself singing along in full voice, grinning from ear to ear.”¹²⁵

“I was in Chicago at the time,” Dezy chipped in. “It was on the evening news. We knew something important was happening. They showed a clip of everyone singing *Do It Now*.”

“The Premier of BC came from the Green Party? How did that happen?” That was a *big* surprise. Back in my time the Greens had only just elected their first MLA.

“They won seven seats in the election,” Dezy replied, “and they offered to form a coalition with the New Democrats on condition that voting was made proportional. The New Democrats had no choice, since they needed the Greens

to form a government. In the election after that the Greens won 29 seats to the Liberals 26, the New Democrats 23 and the Vancouver Island Party's one seat, enabling them to form a coalition with the New Democrats."¹²⁶

"What happened to all the people who had been trying to block the changes? Where were they in all this?"

"They fought back," Lucas continued. "It took them a while to get organized, because they never imagined anything would come of it. Canada is not America, where the opposition to change was so well funded. When you were in school, did they teach you about the Tea Party, the so-called spontaneous revolt against government corruption and wastefulness?"

"No, but I learned about it."

"Well it wasn't spontaneous at all. It was planned and financed by organizations with direct links to the tobacco industry, and by the Koch brothers, the coal industry billionaires.¹²⁷ But no-one expected anything earth-shattering to come out of Vancouver, so the business interests who might have supported a right-wing pushback weren't well organized. Besides, they'd seen the Occupy movement come and go and they assumed we would be the same. But we weren't. We were so much better organized.

"They started to scramble once they realized the scale of what was happening, and took the time to read Derek's book. Then out of nowhere there was a new player on the block—the Canadian Freedom Foundation. Their funding was very secretive, but we think it came from private sources in the US. They claimed to be a grassroots non-profit upholding the values of western civilization, but they were deeply implicated with the Alphas. They started using the normal means of attack, but after a few months things began to turn ugly. I discovered where things had gotten to when the police battered my door down at five o'clock on a Sunday morning with an arrest warrant. There was a huge dawn roundup, *five hundred* of us. They stripped us of our clothes and devices, so we had no idea what was going on. Some said it was the beginning of fascism—they compared it to Krystallnacht in Germany in November 1938, when Nazi storm troopers destroyed Jewish synagogues and businesses and marched 30,000 Jews off to the concentration camps. By breakfast, we learned that there'd been a so-called 'credible threat' of an algattack against the Toronto Stock Exchange, and Tiger News was claiming to have evidence that we were behind it."

"What's an algattack?"

"It hacks into the algorithms that govern critical parts of the economy. It's far more insidious than a straightforward hack-attack. It replaces the governing algorithms with cloned substitutes designed to achieve very different goals. When an algattack hit the financial sector the money-flows went crazy, causing investors to panic. It's a very serious cyberweapon, and it's almost impossible to know who's behind it."¹²⁸

"How long did they keep you in jail for?"

"Four weeks," Lucas replied. "They invoked the *Cyber-Terrorism Control*

Act they had passed when Russia's financial crisis showed what was possible, but when nothing credible emerged they had to release us. But by then we'd had four more weeks to organize. There was a prisoner with us from the Athabasca Chipewyan First Nation in Alberta who taught us how to do Powwow dancing within the confines of a cell. It was a great way to strengthen the spirit. Catch the anger, he said, and channel it constructively. It created a bond that was worth a million when we got out of jail."

"Do you think the Canadian Freedom Foundation was behind the threat of an algattack?" I asked.

"Maybe. The police never did locate the source. The emails came from Russia and pointed to a local connection, but when our lawyer ran a grammatical algorithm he proved that they were very unlikely to have come from us.

"But the threats worked in our favor, because people saw that we were being victimized, and when push came to shove people liked our positive vision and our practical solutions. They weren't being fooled any more by the claims that climate change was a hoax, that genetically engineered crops could feed the world and people were only unemployed because they were lazy. And there were lots of local politicians and business leaders who supported us, who went out of their way to call the Premier's office.

"The attacks came in two waves," Lucas continued. "The first wave came on the heels of the OMEGA Days—the stuff we've been talking about. The second wave came in the 2020s, when the Greens and New Democrats were in government and they were clear about the changes they planned to introduce. That's when the forces opposed to change began to show their teeth.

"Jim used to say that if you want to change the world, you have to know who your opposition is. Then you have to get inside it and transform it. There are three main fortresses of power that maintain the status quo, he said, and each has to be taken over and transformed. They are the government, with its deep state apparatus of police, security forces, intelligence operations and the military; the banks; and the corporations. The corporations don't occupy a single fortress. They have a whole network of fortresses that protect their interests in fossil fuels, forestry, the media, the food industry, farming, chemicals, fisheries, retail shopping and so on—wherever there's money to be made. Each of the fortresses needs to be transformed.

"Behind them, there's a secondary line of defense in the plutocracy—the elites and the super-wealthy who benefit from the status quo and who work to maintain it, sending their plutokids to private pluto-schools where they become pluto-friends with other plutokids, holidaying together on their private pluto-islands and giving each other positions on their pluto-boards. Taken together, it was a very formidable defensive structure, based on the belief that economic growth, the free market and making money are the most important things in life, and all other goals are secondary.

"It was not until the Greens and New Democrats started moving towards

public banking that the Fortress of Banking began to flex its muscles, threatening dire economic calamity, the downgrading of the province's credit rating and the collapse of BC's economy if it moved away from the private, neo-liberal model of banking—but that's a whole other story."

"Well," said Dezzy. "Is this useful, Patrick?"

"My mind is reeling. I have so many questions, but they'll have to wait. But what do you do for work personally, Lucas? Are you still involved in the OMEGA movement?"

"I'm a woodworker in the Cascadia Forest Co-op. And no, I'm not involved, except locally. I sometimes go to our neighborhood meetings. And yes, it's still happening, but not with the same intensity. Aliya's more involved. She's my sweetheart. She's also our street rep on the Neighborhood Council. You'll meet her if you stick around.

"I love working with wood," he continued. "We've got so much forest here in British Columbia, most of it publicly owned, and yet for years the private companies with the timber licenses had been stripping it with no proper oversight or control, creating massive clearcuts hundreds of hectares in size with just a few trees left standing to meet the letter of the law. Not everywhere, but in a lot of places. Everything not big enough to sell, they piled it up to burn. Fir, cedar, maple... it was a crime.¹²⁹ Now that we've got back control we're able to do so much more with it, and the forests are being managed in ways that respect the ecosystem as well as the profit system. Now the main thing we have to worry about is all the forest fires, which have been so bad of late. We do a lot of work with the Trust for Sustainable Forestry, which buys up privately owned forest lands that are threatened with bad logging and protects them by enabling the development of small forest villages on a tiny portion of the land, protecting the rest. Right now, we're building a hammer-beamed timber ceiling for a village hall, the way it was done in Europe a thousand years ago. It's amazing. Sometimes when I'm in the forest I look around and I say to the trees, 'You're safe now. We're not going to hurt you anymore.' They're so happy that we've finally stopped the destruction."¹³⁰

"I'd love to talk more with you, Lucas. I'd be fascinated to know what the solutions were for affordable housing."

"Why don't you come over to my place, and we can talk some more? Give me five minutes to do a couple of things and I'll be right with you."

After Lucas took off, Dezzy said, "Lucas is amazing. He's a bit gruff at times, but he's a sweetheart under the skin. Jake adores him. Make sure you're back in time for dinner. I've invited Betska and her grandson Leo. And tell Lucas and Aliya they're invited too."

 7

A for Affordable Living

WHEN LUCAS RETURNED he invited me over to the laneway house he called The Little Palace at the back of Dezzy's garden, which he shared with his girlfriend Aliya. From the outside, it looked like a tiny two-storey house with a solar roof. Inside, it was one big room with a high ceiling, kitchen area, sleeping platform and large windows that made it seem spacious. He offered me a glass of water and we sat down at the table overlooking the garden.¹³¹

"You said you built this yourself? It's lovely!"

"We had help from a friend who's a builder, and friends came over for weekend work-parties. We followed the Passive House Code, which ensures that you will use ninety percent less heat energy than you would with a conventional house, and I attended the five-day training course put on by the Canadian Passive House Institute.¹³² We couldn't get it certified, since that's really hard with such a small surface to volume ratio, but look at the result! I can go barefoot in here all year round, and it doesn't get too hot in summer either. And when there's a power cut in winter we can keep warm with just three candles.¹³³ The plumbing was complicated, so we hired a professional. We have a composting toilet, and we get all our potable water from rainwater stored in a big tank under the house, filtered and UV treated. We wanted to build a greywater treatment system, but the city wouldn't allow it. The water thing is really important. There have been several summers recently when Vancouver's reservoirs almost ran dry due to the long periods of drought we've been having."¹³⁴

"What do you do for heat?"

"We hardly need any. It's a passive house, so it needs 90% less heat than a regular house. It's got ten-inch walls with rigid foam insulation and Magnum Board in place of drywall and plywood.¹³⁵ There's foam insulation under the slab and the really tight construction seals out all the leaks. As for heat, see that white box up on the wall? That's our heat recovery ventilator, which recovers ninety-five percent of the outgoing heat."¹³⁶

"That's pretty impressive."

"The windows were the most expensive part. They're triple-glazed with a fiberglass frame—they're made locally, and we got them from IKEA. The heat recovery ventilators are made locally too. There's been quite the employment boom, with new businesses and co-ops starting to serve the flourishing green

building scene. We used recycled timber from the Re-Store, and our electricity use is minimal—mainly the toaster-oven and drying clothes in winter. Our solar produces an average four and a half kilowatt-hours a day, and we have twenty kilowatt-hours of battery storage.”

“Is this way of building common for a home like this?”

“Yes, pretty much. Every new building in Canada has to meet the Near Passive House Code these days. They adopted the rule after seeing how much success they had in Brussels, Belgium, doing the same thing.¹³⁷ Why build something you have to pay to heat, when you can reduce your cost to almost nothing? We got the highest green rating, and Dezzy gets a reduction on her municipal taxes because there’s no burden on the city water. We should be looking to buy our own place, but we really like it here.”

“I gather there’s a rule that you can’t park a car. Couldn’t you just park one street over?”

“The parking spots are all permitted and the laneway homes aren’t assigned a permit. We could buy a spot if we wanted, but who needs a car when cycling’s such fun, public transit is so efficient and carsharing’s so easy? Our goal is to live as simply as possible, buy as little as possible and have a really light footprint on the Earth. And no plastics.”

“No plastics at all?”

“Well, as far as possible. Aliya says we should be okay with compostable bioplastic, since it’s earth-friendly, but I’m holding out for no plastics at all except where there’s no alternative.”

“Do you use Li-Fi, the same as Dezzy?”

“No—we’re cabled in directly. But she’s right to do it. I’ve read too much about the dangers of Wi-Fi, and Aliya keeps telling me about people who have cellphone related tumors. She’s a nurse, so she sees it first-hand. I’ve become a bit obsessed, I’ll admit. Ever since I learned about the Pacific Garbage Patch when I was a teenager I’ve been campaigning to stop the use of plastic. Those photos of dead albatrosses with their bellies full of cigarette lighters, plastic bottle tops and other plastic crap really grossed me out. The plastic is constantly breaking down, so it’s filling the ocean with tiny fragments that are being swallowed by the fish.”¹³⁸

“Is anything being done to clean up all the plastic in the ocean?”

“There’s a global treaty to reduce and recycle plastics, and a crowd-sourced initiative to name and shame the countries with the least recycling and the worst beaches, and there are about twenty Ocean Mantarrays at work around the world. They use the currents to catch the plastic and remove it.”

“Mantarrays?”

“Yes. They were dreamed up by a Dutch teenager, Boyan Slat. He was a student when he started working on the idea. He developed a system of floating booms anchored to the ocean bottom. It shows what you can do when you put your heart into something.”¹³⁹

“That’s really impressive. He was just a teenager?”

“Yes. So that got me thinking about the oil plastics are made from. Did you know that at the peak of global oil production the world was consuming enough oil to fill five thousand Olympic-sized swimming pools every day?¹⁴⁰ And all of it from the two hundred million years old remains of ancient sea creatures.

“So I try to never to use plastic and we aim to live as simply as possible, using the sharing economy instead of the consuming economy. As Gandhi said, you have to *be* the change you want to see in the world.”

“The sharing economy?”

“Yes—giving and sharing without any exchange of money. It’s the oldest economy of all. It was only when we started exploring and invading each other’s territory that gifting turned into trading, and then into stealing and slaving. I want to recover the ancient ways.”¹⁴¹

“But you still enjoy going to—what was it—a holoconcert?”

“Yeah—I know it’s a contradiction. We can’t all go back to living in tribes, hunting and fishing, but we can enjoy the experience of sharing. Have you ever been in a Gift Circle?”

“No—what’s that?”

“It’s when we get together and share whatever we can offer, but as a gift, not an exchange. Aliya and I are part of a Circle that meets every month. When we built our house we had tons of help from people in the circle. The more you give, the richer you feel. Aliya’s much better at talking about this kind of stuff. She’s a lot clearer inside. I still carry a lot of crap.”¹⁴²

“Join the gang!” I replied. “I’ve got all sorts of confusions that rattle around inside me. I wonder how long it takes to get this living thing figured out, so that life’s not such a roller-coaster.”

“Did I tell you I’m First Nations?” Lucas said. “My father is Carrier, from the Saik’uz First Nation in the interior, near Vanderhoof. My mother’s family comes from Wales. My father was pretty distant from his people due to some bad things that went down, and after I came to Vancouver I didn’t have much to do with him. But then someone told me about a wilderness camp the Carrier organize to re-introduce people to their culture. So I decided to go.”

“How was it?”

“It was amazing. There were twenty of us. We spent a month living in the bush learning how to hunt and track, how to build a camp, listening to the elders and their stories. It took me a week to get over my city hang-ups, like fussing over what time it was, and then I began to feel at home, both on the land and in my own skin, for the first time in my life. People had always talked about ‘being close with nature,’ but I never really understood what they meant until I spent time in the wilderness. It was like I began to feel a true empathy for the forest, the bears, the birds, and all the other critters, like we shared the same soul. I could really feel how we hurt them when we acted so carelessly with our consumer way of living. We spent three days entirely alone, fasting with just water, and we were

asked to go in with a question. Mine was ‘What is the question that I’m asking in my life?’ What I came out with was ‘*How can I live a life that nourishes everyone around me, both humans and in nature?*’”

“That’s a pretty big question!”

“Yes. I guess it’s a lifetime adventure. It’s also really cool how many great things the Carrier are doing. They’ve formed a co-op that’s building passive housing, solar projects, cohousing clusters, things like that. They gave us a tour of the Saik’uz Village Project. It’s completely car-free, centered around the longhouse, the way villages used to be before the white man arrived. They’re also learning and speaking their traditional Yinka-Dene language. Their ceremonies and dancing are just so powerful.”¹⁴³

“Do you think you might return, like, go and live up there?”

“I’ve thought about it. But I’m happy here with Aliya, and the woodworking co-op is going really well. The crew gave me a Certificate of Excellence for my work on our last project. So you could say I’m happy in both worlds: my First Nations world and my city world. And it’s so cool that the Premier of British Columbia is First Nations. She’s from Haida Gwaii. I’m so proud of her.”

“How did that come about?”

“Charlene Jack. She became a Green Party MLA when the Greens formed the government in coalition with the New Democrats. She started out as Minister of Family Services, then Minister of Finance, and then she became leader of the party. In the last election she led the Greens to a majority, and she’s still only forty-eight. There’s talk that she might run for one of Canada’s seats on the new Global Assembly. That would really be something. Imagine being one of seven people chosen to represent your country on the global stage.”

A Global Assembly? I was itching to know more, but I held off.

Lucas paused, then out of the blue, “Tell me, do you meditate?”

“I tried it a few times, but I never got into the habit,” I replied. “My mother used to meditate when she was in the mood. Why do you ask?”

“Aliya meditates. It’s quite a big thing with her. She gets up early and I see her sitting there so silently. She does it before her morning prayers. She’s Muslim. So I was just wondering. When I was with Jim we used to meditate a lot, but whenever I do now I feel uncomfortable. I get my peace out in the forest. But look, you said you wanted to find out how we tackled the affordable housing crisis?”

“Yes. Is that okay? It can wait if you want.”

“No, it’s fine. If we had a day I could take you on a tour and show you all the great things that are happening. Maybe you’ll get to see some if you go downtown. But I can tell you about some of them. Can I get you a coffee or a cup of tea?”

While Lucas was in the kitchen area I sat at the table and looked around at his space. I could feel Aliya’s presence, though I’d yet to meet her. There was a beautiful embroidered wall hanging and a gorgeous blue, green and gold prayer rug decorated with flowers and minarets.

“So,” Lucas said, returning with two mugs of tea, “when I first came to Vancouver the housing situation was ridiculous. Even a tiny house like this used to sell for half a million dollars. That would be almost three thousand dollars a month if you could get a mortgage, and it was more than fifteen hundred a month to rent a one-bedroom apartment. They said Vancouver had the second least affordable housing of anywhere in the world, after Hong Kong.”¹⁴⁴

This was something I knew all too well. Daria and I had a small inheritance from our parents but nothing we could buy a house with, and the two-bedroom apartment we rented cost more than two thousand dollars a month.

“The OMEGA team that tackled the problem wasn’t starting from scratch, however,” Lucas continued. “The city had put a lot of effort into the problem before OMEGA came along. The most important things they were doing were requiring developers to make twenty percent of the units of any new development affordable, giving incentives to developers to build 100% rental buildings, allowing far more secondary suites around the city, and requiring 35% of all new developments to be family-oriented housing.

“Then during the OMEGA Days, because of the crisis, they brought in a new rule that developers building ten units or more had to sell ten percent of the units to the Affordable Housing Agency at cost, which it rents out to people who work in core services such as healthcare, social services and the police, giving the developer increased density as a trade-off.¹⁴⁵ They also worked to prevent demolitions, and to encourage laneway housing like ours. And they established the Vancouver Rent Bank, which helps renters with short-term loans if they’re in a crisis.¹⁴⁶

“So we’ve got to give them credit, but it was still not enough. The first OMEGA solution was to build a pool of money that could be invested in affordable co-op and rental housing. So there’s now an escalating property transfer tax on top-end real estate sales over three million dollars, and a speculation tax on properties that are flipped within a year of being bought. And before the ban was brought in on property-purchase by non-Canadians, the same as in Australia, there was an annual levy on properties bought through offshore companies or registered offshore to avoid taxes.¹⁴⁷ And there’s an escalating series of fines for owners who leave their properties empty, culminating in jail-time for persistent offenders.”¹⁴⁸

“Jail-time?” I was shocked.

“Yes. They took the idea from London, England, where they had a similar problem.¹⁴⁹ The money goes to the Affordable Housing Agency, which distributes it to community non-profits and Neighborhood Associations to build affordable housing and housing co-ops. That was the second OMEGA solution.¹⁵⁰ People can now invest their retirement savings with the Agency, which has increased the pool of available money.¹⁵¹

“As well as building new housing the Agency is buying out the slumlords who operate the old rooming hotels, so that they can be restored or demolished and rebuilt, still as rooming hotels for single people on really low incomes but

clean and safe with good community facilities. Those places were terrible. Rats, lice, bedbugs—you name it. I lived in one for a while, so I know what I'm talking about."

"What was the third solution?"

"The third addressed the problems people were having around community living. As a result, it's now legal for more than five people to share a house,¹⁵² and for the owners of buildings with flat roofs to build rooftop suites with the same no-car rule that there is for laneway housing.¹⁵³ Vancouver also has two new zoning bylaws, one that allows single family lots to be subdivided into five units of three-storey townhouses, which has done a lot to increase the supply of housing,¹⁵⁴ and one that allows micro-villages on land that is temporarily vacant. Here—I'll show you some photos."

Lucas reached for his laptop and projected a series of images onto the wall, straight from the device. They showed tiny villages of tiny homes, complete with gardens clustered around a village green.

"I've a friend who lives in one in East Vancouver where a development proposal has been stalled for a year. His home is even smaller than ours. They're pre-assembled by a builders' co-op in the Fraser Valley to a standardized design, and wrapped in ten-inch slabs of foam insulation. They come with a rainwater capture tank, a UV filter and composting toilet, and they share community grey-water treatment. There's a rule that if you want to live there you have to help create the gardens, and you're expected to join the weekly village meeting. It creates a strong sense of community, but as soon as the land is ready to be developed the village has to go, at twelve months notice. The Agency keeps a record of all vacant land, however, so it's often possible to move to a new site. It's not a great solution, since it's so temporary, but the people who live in the villages love them so they put up with the inconvenience of having to move."¹⁵⁵

"If they weren't allowed, the land would just be sitting there empty, right?"

"Yes. So, moving on, the fourth OMEGA solution was for people in apartment buildings, renting from a landlord. They wanted tenants to be able to form Tenants' Stewardship Councils to address the various problems that arise. So they wrote a Tenants' Charter, spelling out their desire to live in buildings that are comfortable and energy efficient, free of fumes and infestations, with space to grow food and to store their bicycles and recyclables. In return, the Charter spells out the tenants' commitment to look after the property, to abide by a code of respectful conduct, and to agree to a set of conditions if someone can't pay the rent. That was the landlords' biggest headache—dealing with tenants who trashed the property and walked away without paying. They wanted a guarantee that in return for cooperating when a landlord upgraded a building, the landlord wouldn't raise the rent. And finally, they wanted the Tenants' Stewardship Councils to have first right of refusal to buy their building if it came on the market, to convert it into a Housing Co-op with the land being owned by a Community Land Trust."

"Did the landlords agree?"

“It took a year, but then some of them helped draft the legislation, and after that the others came on board. When they realized that the tenants weren’t being hostile they saw it as a chance to build a new relationship. The thing they liked least about being a landlord, they said, was all the conflicts and complaints. If the Stewardship Councils could improve that, they were all for it.”

I had so many questions, but I was eager to learn about the fifth solution.

“The fifth was for farmers, many of whom were struggling,” Lucas explained, “and for all the young people who wanted to farm but couldn’t afford the land. As a result, any farmer with more than twenty hectares is now allowed to sell one hectare for development as a clustered farm village, with a series of conditions to ensure that the people living there farm the land. The new farm villagers can also lease or buy as much land as they need from the farmer. It’s been a huge success, with dozens of new villages being built.”

Lucas threw up a series of photos. The villages seemed timeless, apart from the solar panels on the roofs. Some were built from straw bales or cob and some from timber, and they were often clustered around a shared courtyard, with a barn for farm equipment.¹⁵⁶

“So,” Lucas said. “It hasn’t solved the whole housing crisis, and there was a lot more that was needed to help the homeless, but it cracked the biggest problem, which was the chronic shortage of affordable housing.”¹⁵⁷

“That’s really impressive. You must feel proud.”

“I only played a tiny role. The affordable housing stuff was other people’s work. Most of the time I think about all the things that still need doing. Vancouver’s great, but it’s not the world. The climate crisis is by far the biggest problem we face, and it’s going to take everyone working together to solve it, in every country.”

“What was it like for you during the Terrible Twenties, as Dezzie called them?”

“The Transformative Twenties, you mean? I remember getting my first carbon ration card. When I analyzed my emissions I found that I needed nowhere near the 4.5 tonnes I was allowed. I didn’t drive a car, didn’t fly places, and I lived in a rented room which had a baseboard heater, using electricity from zero-carbon hydro. So I made \$800 bucks selling the four tonnes I didn’t need.

“I remember the trucker’s strike, however. The truckers were really upset. They said the carbon rationing was putting them out of business so they blockaded the Chevron oil terminal by Burnaby Mountain, parking their rigs at impossible angles across the entry roads. It was only a couple of days before there were line-ups at every gas station. After a week the whole city was grinding to a halt. The police had to arrest fifty drivers and tow their trucks away to get the oil flowing. It was a great lesson in how dependent we were on oil.

“I also remember the protests against the tar sands up at Fort McMurray, in Alberta. They were pretty scary. I went up with a group of people but after a few days some locals discovered where we came from, and why, and we were surrounded by a crowd of angry oil workers who started to beat us up. The police

eventually rescued us, but not before I had a smashed face and three broken ribs. They jailed us for our own safety and I spent a week in hospital under police guard before they got us out of town. A week later a man was shot by a sniper on the road into town. It only takes one nut-case to make it all go bad.”

“That’s crazy. Was everyone who worked in the tar sands angry like that?”

“No, not at all. They were just really worried about losing their jobs. I spoke to a lot of really good people who said they sympathized with our cause, but they needed the money. There were things like that happening all the time. It was a lot crazier south of the border.”

“Going back to what you were saying about affordable housing, Dezzy told me that the A in OMEGA stood for Affordable Living. Did it include other things as well as housing?”

“Yes, it also included affordable healthcare, food, transportation and child-care. But look, I need to get a few things done. Are you going to be around for a while? I enjoy talking with you.”

I explained that I had until Sunday night, and then retreated to Dezzy’s garden to ponder things. I hadn’t expected to be plunged into tales of protest and revolutionary fervor. But what *had* I expected? It was naïve to think that Vancouver could have become such a green city without some degree of upheaval.

The garden was rich with the abundance of June’s greenery. There were rows of healthy young lettuces and lots of bees on the purple and white flowers of the broad beans. The rhododendrons were in flower, deepest red and purest white, and the first strawberries were ripe. I sat in a garden chair savoring a couple, then closed my eyes and drifted off.

I had a dream in which I was walking in a forest of tall Douglas fir trees, the sun dropping patches of brightness onto the forest floor. Then out of nowhere a dark hole opened up in front of me. Not quite a hole—more a fetid swamp, oozing something dangerous.

A New Synthesis

WHEN I WOKE up I pondered my dream. Was there something I was missing? Then I went into Dezzzy's kitchen, where I helped by making a salad while she prepared a quiche and a rhubarb pie.

"Is your mother still alive?" I asked after a while.

"Yes. She lives here in Vancouver, where I can keep an eye on her. She has become very attached to her church."

"When your parents adopted you, was there a reason why they chose South Africa?"

"For sure—they're from South Africa! They were activists during the anti-apartheid struggle in the 1980s and they had to leave in a hurry to avoid being arrested. I think I told you they named me Dezzzy after Desmond Tutu, the famous South African priest. They were really happy when I married Thaba. And equally unhappy when I left him, but that's another story."

"Hi Dezzzy!" A young woman in her twenties appeared in the kitchen. She had pale brown skin and tightly cropped black hair curled into multi-colored spirals. She was wearing a long summer dress embroidered with a traditional Middle Eastern design, but her expression looked confused.

"Hey, Aliya! Good to see you. You look... what's up?"

"I'm all over the place. Can I have a hug?"

"Well, my sweetest honey-bee... of course you can!" Dezzzy embraced Aliya, who burst into tears. It took her a while to calm down, and then she blew her nose and sat down at the table.

"So tell me, what happened? This is Patrick, by the way. He's staying with me for a few days while he visits Vancouver."

Aliya nodded in my direction and gave me a timid smile. Then she turned to Dezzzy. "I had the most awful day at the hospital, and then on top of it all I discovered that, that..." She choked up and started to cry again.

"Take your time, girl. You discovered that..."

"I discovered that... I'm pregnant!"

"Oh my goodness. That's wonderful! Does Lucas know?"

"Yes. I just told him five minutes ago. He thinks it's wonderful. We both do. But at the hospital today there was this two-year-old girl with an MDR lung infection we'd been nursing. I really loved her, but we just couldn't save her."

Aliya broke down and cried again. After she had pulled herself together, she said, “I just loved her so much. I don’t know what it was. I’ve seen many people die, but this one, she was so sweet, she got to me right here.” Aliya gestured to her heart. “I think she reminded me of a child I knew in the refugee camp in Turkey, after we escaped from Syria. But how many more? How many more are we going to lose? I had to break it to her parents. I feel so mixed up. How can I celebrate a baby growing inside me when they have just lost theirs? How can I even think of bringing a child into the world when this is the reality it’s going to face? It’s too confusing. I almost feel that I want to give them my baby to make up for their loss.”

I didn’t want to probe, but I guessed—correctly—that Aliya had been living with her parents in Syria at the time of the civil war.

“Oh, Aliya,” Dezzy said. “Come here. Have another hug. You’re just too loving. You are *such* a gift to the world.”

MDR... I racked my brain and then remembered that it stood for multi-drug resistant, caused by the overuse of antibiotics. My thoughts were interrupted by a knock at the door, and Betska came in accompanied by a tall young man with wavy black hair and an intense expression, wearing black pants and a snazzy black shirt with two vivid vertical green stripes down the front.

“Hi there, everyone!” Betska said. “Good to see you, Aliya. You look as if—” Her sentence was interrupted as Aliya rushed over and threw herself into Betska’s arms. Leo looked embarrassed, and then came over and introduced himself, shaking my hand. “I’m Leo—Leo Brankovic Lavric.”

“That’s quite the name,” I said.

“Leo’s my name. Branko’s my father’s name and Lavric is my father’s family name. He comes from Slovenia. Long story. I live a few blocks over in a shared collective house with five other people. Betska’s my grandmother.”

“Aliya, can you choose the art to go with our dinner?” Dezzy asked. “Whatever you feel like. And I mean that.”

I watched as Aliya picked up a remote and pointed it at a picture hanging on the wall, a summer landscape by Cezanne, all mountains and greenery. She pulled up a menu that seemed to include artwork from all over the world. She flicked through several, and settled on a powerful photo of a young girl’s face in a garden staring directly at you, with the slight hint of a smile.

That’s crazy! I thought. She seemed to have the entire universe of art at her fingertips. But why not? It was obviously easy to digitalize. So why wasn’t it happening back in my time?

“A perfect choice for a lovely summer evening,” Dezzy said.

“It’s hard when you have such a great collection,” Aliya said. “We’re so spoiled for choice.”

“No more than we have been for music for all these years,” Betska said. “I remember how proud my grandfather was when he bought his first record.

Stravinsky's *Rite of Spring*. That's all he had, apart from what was on the radio. Now look at all the choices we have."

Lucas joined us, happy at Aliya's news, and then Dezy's son Jake came bouncing in. When we were seated, we joined hands and closed our eyes. The room was still, and nobody broke the spell. Finally Dezy ended it and we tucked into the meal. The conversation ranged through Aliya's pregnancy, Jake's day at school, and a variety of personal and neighborhood happenings.

After a while, Dezy asked me, "Since you're visiting, is there anything particular you'd like to ask about Vancouver, and all the changes that have been happening here?"

"Well, I have so many questions," I replied. "But yes, there is something. When you were telling me about the OMEGA Days this afternoon you mentioned something called a new synthesis. I was wondering what it is."

"Ah, now there's a big topic," Betska said with a chuckle. "I bet you weren't expecting that!"

"Well, it's rather complicated...." Dezy began. "Where do you want to begin, with Socrates or Marx?"

"It doesn't have to be that complicated," Leo said. "It's like a clear stream of water flowing through a forest."

"That's my Leo," Betska said proudly. "You'll be our Tolstoy yet!"

"No pressure there," Lucas said. "You can always join me in the woodwork shop if you want trade your books for a band-saw."

Leo, I later learned, had been home-schooled by his parents with a community of home-schoolers, and was studying political science.

"The easiest way to understand the new synthesis is through its three levels—*syntropy*, *synthesis* and *solutions*, and the way they change political philosophy," he said.

Now I was listening. Three years studying politics at university had taught me enough to be bored with the old philosophers from Cicero to Sartre, weary of the modern political division between left and right, and so frustrated with the post-modernists I wanted to tear my hair out. So talk of a new synthesis had me paying attention. And there it was again, that word *syntropy*.

"*Syntropy* is Satyanendra's new scientific principle that unites consciousness, energy and matter. It provides the thrust that has driven all existence to self-organize ever since the Universe began," Leo declared.

Woah! I wanted to stop him right there and have him explain that slowly, but that was a luxury I'd need to wait some time to enjoy.

"*Synthesis* takes the best aspects of pre-syntropic political philosophy and unites them into a single coherent whole," he continued. "And *solutions* represents the package of applications that are the logical outcome of the synthesis, creating positive, life-enhancing, evolutionary change."¹⁵⁸

My mind was reeling. And he couldn't have been much older than I was.

"The new synthesis takes the best aspects of liberalism, expressing our innate

desire for freedom going back to the enlightenment philosophers—Locke, John Stuart Mill and Voltaire—while leaving out the worst aspects, such as the neo-liberal belief that we should extend freedom to non-personal entities such as banks and corporations and demolish the regulations that control the market. We all know what that led to.¹⁵⁹

“Next,” he continued, “it takes the best aspects of the green movement, such as the belief that we need to live in harmony with nature, but it walks away from the judgmentalism and the belief some greens have that humans are a plague on the planet and we should return to a pre-industrial or pre-agricultural utopia.”

“What’s so bad about a pre-industrial utopia?” Lucas asked. “We were so much closer to nature then, and we had a far smaller ecological footprint.”

“Can I come with you next time you go into the forest, Uncle Lucas?” Jake asked. “It was wicked the last time. Lucas showed me how to use his bow and arrow.”

“We’ll talk about it later, Jake,” Dezzy said. “Leo’s talking.”

“I agree, Lucas,” Leo said. “But you try giving eight billion people each a slice of rural bliss. They’d soon destroy whatever bliss they had. The new synthesis also takes the best aspects of capitalism, such as Adam Smith’s recognition of the importance of the free market, provided it is properly regulated, but it adds the recognition that markets need to show the true price of all external costs, including nature’s services, while discarding the worst aspects, such as the hyper-capitalism that people in the financial sector used to gamble and enrich themselves.

“Next, it takes the best aspects of socialism, such as the belief that every human has the right to a secure home, a good education, meaningful work and good healthcare, but it discards the worst aspects, including class warfare, militant unionism and too much state ownership and control. It transcends the left-right division that has dominated politics for the last two hundred years. The duality that matters today is different. It’s Gaia versus Zeus; community, kindness and harmony with nature versus domination, control and the manipulation of nature.”

“I can see that your philosophy studies have been paying off,” Dezzy said.

“If that’s so, it’s not because of all the books we had to plough through,” Leo replied. “Most of my professors turned their noses up at Satyanendra and didn’t know enough science to understand the significance of the new integration. The new synthesis also embraces the best aspects of anarchism, such as the belief that humans thrive best when they have the freedom to self-organize in small groups and communities, while ignoring the worst aspects, such as the belief that the state is the enemy and the only way to get change is by violence and street warfare.”

“I can see why you call it a synthesis,” I said, hoping to get a pause in his explanation to digest some of these ideas.

“But wait! I’m not done yet!” Leo exclaimed, dashing my hopes. “It also takes the best aspects of science, such as the importance of observation, reason and experiment, and fuses it with the best aspects of spirituality, including humility in the face of the Universe and knowing that we have hardly begun to penetrate

the secrets of consciousness and existence. But it walks away from the worst aspects, where science becomes the corporate manipulation of knowledge and dogma and dualism prevent the acceptance of new ideas, and the worst aspects of spirituality, where an absence of learning and a surplus of fantasy allow weird ideas to proliferate and people's brains to become mystical mush."

"What did I tell you?" Betska said. "He's our very own Spinoza and Pico della Mirandola rolled into one. Your mother would be so proud of you."

"Hey, enough with all the babushka stuff!" Leo shot back with a grin. "At this rate you'll be telling us you're descended from Trotsky's secret love-child."

Betska, I had to remind myself, was Leo's grandmother, and had grown up in Russia.

"So maybe I am!" Betska replied. "There was a rumor that my grandmother had a secret love affair. If Trotsky's my grandfather, that would make you his great-great-grandson. From Leon to Leo. How does it sound?"

"Betska's right about one thing," Aliya interjected. "When you consider how syntropy is shaking up science and opening new avenues of thought it's very similar to Spinoza's way of thinking."

"And who is this Spinoza?" Lucas asked. "Or am I the only one who's getting a bit lost? And who is this Pico character, too?"

"Spinoza was one of the world's greatest philosophers," Betska answered in her soft melodic voice. "He was a Jewish genius who lived in Holland in the 17th century. He was a pantheist who rejected the dualism of the monotheistic religions, which separated nature from God and God from humanity. To Spinoza, God was in everything and everything was in God. The entire universe was a celebration of divine unity. He was a bit like Einstein, who thought the same way.

"His views brought new life to an ancient way of thinking that goes back to our Neolithic ancestors, which is still held by many aboriginal people. I haven't understood syntropy theory very well, but I know enough to understand that it unites the realms of spirit and matter. And that's music to my Russian ears."

"It's music to my Muslim ears too," echoed Aliya, "though I suspect that Spinoza would probably be censored and jailed by the mullahs if he were alive today. I'd never heard of Spinoza until I read Dan Brown's book, *Einstein's Lover*, and saw the movie. It's still one of my favorite movies because of the way it links spirituality, science and love. I love the scene where Carlos is sitting by the ocean and in his imagination the waters part, separating science and spirituality and then circling back together, creating that incredible dance of the waters."

"I *loved* that movie," Betska said. "But I never did get the title. Who *was* Einstein's lover?"

"As I understood it, she was God, Science and Nature, rolled into one," Aliya replied. "That was the mystery that enabled Spinoza to fathom out the laws of the Universe and had the priests in the Vatican and the rabbis in Lisbon competing to control the world."¹⁶⁰

"But Pico got there first," Leo said.

“Can someone remind me who this Pico is?” Lucas asked, with a degree of impatience.

“Giovanni Pico della Mirandola, flower of the Renaissance, lover of life, wisdom and humanity,” Leo replied with a flourish.

“And lover of women too, I believe?” Dezzy commented. “Jake—you can go now if you want to. Can you get ready for bed?”

“But I want to stay!” he said. “I want to listen!”

“Well, okay. But soon, okay?”

“Well, yes. And why not?” Leo continued. “Women are part of God’s creation—should we not love them too? Pico believed that there’s a hidden unity behind all knowledge, whether it comes from nature, the ancients, Plato or Moses, and that if we studied long and hard enough we would be able to reconcile and unify all knowledge, enabling us to become masters of our own fate. He was an early seeker after the Theory of Everything, but he sought it in Plato and the Kabbalah, since modern science didn’t exist in those days.”

“How does this connect to syntropy, and the new synthesis?” Betska asked.

“The new synthesis became possible because syntropy allows us to reconsider important ideas that were previously dismissed as being vague or spiritual,” Leo replied. “The new syntropic paradigm views the dimension of consciousness as an essential integrating field which permeates all reality, including matter and energy.”

“That’s fine, but what does it have to do with politics?” Betska persisted.

“If you look at the history of political thought,” Leo replied, “the people who developed big political ideas all wanted to use science to lend support to their ideas. In the seventeenth and eighteenth centuries, the liberal thinkers of the Enlightenment drew confidence from the progress that scientific rationalism was making in an era of rapid exploration and discovery. In the 19th century, Marx and Engels and their followers grounded their theories of socialism and communism in evolutionary materialism, and the belief that revolution was an inevitable stage in a process of dialectical emergence. In the 20th century, many greens grounded their environmentalism in scientific materialism and the law of entropy. Before syntropy arrived on the scene the dominant belief among scientists was that the Universe was a random affair with no purpose or direction apart from biological self-replication. One of my professors used to argue that the drift from democracy to plutocracy that we saw before the OMEGA Days was related to the loss of direction in science. If the Universe is purposeless then life and politics are purposeless too, so why not act selfishly and pursue purely personal goals?”

“In each era,” he continued, “the political assumptions followed the scientific assumptions. Science’s assumptions change, however. That’s its strength. Scientists constantly gather new information and build new theories as they work to get closer to the truth.”

There was silence in the room as we pondered Leo’s words.

“So how does syntropy theory change things?” Aliya asked.

“Syntropy includes the recognition that consciousness is an omnipresent dimension in the Universe,” he replied, “not just a neurological expression of a random, material world. That points to the need to explore the true nature of consciousness, and it provides a new dynamic for growth and change, which includes political change. Syntropy proposes that the experience of existence brings with it the impulse for cooperative self-organization at every level. All units of existence self-organize cooperatively to realize their higher potential, and it’s as true for humans as it is for microbes. So when a movement like the OMEGA Days arrives with its powerful call for self-organization to achieve social justice and environmental harmony it’s a direct expression of syntropy at work. So science and political theory have a new partnership.”

“You’re so good with the big ideas, Leo,” Lucas said. “But may I offer another way of looking at it?” He had been quietly listening to the conversation.

“For sure, Lucas. I know when to shut up.”

“Not at all,” Lucas said. “You’re doing great. There’s something Jim used to say when we were in the thick of the OMEGA Days. He said that whenever a philosophy isn’t grounded in a faith in humanity that includes our personal lives, its followers tend to become self-important and dogmatic, putting principles ahead of love. That feeds egoism and infighting, because when you remove love you remove the connection that unites all existence and you allow division to enter in its place. He said that whatever political philosophy you embrace, never forget the heart.”

“That’s so true,” Leo replied. “Syntropy has given everything a new frame. We can unite around our love of life and bring it into whatever campaign we are working on, knowing that we do so on solid scientific ground.”

“What does this mean in the real world?” I asked, still trying to understand what syntropy was. It was obviously a major new idea.

“For sure,” Lucas replied. “At one point during the OMEGA Days the campaign for more bike lanes required that the parking be removed on a particular road. The plan was to go door-to-door, seeking support. But some people were impatient. They wanted a big rally with cyclists demonstrating their right to use the road—probably naked, for all I know. It was all very grand, but when we tuned into how the residents might respond we saw that rather than being grand it was grandiose, and likely to get their backs up. So we had to talk them out of it. By making our campaign slow and respectful, with individual conversations on the doorstep, we won the support needed to make it happen. Afterwards, we gave every household a bunch of flowers as our way of saying thank you.”

“That’s beautiful,” I said.

“And highly effective,” Lucas added. “I was one of the people who went around with the flowers. It goes back to Jim, and his insistence on the Middle Way, avoiding the rocks of extremism and ego.”

“Anyone for more pie?” Dezy asked.

“This is wonderful,” Betska said. “I feel so wealthy to have such good friends.”

“Yeah, TVH,” Aliya said, and they all laughed.

“Excuse me, but what’s TVH?” I asked.

“Total Vancouver Happiness,” Aliya replied. “It’s something Vancouver measures every three years. A score of a hundred would tell us that everyone was deliriously happy—eating like kings, loving their neighborhoods, enjoying their work and having passionate love affairs that would remain forever secret.”

“Ahem,” Lucas interjected. “I take it you’re not expressing your personal wishes?”

“That might depend on how good you are at changing the diapers,” Aliya replied, smiling at Lucas.

“You’ve cheered up!” Dezzy said.

“That’s a good definition of happiness,” Betska said. “But where is my prince to bring me breakfast in bed each morning and make passionate love until noon?”

“Eugh. That’s gross, grandma,” Leo responded. “You’re almost a hundred!”

“I’m just happy to be in my workshop and to come home to my beautiful princess,” Lucas said.

“And I’m happiest when I’m out on horseback with Lucas riding the trails at dusk,” Aliya replied.

“What about you, Dezzy?” Betska asked. “What makes you the happiest?”

“Oh, don’t ask,” she said. “I’ve got too many bad memories. They haunt me like sad love songs.”

The room fell silent. Then Betska spoke.

“Sadness is not the absence of happiness, Dezzy. Sadness is the memory of past happiness that clings to the soul. It is something to celebrate and then gently let go of, however great the loss.”

“I thought I had,” Dezzy said. “But they cling to me like limpets. My father, my daughter, Derek, Jenny, Thaba. They make me sing my happiness in a very minor key.”

“It’s a gift,” said Betska. “To have your heart broken is a gift from the Universe, even when it happens tragically. If you embrace it, it will transmute you and turn you into one of God’s angels.”

“Ever since my father was killed so brutally I’ve seen pain and sadness I never saw before,” Dezzy replied. “It doesn’t bring me happiness, though.”

“Our world is full of suffering,” Betska said, “and grief only needs one friend. It’s bitter medicine, but I do believe that it’s not until our hearts have been truly broken that we can comprehend the depth of suffering that surrounds us, and know true compassion. The animals suffer too, and so often at our hands. Think of all the wild animals that are still being held captive in the world’s zoos. Whenever you reach out to a stranger or to an animal you open a door to heaven. We should never be ashamed of loving someone, even if we grieve when love ends or is torn away. It’s only by embracing grief in its fullest that we are most truly healed. And when you finally pick yourself up, you may find yourself in a much better place, and be grateful to whatever it was that gave you the grief.”

Aliya then did something I'd never seen before. She walked over to Dezzzy and did a slow dance with her hands above her head, while the rest of us watched. Then she reached forward, placed her cheek beside Dezzzy's and held up her hands for us to take, forming a raised circle. After a minute, Dezzzy started sobbing—and I found myself crying too.

Later that night, when everyone had gone, I found myself imagining small acts of healing like this happening all over the city in quiet, unchronicled ways. Had such a thing become normal? I couldn't recall a dinner party ending this way in my time, but it could have been going on for ages without my knowing. After all, the tiny slice of time I inhabited was just a bubble of nothingness compared to the ocean of consciousness the rest of humanity experienced.

After people had gone and we had cleared the dishes, Dezzzy came up to me and said, "It is such a pleasure having you here, Patrick."

"I must admit, I find it a bit overwhelming at times. Your friends are very lively."

"Oh, Leo. He's just completed his degree and he can't stop talking about it. And Betska—well, she's just Betska. I hope I'm as lively as she is when I get to her age."

"And Aliya—does she often do a thing like that with her hands?"

"Yes. There's a lot more to that girl than meets the eye. I'm so happy Lucas has found himself such a good woman—and that she's pregnant. I expect there'll be a wedding soon. I can't see her mother allowing her to have a baby without being married. Lucas has quite settled down since they got together. But what about you? You said you were single, but is there someone perhaps you are waiting for?"

"No—well, not really."

"What do you mean, not really? There either is or there isn't."

So then I unburdened my heart to Dezzzy about the girl in Jerusalem. I felt stupid, but Dezzzy took me seriously. This was the first time I had told anyone about the way I loved her—not even Daria or my parents.

"I've no advice I can offer you," she said. "Life is so full of possibilities, most of which go unexplored. Maybe she's dead. Maybe she's the girl for you, if she's still alive. Or maybe you'll go to Jerusalem and she'll be happily married with six kids and hardly remember you. You've got plenty of time. Look at me. I was head-over-heels in love with Thaba, but I still had to leave him. I've given up trying to find reason in affairs of the heart."

The evening over, Dezzzy invited me to take a bath and to help myself to a glass of the brandy I'd find there. Relaxing in the water, I saw a red disk on the wall. When I pressed it the light dimmed to darkness, revealing a full night sky across the ceiling accompanied by a chorus of peaceful music. The occasional meteorite passed by, and galaxies melted into distant nebulae.

My mind wandered back to that day in Jerusalem. I could see her gazing at me so intently. Was I drawn to her because she had been so badly hurt? Or was there something deeper that could never be erased?

The music ended, so I touched the button again. The ceiling turned into a kaleidoscope of changing fractals set to Pink Floyd's *The Dark Side of the Moon*. I wanted to turn the volume up, but I was concerned about waking Dezzy. After a while I pressed it a third time and it changed to a sequence that was distinctly R-rated, color-brushed in reds and maroons, but it gave me confused thoughts about the girl in Jerusalem, which felt both right and wrong. Why was life so complicated?

Afterwards, I investigated the rest of the bathroom. I was twenty years in the future, remember, and curious to see how things were done. The bath had a tap underneath that diverted the summer greywater onto the garden, and the faucets to the sink came on by touch and emptied into a sleek, dual-flush toilet-tank. On another occasion I had a chance to try her shower, called a Nebia, which had the most amazing flow of water, while apparently using far less water than every other shower.¹⁶¹

As I stood by the sink, a painting appeared on the wall showing four women sunbathing under a tree in autumnal red and brown colors. *The Four Bathers*, it said, by the Belgian impressionist Theo-Van-Ryseelberghe. Were bathrooms everywhere being transformed into temples and art galleries, I wondered? The possibilities were endless.¹⁶²

The Health Revolution

I SLEPT IN on the Friday morning, and when I awoke Dezzy had gone, leaving me a note on the kitchen table:

Gone to work. Make yourself at home. I've arranged for you to meet Li Wei-Ping at the Green Economy Institute at 1 p.m. You'll like him. Aliya has invited you over for coffee, and she'll ride into town with you when you're ready. See you for supper, then we're all going to the Song of the Universe.

Today I would go downtown and seek answers to some of my many questions, such as how much had Vancouver been able to reduce its use of fossil fuels? And how did its economy operate? Enough with all the philosophy for a while. I wanted some practical answers.

After breakfast I went to meet Aliya in the laneway house she shared with Lucas. Aliya al-Kuzbari—that's her full name.

"Good morning, Patrick!" she greeted me. "Fresh coffee? It's level four organic, shade-grown, fair trade, shipped here from Nicaragua on the SolarSailor."¹⁶³
The what? Best leave till later.

She was browsing the morning news on her screen. "I like to start the day by scanning my personalized news," she said. "I get all the news I want in one place, including the daily news from Syria, internal news from the hospital, and the Positive News Network so that I can start the day feeling uplifted."¹⁶⁴

"It also tells me about any new videos or radio programs that match my interests. There's a program on Radio Moscow today on the use of herbal medicine in Siberia, for instance, so I just click, and it's saved as a translated podcast."

I had often wondered why radio had been so slow to crawl into the digital age, and why radios didn't even have the means to pre-record a program, the way you can with television.

Aliya said she'd be happy to ride into town with me along the Eighty-Eight Elements Trail, which had been created to showcase the city's transportation initiatives. "I can go with you as far as the Future Café, and after that it's clearly marked. I gather Dezzy has set you up with a meeting?"

"Yes, and that's perfect. What's the Future Café?"

“You’ll see when we get there. I’ve just got to do my weekend shopping, then we can chat for a while.”

“You’re going out? To do your shopping?”

Aliya looked at me quizzically. “No, I do it online. It’ll be delivered tomorrow by bike. Take a look.”

Using her screen she pulled up Sustainable Produce Urban Delivery, ‘loyally serving Vancouver’s residents for thirty-five years.’ She clicked “weekly order” and all her regular items showed up. Each time she chose an item a widget gave her a score, flashing amber when she added a tub of blueberry vanilla ice cream.¹⁶⁵

“Darn it,” she said. She switched to frozen yogurt and the amber went away. “As a nurse, I love that widget, but as a human who likes ice-cream, I hate it!”

“What does your score represent?” I asked. It had gone from zero to eighty-five as she clicked on the different items.

“It’s my weekly FoodScore. Everything I buy has been encoded for its health properties. Look, I’ll show you.” Aliya clicked on her score and it showed her accumulating tally for a wide range of essential nutrients from Omega 3 fats, iodine and zinc to calcium, iron, folate, niacin, magnesium, thiamine riboflavin and various vitamins. “It tells me if I’m running a deficit in any particular nutrient and gives me suggestions on how to fill the gap. It also tells me if I’m getting too much of something, since it’s easy to overload on vitamin D or A, which can be as harmful as not getting enough. A lot of health problems are related to the absence of nutrients so this is a valuable service, especially now that I’m pregnant.”

“Yes—congratulations!”

“Thank you. I wasn’t expecting it. Lucas is very happy.”

“What about the food you grow yourself or buy locally—does it score for that?”

“There’s a space where I can add anything I’m harvesting from the garden or buying at the Saturday market. So I’ll click here for peas, lettuce, spinach, carrots and chard, which we’re eating from the garden.”

“Does it tell you when to brush your teeth?”

“No,” she laughed, “but it does tell me about calories, fair trade, food-miles, colorants and preservatives. It says that 64% of the produce I’ve ordered has been grown within 50 kilometres. That’s good, because they’ll have more phytonutrients.”¹⁶⁶

“Why is that?”

“Well, take salvestrols, one of many phytonutrients. Plants produce them when they’re attacked by mold or fungus, which only happens when they’re ripe and when they’ve been grown organically and not sprayed with fungicides. The salvestrols trigger a process that fights any incipient cancer cells. The further food is shipped the more likely it is to have been picked before it’s ripe, before it’s had a chance to be attacked by fungi and to generate salvestrols in self-defense.”¹⁶⁷

“So the salvestrols protect you against cancer?”

“Yes. Before, when the farmers used so many pesticides and fungicides, the

salvestrols had almost entirely disappeared from our diet, so our bodies had one less defense against cancer.”

“That would explain a lot,” I said. “Does your FoodScore app work in the stores as well?”

“For sure. The information for each product is in its barcode. All you need is a phone and a digital shopping list.”

“How much of it’s organic?”

“All of it. All food grown in Canada is organic these days. It’s not all five-star, but three or four-star is still pretty good.”

I was really surprised. Back in my time, only two percent of Canada’s farms were organic. “What made all the farmers go organic?” I asked. “And what’s the five-star system?”

“Five-star means that as well as using no chemicals, the farmers build their soil, treat their farm animals with kindness, pay fair wages and take care of their wildlife. They get a star for each if they meet the requirements.”¹⁶⁸

“That’s impressive.”

“As to why the farmers went organic, it all happened quite quickly. Soon after the OMEGA Days the government commissioned a study to investigate the full cost of conventional farming. They looked at everything from farming’s climate impact to the loss of habitat and species, herbicide-resistant super-weeds, nitrogen pollution from fertilizers getting into the water, soil erosion, the impact on bees, the abuse of antibiotics, and negative health impacts caused by the use of pesticides and fertilizers and the loss of essential nutrients from the soil. That includes cancer and dementia, which have been linked to the use of pesticides and nitrogen fertilizers. Maybe autism, too.¹⁶⁹ Pre-natal exposure to pesticides was also contributing to ADHD, and to a fall in children’s IQ. A crop like celery was being sprayed with as many as sixty-seven different pesticides. Can you believe it? When the government saw the full social, environmental and healthcare impact they brought in a tax on pesticides and fertilizers, to recover the costs.”¹⁷⁰

“Just like that? Didn’t the farmers protest?”

“Oh, for sure. There was a lot of complaining. But there were many benefits to going organic. It eliminated the cost of fertilizers and pesticides, and when the farmers realized that they could save money and get better yields it became a no-brainer. Conventional yields had been falling anyway due to pesticide resistance and the spread of herbicide-resistant weeds,¹⁷¹ especially with the genetically modified crops, so the farmers didn’t need much persuading. The government gave the money back to the farmers to subsidize their transition to organic, and the rest is history.”¹⁷²

“That’s a really significant change.”

“Yes,” Aliya replied. “We have a family friend who farms in the Okanagan. Since she made the change they’ve been busy planting trees and hedgerows along their contour lines, and learning about permaculture. Instead of fighting the insects they’re working to attract the ones that are beneficial. Do you know

how many species of bacteria and microorganism there are in a single handful of soil? More than there are people on the planet! Previously, before the farmers went organic, so many of them were being killed by chemicals. Globally, I've read that the soil performs economic services worth *\$20 trillion dollars a year*, yet it never sends us an invoice."¹⁷³

"That's a great way to look at it. How did the big food corporations react?"

"They were furious. When Vancouver required all food served in city facilities to be organic, Vivendo sued for lost sales. There was huge pressure to back down, but the city hired a lawyer and put out an appeal to cover her costs. Vivendo lost, since the courts ruled in the city's favor on public health grounds.

"Vivendo also sued the farmers, demanding that they honor their contracts to buy genetically modified seeds, and accusing some of using GM seeds illegally. It was never proven, and when the farmers counter-sued, Vivendo had to pay a two billion dollar settlement to the Canadian Organic Growers Association."¹⁷⁴

"Canada now has a Seeds Law that prohibits the use of genetically modified seed and specifically protects seed companies that grow heritage, open-pollinated seeds. Vivendo is still active overseas, but it's only a matter of time before they're gone. They kept telling us the world would starve without their seeds, but yields on organic and agro-ecological farms are going up, not down, and organic farmers benefit from increased carbon storage and soil moisture, which results in better yields in drought years."¹⁷⁵

"When you trained to be a nurse did you do a course in nutrition?"

"Yes. I was in the first cohort to be trained in the new medicine. Our entire training emphasized the benefits of exercise, diet and attitude."

"What triggered the change?"

"You name it. Canada's healthcare system was costing more each year, fuelled by a fourteen percent annual increase in chronic diseases like obesity, diabetes, heart disease, cancer, respiratory disorders and dementia."¹⁷⁶ Together they were eating up most of the healthcare budget, and the drugs used to treat them were costing more each year. The whole healthcare system was going into crisis."¹⁷⁷

"The OMEGA Days had a very liberating effect, opening up new ideas and possibilities. The health care community went through a period of intense review. There was a lot of tension when doctors were reassigned to new positions of responsibility in the Community Health Clinics and their regular work was taken over by nurse practitioners. There was talk of a strike, but the doctors were divided, with some supporting the move and others opposing it. In the end they developed the approach we have today, based on nutrition, prevention and community care.

"It's diet that's the big one," Aliya continued. "Right at the start of our training they showed us a video about an American doctor, Dr. Terry Wahls, who'd been a marathoner, ski marathoner and Tae Kwon Do champion. She had multiple sclerosis, and she was getting weaker and weaker in spite of all the chemotherapy and expensive drugs. In those days it cost up to \$30,000 a year to treat a patient

with MS, plus \$34,000 a year in indirect costs. In the States, it drove many people into bankruptcy.¹⁷⁸

“Dr. Wahls had declined so much that she was confined to a zero gravity wheelchair. But rather than give up, she started researching what caused her multiple sclerosis and she learned which vitamins and supplements were important for the health of her brain. She compiled a list, and when she started taking the supplements the speed of her decline slowed. Then she asked herself which foods contained those nutrients and she redesigned her diet to include the nutrients her brain needed. Within a year she went from being in a wheelchair to being able to complete an eighteen-mile bike ride. She had cured herself, using just food.¹⁷⁹

“That was a huge eye-opener. She developed a diet to maximize her brain health, with nine cups of specific organic vegetables every day, combined with the rigorous elimination of foods she was sensitive to, plus neuro-stimulation and exercise. It was this insight, that she could cure herself of multiple sclerosis using mainly food alone, which laid the foundation for our training. There’s a host of chronic diseases that can be prevented, cured or alleviated by a change of diet. Do you know how much it used to cost to treat diabetes with gastric bypass surgery? Thirty thousand dollars. And with diet, including peer support? Three thousand.”¹⁸⁰

“That’s a huge difference!”

“Most people are still not getting their daily dose of Omega 3 fatty acids, iodine, zinc, calcium and magnesium. That’s why I like the FoodScore app. Every new nurse, doctor and health-care practitioner is now being trained in functional medicine, based on nutrition, prevention and community care. We’re changing from a disease-oriented to a health-oriented approach. Instead of having a family practitioner, you’re attached to a Community Health Center where your primary care provider is a nurse practitioner, and the focus is on the prevention and management of chronic disease.”¹⁸¹

“My parents used to work in the refugee camps in East Africa,” I said. “There was a lot of sickness, especially among the children, so they often discussed medical matters. It got me interested. So if I lived in Vancouver and I went to a Community Health Center, what would I expect to find?”

“That’s a very timely question, since I’m making the shift to community nursing this fall. If you were new, and I was your primary care provider, first I’d interview you to understand your life situation, your health, and any chronic diseases you might have. If you were sick, I’d take you under my wing, just as a family doctor would, and I’d do whatever it took to get you up and well again. As soon as you were better we’d discuss your diet and read your weekly FoodScore, just as I did five minutes ago, and we’d talk about the importance of getting enough essential nutrients, and how the right food can protect you against various chronic diseases.”¹⁸²

“Then we’d move onto exercise. I’d give you an aerobic fitness test and put you on a treadmill to measure your oxygen uptake. We’d work together to

complete your Total Health Inventory, or THI, which includes everything from weight, body fat, blood pressure and cholesterol to diet, fitness, alcohol, drugs and sleep patterns. I'd do some basic cancer tests using the SmartSmell detection sticks, and I'd give you a questionnaire to assess your stress, brain health and mental health and your overall attitude to your health. Finally, I'd use the community toxics map to check for workplace health and safety, and we'd work together to estimate your cumulative X-ray exposure, since that's a long-term cancer risk. Your THI would be fully transparent—the lower your score, the better. When I went for my annual check-up last month the nurse recommended that I start using a brain-app to protect myself against future eye disease, since there's a history of it in my family."

"What would happen when I'd answered all those questions?"

"If you had an ailment or a disease I wasn't trained to handle I'd refer you to one of our physicians, or to a herbalist, acupuncturist or massage practitioner. We have all been trained in basic counseling, but if need be I could refer you to a professional counselor. For most ailments, I'd be able to help. Two weeks later you'd come back and we'd create your Personal Health Plan, primarily covering diet and exercise. I'd set you up with an app to give you daily or weekly feedback, and if you needed major changes I'd recommend that you use it to track your health and fitness, your insulin and other health indicators, and maybe suggest that you join one of the clinic's peer support networks."¹⁸³

"How do they work?"

"They're based around shared interests, so that people have something in common, whether it's religion or a love of dogs. They meet regularly, and people help each other adopt new dietary habits, learn new cooking skills, grow more food, get more exercise, or break a habit such as sugar addiction. Joining a support group is twice as effective as trying to change a habit on your own. We're social animals, and we need peer support. That's how we have evolved over millions of years."¹⁸⁴

"I can identify with that," I replied. "People in the villages in Sudan help each other all the time with everything from childcare to building each other's homes. But what if I just didn't care, and I wasn't concerned about my health?"

"Here in Canada we have a socialized health service, so every Canadian pays an annual healthcare premium. Under the new system if you have a low THI you get a discount, just as you do with car insurance. If you make good progress on your THI you can also win a prize. So there's an incentive. If you don't participate, you pay the full premium."

"That seems fair."

"It also makes allowance for environmental risk factors, though their influence is declining now that we've stopped burning fossil fuels, and the chemical industry is embracing green chemistry.¹⁸⁵ There's been a steady decline in heart attacks and lung cancer since we stopped burning diesel.¹⁸⁶ Do you want a cup of tea or a home-made juice, by the way?"¹⁸⁷

I told her I was fine with my glass of water and urged her to continue. “You’re a nurse in the general hospital—is that right?” Aliya nodded. “So what kind of difference has the new approach made there?”

“Not that much, surprisingly. We deal mostly with acute illnesses and injuries, which are past the point of prevention. Our biggest concerns are tuberculosis, malaria, and drug resistant superbugs, like the child who died on me yesterday for the lack of a workable antibiotic. It was wretched. She was only seven. It makes me sick that we’ve destroyed such an incredible aid, and all because the doctors handed out antibiotics so liberally and so many farmers dosed their animals to increase their yields. If they had known how much grief they were going to cause I’m sure they’d have stopped doing it.”¹⁸⁸

“How do you cope without antibiotics?”

“With great difficulty. We do bacteriotherapy, using live fecal transplants and synthetic stool.¹⁸⁹ It’s like the worms we use against Crohn’s disease¹⁹⁰ and the maggot enzyme healing gels we use to treat wounds.¹⁹¹ They sound like they’re out of the Middle Ages, but they’re actually standard microbiology.¹⁹²

“The crazy thing is that it was antibiotics that made it easier for some diseases to get a hold in the first place by wiping out the friendly bacteria. Most people have no idea how important bacteria are. Instead of feeling ‘yuk’ we should be grateful, since they’re working to keep us healthy. There are literally trillions of them—there are three times more bacterial cells in our bodies than there are human cells.”¹⁹³

“Trillions?”

“Yes—around thirty-seven trillion, by the latest estimate.¹⁹⁴ Antibiotics have saved millions of lives, but their misuse may cost us just as many. Most people try to avoid coming into the hospital these days unless it’s an emergency. People are self-medicating off the Internet, or going to a pharmacy where they print the drugs they want. The cleaners at the hospital get paid as much as I do, because their work is so important to keep the superbugs at bay.”¹⁹⁵

“Doesn’t it make you feel a bit depressed, some days?”

“For sure, but there’s a lot of great stuff happening to balance it. Now that we understand how important the gut microbiome is, for instance, our prenatal team is providing a microbiome optimization service for pregnant mothers who have compromised immune systems, using fecal transplants from children in rural Africa whose intestinal flora are genetically closer to the way our bodies used to be in the Stone Age.”¹⁹⁶

My jaw was literally dropping at her mention of fecal transplants, but I hid my surprise and pressed on.

“You mentioned drug-resistant tuberculosis. That sounds pretty bad.”

“It is. A person with drug-resistant TB can infect ten to fifteen people a year if we don’t catch them. That’s potentially as many as 100,000 people over five years. Several hospitals have been converted into TB isolation hospitals, and there’s no end in sight.”¹⁹⁷

“What about substitutes for antibiotics? Is there anything in the pipeline?”

“There’s work going on to cultivate new viruses that can attack the superbugs,¹⁹⁸ and biologists are exploring the thousands of species of flies, since their maggots thrive in infected material, which means they’ve had millions of years to evolve anti-bacterial enzymes. But you know what the real tragedy is?”¹⁹⁹

I looked at her with a blank expression.

“It’s the tropical rainforests. There are hundreds of common drugs that originated in the rainforests, like quinine and novocaine, cortisone and ampika, but we’re still losing the forests to slash-and-burn farming, cattle ranching and illegal logging. It’s like burning an ancient library full of texts that have never been translated. Tropical rainforest plants have evolved over millions of years, so they have remarkable properties, but they’re still being destroyed. As for the Amazon, if there’s another drought like the recent one the entire forest could burn to the ground by the end of the century, to be replaced by savannah. I can’t begin to tell you how much that hurts. And to think that I’m going to bring a child into such a world.”²⁰⁰

“What’s being done to protect the forests?”

“Not enough,” Aliya replied. “We did an initiative at the hospital last year called Nurses for Nature. We asked Vancouver’s artists to create paintings of plants and trees from the rainforest that have led to essential drugs and we displayed them on the hospital walls, making the point that most rainforest plants have never been analyzed for their medicinal value. We asked people, ‘Could this plant save your loved one?’ and we encouraged them to support the Rainforest Action Network’s campaign to stop illegal logging and slash-and-burn farming. We got a great response.”²⁰¹

“What a wonderful initiative! What about childhood brain disorders, such as autism? Are you seeing much progress there?”²⁰²

“Yes. We’re seeing a decline in all childhood brain spectrum disorders, including autism, and also in gastro-intestinal and bowel disorders like Crohn’s disease and colitis. The frustrating part is that we don’t know *why* they’re declining. It could be that pregnant mothers are eating healthier food and getting a wider spectrum of essential nutrients, including folic acid. It could be that doctors are prescribing far fewer antibiotics, which were destroying the bacterial microbiome in the gut, which has been linked to these diseases.”²⁰³

“It could also be a spin-off from Canada’s Toxics Use Reduction Act, which has banned the most toxic chemicals and imposes a fee on the others, reducing their use.”²⁰⁴ We do a cord blood analysis on one in every hundred babies and we’ve seen a steady fall in the number of chemicals in their blood. A newborn used to have as many as two hundred toxic contaminants in its cord blood, a hundred and eighty of which were known to cause cancer. Now it’s down to forty, and it’s falling every year. That’s very reassuring, especially in my condition.”²⁰⁵

“There are also various neurotoxins that were implicated with autism, including air pollution from diesel fumes, cadmium, and mercury from coal-fired power

stations,²⁰⁶ maybe also the pesticide glyphosate, or Roundup, that was used so extensively in conjunction with GM crops.²⁰⁷ With 100% organic farming, no more coal-fired power, no more diesel and no more genetically modified crops, all of those risk factors have disappeared.

“Autism could also have been caused by a combination,” she continued, “including zinc or selenium deficiency in the mother caused by soil depletion from conventional farming.²⁰⁸ It’s such a complex subject. It might even have been high fructose corn syrup, which reduced a mother’s ability to absorb zinc.²⁰⁹ I’m glad we’ve finally gotten that out of our diet.”

“How did that happen?”

“When the evidence came out linking high fructose corn syrup to obesity, governments both here and south of the border sued the food industry to recover their healthcare costs and the industry went into a tailspin. The diet apps are having an impact, and the bans on high-fructose corn syrup and Bisphenol A put the final nails in the coffin. Today, if you want a soft drink it carries a warning that it will make you fat and flabby. Nobody wants that.²¹⁰ The government also hiked the tax on salt, sugar and saturated fats, which are the main culprits behind diabetes and cardiovascular disease, and they tightened up on the sale of alcohol, getting it out of the supermarkets, while imposing very visual warning labels.²¹¹ There had been an epidemic of binge drinking fuelled by cheap prices in the supermarkets and it was causing an increase in fetal alcohol syndrome and all the other disasters that come from excessive drinking, including sexually transmitted diseases, some of which have become drug resistant. And I can tell you from my experience as a nurse, that’s not a pretty sight.”²¹²

“I can imagine—but I’d rather not.” Then changing the subject, I asked, “How much did the tax on salt and sugar gather?”

“At its peak, enough to cover a fifth of Canada’s health care costs.”²¹³

“But that’s enormous! Did it work?”

“Yes. There has been a big fall in sugar consumption. All sugar-products are now labeled on the front saying how many teaspoons of sugar they contain, and there was a lot of publicity around the lawsuits against Big Sugar. Before the decline, the average North American was consuming twenty-two teaspoons a day. No wonder we had so much diabetes and obesity and so many behavioral problems in small children.”²¹⁴

“Are you seeing progress with attention deficit disorder too?”

“Yes, that’s also declining. It could be due to the restrictions on fire retardants and other household chemicals that were linked to ADHD. An ordinary couch used to be so laden with toxic chemicals, thanks to industry manipulation of the standards, and children would play on them with their noses right next to the fabric.²¹⁵ It might also be the ban on advertising in children’s television. The programs were deliberately made with actions that were faster than real life to keep children watching, and the child’s growing brain assumed that the whole world operated at that speed.”²¹⁶

Aliya paused. “I used to be ADHD myself,” she said. “My parents weaned me off Ritalin by immersing me in nature. That was in Syria, before we came to Canada. The drug companies really went to town, persuading the doctors and parents that their kids needed to be on drugs.”²¹⁷

“You used to live in Syria?”

Aliya paused again. “Yes. Before the civil war. My father got us into a Turkish refugee camp just before the fighting got bad. I was nine. I’d had a very happy childhood until then. But my father was a doctor, and he returned to care for the wounded. It was his duty, he said. He was killed a few months later in an aerial assault on the suburb of Damascus where he worked.”

Aliya was silent. I said how sorry I was, and then I told her about my own parents’ death.

“I’m so sorry. You understand, then. We spent three years in the refugee camp before we were finally accepted to come to Canada. My father’s a huge reason why I became a nurse.”

“What was it like when you arrived in Canada?”

“I was just twelve, so it was all very new. We lived in an apartment block in Toronto. It was fine for a while but then the crash happened and the people we lived among were really struggling. The unemployment was already high among new immigrants and then the carbon rationing started, and the few people who owned a car had to sell them because they couldn’t afford the gas. I was very happy when I was accepted into the School of Nursing at UBC, and was able to move out here.

“What was I saying? Oh yes, the importance of nature, and ADHD. The experience a child gets from TV only stimulates a fraction of the brain compared to climbing trees and playing outdoors. I’m doing a course on play in nature later this summer, for when I become a Community Nurse Practitioner.”²¹⁸

“Are you looking forward to it?”

“I am, but I do like the hospital work too. I’m fascinated by some of the new techniques we’re using. Last week we had a patient with bladder cancer, and we had to remove part of his bladder. The biolab had grown a new one using his own cells, which we transplanted into his body. They’re doing the same for damaged teeth, and retinal damage of the eye. They’re printing 3-D blood vessels, livers and kidneys, and they’re spinning proteins into flexible biofabrics that encourage the damaged cells to repair themselves and to self-organize into a new organ that can be transplanted into the patient’s body. Isn’t that incredible?”²¹⁹

“Do you still need organ donors, then?”

“Yes, for sure. They’ve made it so that there’s a donor check-box with every bus pass, driver’s license and credit card application, and it’s had a very positive effect on the number of people donating, for both organs and blood.”²²⁰

“What comes next—brain transplants?”

“Since you ask—yes, kind of! We’re seeing an increasing number of acoustic neuromas on the side of the brain where people held their cell phones.”²²¹ It’s

difficult to operate, since the neuromas push up against the brain, so we try various tumor-shrinking techniques first. If we do have to operate, we use a technique that combines regenerative stem-cell tissue with quantum neurome latticework. It causes the brain to grow new neurons to replace the ones that are damaged during surgery.²²² The surgery itself is changing too. The surgeons use smart-knives and the nurses all wear smart-glasses. There's an overhead camera that communicates to the glasses and we can see the status of the tissue and blood vessels and record the operation in case there's a problem later."²²³

"What's quantum neurome latticework?"

"It's a spin-off from the human neurome project, where they're mapping sections of the brain. Some of the processes that govern neuron cell growth in the brain are uncannily similar to quantum processes, so someone suggested that it might be the key to atomic self-organization, and they're using it to grow new brain tissue. It's pretty wild. They say one day we may be able to use it for Alzheimer's and memory loss. Who knows what else might be possible?"

"Yes, it is incredible. What about cancer? Are you seeing much progress there?"

"Yes, lots. The incidence-rates for most cancers are falling, and we're hoping they'll continue to fall with the use of functional medicine, combined with toxics reduction and people eating healthier food. There's far more emphasis on cancer prevention these days, and we're making good progress with early detection.²²⁴ We used to use dogs, and sometimes rats, which were trained to sniff out a cancer. Now there's a urine test that can be analyzed on a smartphone, an infrared biomarker test that gives almost instant diagnosis, and the SmartSmell detection sticks with their tiny DNA sensor molecules."²²⁵

I was puzzled.

"There are more than three thousand volatile organic compounds in your breath, and they change when you're sick. The SmartSmell stick can be tuned to read any smell, and it can reveal early cancer. We also lend them to parents to sniff out chemicals in the home that might pose a risk to a baby, and they're being used to screen people coming into the country who might be carrying a dangerous disease."

"That's quite something. How are we doing for time, by the way?"

"We should probably be going soon. The really exciting changes are happening at the community level, where the goal is to prevent most chronic diseases before they begin. One of the justifications Vancouver made for its big investment in bike paths was the healthcare savings. People who cycle more live longer, have fewer illnesses and take less time off work. They're also happier. The new medicine is really turning things around: we've had falling healthcare costs for the last five years in a row."²²⁶

"What about the drug companies? Are they supporting the changes or resisting them?"

"They fought them every step of the way, just like the tobacco industry did

years ago. But they took a real battering when it came out that they'd been failing to publish studies that show negative results for new drugs. Ever since the OMEGA Days there's been a shift in favor of prevention. Under the new system, before a doctor can prescribe a drug, she or he must show you the listed side effects, and it has become normal for doctors and nurses to use Cochrane, which gives us clear, peer-reviewed evidence on the effectiveness or not of the various drugs and remedies, including holistic and preventative alternatives."

"What's Cochrane?" It was not something I had heard of.

"It's a vast body of evidence into the effectiveness of various remedies assembled by fifty thousand researchers and professionals around the world. It enables us to sidestep the influence of the drug companies, who have a vested interest in selling their products.²²⁷ There's also a big campaign to get people exercising, eating more healthily and growing their own food. But speaking of exercise, we should get going ourselves. Do you want an electric bike or regular? And upright or recumbent?"

"Upright and electric, if that's alright."

Aliya picked up her screen and clicked a button. "Carl has a bike we can rent for two Deltas. Or there's a Bixibike station three blocks over if you prefer a public rental."

Deltas? Renting from a neighbor? Then I remembered Betska talking about their community currency, and I said that Carl's bike would be fine.

"I'll cover it on my Delta-card," Aliya said. "No problem. I like to use my Deltas for local services such as bikesharing and carsharing."

"You use Deltas to borrow each others' cars?"

"For sure. Someone did a survey and out of two hundred households in our neighborhood, only thirty own a private vehicle. The rest of us share twenty vehicles between us. Compared to how it used to be, it's a huge reduction."²²⁸

"And that's not all," she continued, fastening her ankle-straps. "The decline in fossil fuels has caused a big reduction in our ecological footprint, and almost all of our energy comes from renewables."²²⁹

"That's great!" I said. "Do I need a helmet?"

"No. It's very safe, thanks to all the separated bike lanes. I stopped wearing mine a few years ago when the requirement was relaxed. I can see why they were needed in the past, but that doesn't apply any more. Are you ready? Then let's go!"²³⁰



10

Climate Compassion

WALKING OVER TO Carl's house to get the bike, I asked Aliya how she felt about being pregnant.

"I'm all mixed up," she replied. "I'm full of awe at the new life that's growing inside me, but I feel sad that my father didn't live to see his future grandchild."

"I'm sure he'd be so proud of you. How does Lucas feel about it?"

"He's nuts. He's already decided it's a little girl. He's going to love her to bits—or him, if it's a boy. I think he's a bit more intimidated about it being a boy. It probably reminds him of his dad, and makes him worry if he'll be a good enough father."

"He wouldn't be human if he didn't have those kinds of worries. I'm sure glad my parents created me. It means I can actually *do* something to make the world a better place. Maybe your baby will think that way when she grows up. Or he."

Five minutes later we were heading for the Eighty-Eight Elements Trail, which displayed Vancouver's sustainable transportation initiatives.²³¹ My bicycle was comfortable, and the separated bike-lanes made for easy relaxed riding. The handlebars had lights built into them and an electronic tablet with various functions including GPS, a map that showed where I was, a travel planner, and information on how much juice was left in the bike's battery. It had a top speed of fifty kilometres an hour and GPS to track it in case it was stolen. When we came to a hill I switched on the electric drive and the bike sailed up as if the road were flat, defying the law of gravity.²³²

Most of the streets were green and leafy. Not all had been reclaimed the way Dezzy's had, but most had a charm that showed someone was caring for them. Many boulevards had been planted with food and flowering shrubs, and many telephone poles had runner beans climbing up them.²³³

The trail went all around Vancouver, but we were on just one section. One of the displays explained Vancouver's transportation history going back a hundred years to the days before the motorcar, when Vancouver had a thriving cycling culture.²³⁴ In 1967, the Chinese community had come out in force to oppose a plan to bulldoze their homes to make way for a freeway, with the result that Vancouver was never blighted with the ribbons of concrete and noise that make pedestrian life so unpleasant in other cities.²³⁵

Another display had a map of the complete bike network, crowd-sourced to

show the best routes.²³⁶ It told me that 40% of personal trips in Vancouver were happening by bike, 25% by public transport, 20% by foot and only 15% by motor vehicle.²³⁷ Of all the innovations needed to make a great cycling city, it said, none was more important than safe, separated bike lanes. They were ten times cheaper to build than a new road, they created more jobs,²³⁸ and they justified the cost by the health-care savings, since cyclists increased their fitness and overall health.²³⁹

For a short while we rode along the Oak Street Ferry Trail from Tsawwassen, thirty-five kilometres to the south where the ferries depart for Victoria. The bike lane was separated from the traffic by a strip of shrubbery in planter boxes and green lights along the trail told us that if we kept to an easy 15 kph we could sail through the lights without stopping.²⁴⁰ The pedestrian crosswalks were clearly painted, marked by trees and shrubs, and there was a sign twenty metres before a crosswalk that flashed if a car was approaching too fast.

It was great to be able to ride on routes specifically designed for bicycles, with advanced waiting and painted green paths across the busy intersections.²⁴¹ As well as regular bikes there were recumbent bikes, bikes made from bamboo, bikes with super-cool designs that I'd never seen before, tricycles being pedaled by parents with young children, and cargo bikes carrying everything from plumbers' gear to girlfriends. On the road, as well as buses and electric cars there were some cute brightly colored three-wheelers called VeloMetros, human-powered electric tricycles that Aliya told me were manufactured locally in Vancouver.²⁴² I had never ridden among so many cyclists, so I didn't know I was supposed to signal when slowing down. As a result, I caused mayhem when I braked suddenly without signaling. The cyclist behind almost ran into me and another had to swerve to avoid the chaos. No damage was done, but I received some pretty ripe language.²⁴³

"Do you miss not having a car?" I asked Aliya as we got off the trail and were able to cycle side-by-side along a quiet residential street.

"Not at all. I can get most places I need by bike. The transit is great, and when we go away for a weekend we rent a car-share vehicle.²⁴⁴ Owning a car feels so old-fashioned."²⁴⁵

"What about in winter, when it's cold and raining?"

"I've got a good rain-cape, and if the weather's bad I can always take the bus." Then she suggested we do a detour to show me a couple of things—and along the way I saw the first of what would be a series of posters, labeled simply *Change The World*. It had a photograph of the famous British leader Sir Winston Churchill, accompanied by some words he had spoken:

I am an optimist.

It does not seem too much use being anything else.

I liked it! We came to a piece of land that had twelve tiny houses around a village green with a barbecue pit. It was one of the micro-villages Lucas had told me about, but what was even more astonishing was the sign, which said that each house had been printed on a 3-D printer in less than a day for less than \$10,000.