

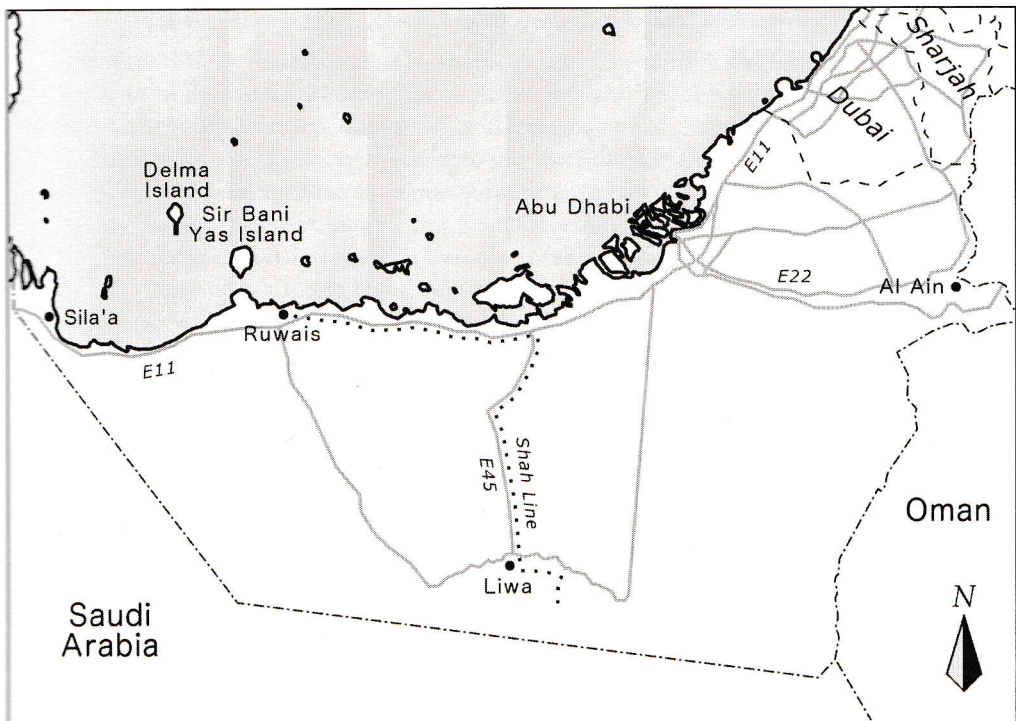
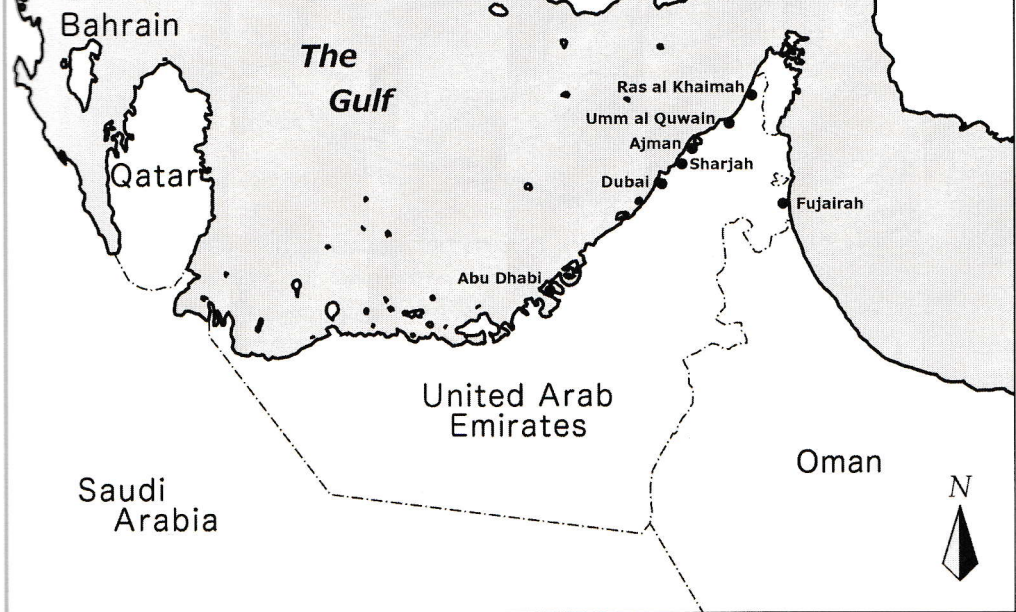
# Castles in the Sand

*A City Planner in Abu Dhabi*



Michael Cameron Dempsey





*Top:* The UAE and its constituent emirates. *Bottom:* The emirate of Abu Dhabi, including major settlements and roads.

# Preface

This book is not, in the strictest sense, a work of nonfiction. Some of the characters in these pages are composites, and I have changed just about everyone's name for the sake of privacy. Though I have tried to recount conversations as best as I can recall them, I may have occasionally put words in others' mouths. I could very well be charged with having embellished or rearranged the order of certain events, to which my only defense is that the passage of time tends to make my memories more colorful.

No single book can claim to paint a comprehensive picture of a city and its people, and I have not attempted such a feat here. Rather, I have tried to give readers a snapshot of Abu Dhabi at a unique and critical juncture. I was privileged to spend just over two years in the city, two years that coincided with the frenzied peak of its transformative boom. I hope my faltering words convey a sense of that fascinating, tumultuous moment in Abu Dhabi's history. Although I have mused at length on Abu Dhabi's people, I am not an anthropologist, and this is not a formal study of their culture. All mistakes in its interpretation are mine alone.

In light of these disclaimers, why should you bother to read this book? For starters, Abu Dhabi is one of the most important places you've probably never been to. This obscure Middle Eastern principality controls one-tenth of the world's oil. It has been called the richest city on Earth, and for good reason: its citizens are worth about seventeen million dollars each.<sup>1</sup> Its stupendously wealthy state investment funds have spent the last decade quietly combing the globe, buying stakes in everything from international banking conglomerates to New York real estate to the Italian supercar manufacturer Ferrari. Abu Dhabi's ongoing experiment in city-building, in addition to being a captivating story in its own right, has profound implications for our increasingly urbanized planet. To my knowledge, no one else has yet attempted to tell that story in narrative form.

Although I intended this to be a contemporary account, I also wanted to let some time pass in order to see how things in Abu Dhabi panned out, so the events recorded herein are already a few years old as of publication. Nevertheless, I believe that the reader will find much that is still true of Abu Dhabi. I hope this modest work might thus serve as a sufficiently broad introduction for the visitor or new arrival to Abu Dhabi—the kind of introduction I wish had been available when I first landed in the emirate. For those readers who have not set foot in Abu Dhabi, I would be honored were this book to succeed in convincing you to pay the emirate a visit and witness for yourselves the remarkable changes taking place there.



along the Detroit River, into a new mixed-use district. For the next four years I partook in just about every activity on the redevelopment continuum, from creating a new master plan for the district, to demolishing dilapidated factories and pulling industrial sludge out of the ground, to supervising the design and construction of new infrastructure, and finally to negotiating with developers to fill the district with new real estate. After more than three decades of grand ideas and false starts, Detroit's riverfront was being reborn.

Unfortunately, all of this took place under the most corrupt mayoral administration in Detroit's already sordid history. Just as our agency's efforts were reaching fruition and a slew of new buildings were ready to break ground, a scandal broke that would eventually land the mayor in federal prison. The drama dominated local news for months on end, torpedoing political support for any initiative remotely associated with the mayor and his entourage—including the redevelopment of the riverfront. At the same time, the national housing market began to implode after years of speculative overheating, delivering the coup de grace to our labors by decimating the ranks of prospective buyers for the riverfront's new residential projects. By early 2008, Detroit's nascent riverfront renaissance had ground to a halt.

As the work slowed I decided to look for opportunities elsewhere, and pondered going abroad once more. I happened across a magazine article profiling the Arabian Gulf, where a development bonanza was just taking off—in stark contrast to the doldrums then descending upon the industrialized world. The Gulf's oil sheikhdoms were bankrolling grandiose urban expansions across the board. This was partly in response to having some of the fastest-growing populations in the world; by 2020 the inhabitants of the Gulf were predicted to increase by more than a third. The Gulf's monarchs had their work cut out for them just trying to stay ahead of this curve, but they also seemed to be competing with one another to see who could use his petrodollars to buy the fanciest makeover for his city-state.

At that stage my knowledge of the Gulf was limited to Dubai. I had read story after story about the extravagant desert fantasyland, where new skyscrapers rose from the sands every week and shorelines were remade with fanciful palm-shaped islands visible from space. In every city planner lurks a hint of megalomania; a place like Dubai embodied a tantalizing chance to set it free. Yet it was not Dubai that drew my attention now, but instead Abu Dhabi, a city further down the Gulf coast. All I had known about Abu Dhabi up to that point was that it was the mysterious destination to which Garfield the cat often mailed his counterpart Nermal in the eponymous comic strip.

Its anonymity notwithstanding, Abu Dhabi appeared to be pursuing the Gulf's most ambitious urban transformation by far. Its leaders had announced a plan to remake the city into one of the world's leading centers of commerce and leisure, tripling its size by 2030. They had enticed prominent institutions of culture (the Louvre and Guggenheim museums), education (New York University and the Sorbonne), medicine (the Cleveland Clinic), and media (CNN) to establish franchises in town. But Abu Dhabi was doing more than just raising buildings; it was charting a holistic strategy for growth. Its ruling sheikhs aimed to balance progress and change with tradition, preserving and showcasing Abu Dhabi's character as a traditional Arab city in the midst of rapid development. Abu Dhabi's citizens wanted to retain their proud identity and their cherished culture while embracing the best the modern world had to offer.

This city-scaled experiment would have huge ramifications for an increasingly urbanized world. Perhaps not coincidentally, it was during that same year, 2008, that the United Nations estimated that more than half the world's people would live in cities for the first time in history.<sup>1</sup> Societies around the globe were grappling with the tensions brought about by urbanization's rapid shifts in population—geographic shifts from countryside to city and from



wilderness to ward, and also cultural shifts from tents to tenements and from tribesmen to townspeople. Abu Dhabi might be able to offer solutions to these challenges. The city's metamorphosis would be a test case for the "New Urban Order" of the 21st century.

Abu Dhabi was also making sustainability a cornerstone of its growth. In the midst of one of Earth's harshest climates, the city's new incarnation sought to strike a balance with nature. Electricity would come from solar farms and other renewable sources. Extensive mass transit systems and pedestrian networks would offer alternatives to the automobile. New buildings would be constructed with energy-efficient methods, materials, and designs. And instead of pursuing unconstrained, unplanned expansion, Abu Dhabi was taking a more measured and deliberate approach, one that would maximize the efficiency of the city's tens of billions of dollars of new real estate and infrastructure. To coordinate all of this, Abu Dhabi's leaders had established a new agency, the Urban Planning Council, and empowered it with a sweeping mandate to plan and oversee the city's transformation.

In short, for anyone working in the built environment—the fields of architecture, planning, civil engineering, and so forth—Abu Dhabi represented perhaps the most dynamic, innovative, and inspiring spot on Earth. Even China, for all its frenetic urban growth, didn't seem to be pushing the envelope quite as far. And the Urban Planning Council sounded like the place to be, in the very center of all the action. I didn't bother to check whether it was hiring. I simply sent my resume along with a cover letter requesting I be considered for any open position whatsoever. Not surprisingly, I didn't receive a response.

Several months later, as I sat in my office mulling over other ideas, the thought occurred to me that the ongoing conflict in Iraq had supposedly created plenty of reconstruction jobs—perhaps they were in need of planners? I googled *Iraq urban planning jobs* and telephoned the recruiter for the first result.

"Do you want to carry a gun?" she grilled me.

"Not particularly," I responded, unsure what that had to do with planning.

"Good. We get too many people wanting to go over there and play cowboy." She asked me to send in my resume. A few days later she called back to say that I'd been hired, and that I had two weeks to get to Jordan in order to catch my flight to Baghdad.

Admittedly, for someone who makes plans for a living, my course of action was perhaps not all that well thought-out. A local business paper quipped of my departure: "Only in Detroit would someone see a job in Baghdad as a step up."<sup>2</sup>

It wasn't. I spent a month in purgatory at my new employer's compound in Baghdad's Green Zone, waiting for the military to issue me an identification badge. Once it arrived I was shipped south to join a civilian-military reconstruction team on a forlorn base outside the city of Najaf. When I arrived in the spring of 2008, Najaf was relatively calm compared to hotbeds like Basra and Mosul. Fortunate as that was, it also meant the people of Najaf received little attention from either the Iraqi or the American authorities, who were busy spraying money and manpower at fires elsewhere. Our reconstruction team was left with a grab bag of projects ranging from the rehabilitation of a local park to the creation of a vocational training center. While we fussed with these trivialities, Najaf's bigger problems went unaddressed. The city's roads were a mess, its citizens suffered a pronounced housing shortage, and its sputtering grid delivered no more than four hours of electricity a day. Even if we'd had the resources to tackle these challenges, we were hampered by a dearth of reliable partners in the Iraqi government, and by an astonishing quagmire of bureaucracy, indifference, and incompetence in our own chain of command.

Then one day, quite unexpectedly, I received an e-mail from the Abu Dhabi Urban Planning Council, thanking me for my earlier inquiry and inviting me to a phone interview.



# Ready, Fire, Aim

Abu Dhabi has all the vigor and likeability of an experimental society. Never in history had so much money, so much technical expertise, or so powerful a social and religious vision been at anyone's disposal to build a civilization from scratch as was occurring here and now. At the same time, it exuded an anxiety.... All its energy seemed to be in danger of being sapped by the sense that everything and everybody were only temporarily here.—*Jonathan Raban, Arabia: A Journey through the Labyrinth*

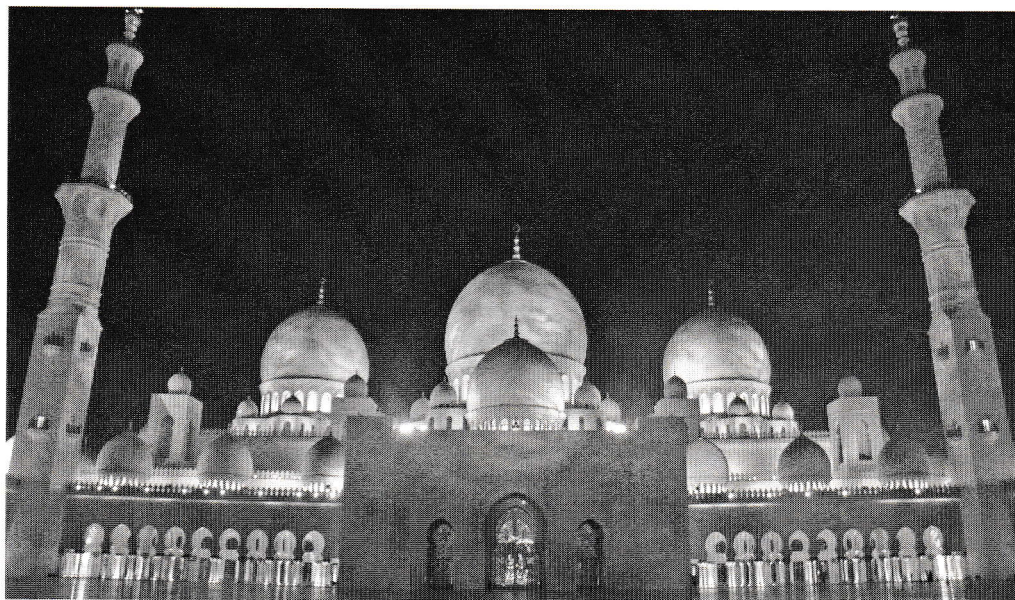
**F**or the life of me, I couldn't figure out why someone would sing opera at half past four in the morning. I buried my head in the pillows, but still the tenor voice assaulted my eardrums. It sounded like a protégée of Pavarotti was performing right outside my window. With a bullhorn.

My grogginess cleared and I remembered where I was. The singing was the early morning *adhan*, the Muslim call to prayer, emanating from the mosque next to my hotel. As part of its blending of the traditional and the modern, Abu Dhabi has put a contemporary spin on this ancient custom. Most of the city's mosques are linked to a central public address system from which a lone male voice serenades residents five times a day—a stark contrast to the cacophony one hears in other Middle Eastern cities, where each mosque issues its own call to prayer. I took to calling Abu Dhabi's *adhan* the Giant Voice, the term that inhabitants of Baghdad's Green Zone employed for the bellowing civil defense system that warned them of incoming mortars and rockets.

Abu Dhabi's Giant Voice happens to belong to the *muezzin*, or prayer caller, at the city's Sheikh Zayed Mosque. This immense white structure sits at the southern end of the island and dominates the mainland entrance to the city, although the lack of nearby buildings makes it difficult for the onlooker to appreciate its true size. The mosque is by far the largest in Abu Dhabi and the third largest in the world, capable of accommodating more than forty thousand worshippers in its prayer halls and courtyards. Its chandeliers are plated in twenty-four-karat gold, and the hand-woven Persian carpet that covers the main prayer hall is the world's most expansive. The mosque is especially breathtaking at night, when watery blue and purple lights ripple across its eighty egg-shaped domes. Although the Sheikh Zayed Mosque has become Abu Dhabi's most recognizable symbol, its architecture is actually more Indian than Arabian, taking most of its cues from the Mughal style of the Taj Mahal. Sheikh Zayed started construction on the mosque in 1996, yet when I arrived more than thirteen years later, workers were still putting the finishing touches on its façade.

The Giant Voice is a fitting complement to such a regal structure. During my first few days in Abu Dhabi I had already been amazed by the *muezzin* maestro's talent for stretching a single word of the prayer call across a dozen notes or more. Most days his song was bold and haunting, ending on a minor key as if more were to come. Sometimes he would switch





The Sheikh Zayed Mosque at night.

things up in the late afternoon, calling out to the setting sun with a soaring paean that was equal parts celebration and mourning for the passage of another day. Even for a non-Muslim, it stirred the soul. On this day, however, the earliest of the calls to prayer was an alarm clock I could have done without.

After another hour of fitful slumber I awoke again, stumbled over to the window, and opened the curtains. Sunlight poured into the room. From my twelfth-floor vantage point I would have had a commanding view of the eastern side of the city—if it weren't for the towering eyesore standing in the way.

Rising outside my window was a thirty-story concrete partition as wide as it was tall. Gaping voids pockmarked the unfinished façade like squares on a checkerboard, with scarcely a detail or ornament to break the repetition. Semi-circular turrets bulged out at either end of the building, rising above the height of the façade and topping out in the shape of upside-down fedoras. Clumps of uncut rebar jutted out from every edge and corner like flagella. A half-dozen tower cranes soared above the structure, keeping watch over the hundreds of laborers swarming about like worker bees.

This was the western side of Wahda City, one of dozens of new real estate projects that had sprouted like weeds in Abu Dhabi's ongoing development boom. Architecturally, it left much to be desired. Wahda City was far too big for the piece of land on which it sat, a modest plot barely four hundred feet square. On the opposite side of the elongated building visible from my window, the development also included a pair of equally tall towers with narrow elliptical floorplates. The three buildings were wedged onto the plot at odd angles to one another, like strangers trying to avoid contact in a crowded elevator. The entire cluster loomed twice as tall as the surrounding buildings, a dissonant chord among the otherwise uniform harmony of the skyline. When finished, the development would overflow with more than a million square feet of offices, apartments, retail space, a movie theatre, and an 850-room luxury hotel.

In addition to its bulk, Wahda City also occupied a singularly poor location. It was sur-



rounded on three sides by a mall, a stadium, and the city's main bus station, each of which already generated huge amounts of traffic. The streets of the unfortunate superblock that housed this cluster were choked at all hours of the day, and the single arterial to which Wahda City had access was already a free-for-all due to the cars entering and exiting the mall. It was anyone's guess as to what would happen with the additional traffic Wahda City would beget; the nearby roads simply had no more room.

Developers are fond of the phrase "highest and best use" to describe how they maximize the utility of real estate. Wahda City certainly fulfilled the "highest" part; "best" was another story. Any of its flaws—the amateurish aesthetics, the disproportionate scale, and the awkward location—should have been a show-stopper for whoever was in charge of reviewing development proposals when Wahda City was first put forth. Yet here it was, rising before me in all its elephantine inelegance. Hadn't anyone tried to stop this?

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"We keep the shades closed for a reason." Alex nodded at the obscured window. "Normally I enjoy a room with a view, but when the sun comes up, we roast in here." His darkened office was like the cave of a hermitic bibliophile. Reports, papers, and engineering drawings in various stages of unrolling covered every surface and spilled from the bookshelves. Alex's office mate, Ethan, sat in front of his computer in the far corner, surrounded by piles of paper. Alex was perhaps a half-foot shorter than Ethan, but his spiked hair nearly made up the difference. Both were Canadians from Toronto in their late thirties.

Alex was my new supervisor. He had been at the Urban Planning Council all of nine months, which made him an old-timer at the fledgling agency. I had met him briefly when I first arrived at the office for my orientation, but he was so busy that I barely saw him during the following days. Only now, at the end of the week, had he finally found time to brief me on the Urban Planning Council's role in Abu Dhabi's development and the part I was to play. He cleared a space for me to sit and launched into an overview of the agency's history.

In the later years of his reign, Sheikh Zayed had become ever more protective of Abu Dhabi. His 1977 moratorium on private construction left development in the hands of government agencies that peppered the city with bland apartment towers and commercial buildings. This moderate pace of development slowed to a crawl in the late 1990s and early 2000s, even as the neighboring emirate of Dubai embarked on a building spree.

Zayed's death in late 2004 changed everything. The mantle of leadership passed to his nineteen sons. The eldest, Khalifa, inherited Zayed's dual positions as president of the UAE and ruler of Abu Dhabi, while the third-eldest, Mohammed, became the emirate's crown prince. Khalifa concentrated on federal issues, while Mohammed took charge of administering Abu Dhabi.

The sons of Zayed soon unveiled an ambitious vision to transform Abu Dhabi into one of the grandest cities in the world. Underlying it was a desire to diversify Abu Dhabi's economy beyond its virtually exclusive dependence on oil. Like the leaders of the Gulf's other oil-rich states, Abu Dhabi's sheikhs were realizing that their petroleum-funded windfall wouldn't last forever. They began looking for ways to broaden their economic bases so that when the crude ran out, their people wouldn't suffer a dramatic decline in the comfortable standard of living to which they had become accustomed.

Here Ethan chimed in. "The Saudis have a joke about it. 'My father drove a camel, I drive a Benz, my son will drive a Gulfstream ... and his son will drive a camel.'"

"They're all a bit paranoid about going back to the Stone Age," Alex agreed. "Rightfully so, I guess."



The attempts at diversification were not novel. When author Jonathan Raban visited the Gulf in the late 1970s, he observed that some of the region's city-states were already setting up basic local industries like steel smelters. Although these were helpful for replacing imports, Raban pointed out the illogic of their competitive position in global markets: "Why ship alumina from the Pacific to be smelted in Bahrain and then shipped back to the Pacific as aluminum?"<sup>1</sup>

The emirate of Dubai was one of the first places in the Gulf to pursue diversification on a large scale. In the 1980s Dubai began using the revenues from its own modest oil discoveries to jump-start an economic expansion centered on real estate, tourism, and entertainment. The endeavor paid off. By the early years of the new millennium, Dubai had captured international attention with its meteoric growth and its ever more outlandish projects, including the creation of artificial islands and the construction of the world's tallest building.

I interrupted to ask whether there was a rivalry between Dubai and Abu Dhabi.

Alex laughed. "It's more than that. Ask any of the Emiratis whose families have been in Abu Dhabi for generations, and they'll tell you that Dubai is just an upstart. Abu Dhabi is the real UAE. The power and culture are here. They think that their cousins in Dubai sold out."

Ethan added, "All the same, you can imagine how watching your neighbors get the glory for all those years could give you something of an inferiority complex."<sup>2</sup>

Dubai's expansion also attracted plenty of foreign critics who disparaged the emirate as an Arabian Disneyland, lacking substance and authenticity. The frenzied activity and construction eventually surpassed the realm of realistic growth and became a speculative bubble in danger of bursting. At its peak, Dubai had more real estate under development than Shanghai, a city with thirteen times Dubai's population.<sup>3</sup>

In their post-Zayed vision for diversification, Abu Dhabi's sheikhs elected to cast a wider economic net than had Dubai. They wanted to develop local industries in a broad range of sectors, including manufacturing, defense, renewable energy, media, and more. The emirate's state-owned sovereign wealth funds started targeting companies around the globe for acquisition and investment, looking for opportunities to transfer those enterprises' knowledge and facilities to Abu Dhabi. They also started buying stakes in everything from global financial corporations like Barclays and Citibank to New York City office towers and London's Gatwick Airport. In 2008 one of the sheikhs spearheaded the purchase of Manchester City, the English Premier League football (i.e., soccer) club, subsequently investing more than a billion pounds in new players and facilities.<sup>4</sup> The state dumped billions of dirhams, the UAE's currency, into a raft of new Abu Dhabi-based enterprises like the flagship Etihad Airlines.

In order to create a suitable skyline for the new and improved Abu Dhabi, the sheikhs lifted the emirate's development restrictions. Within a year and a half of Zayed's death, untested development companies like Aldar and Sorouh had broken ground on dozens of projects across the city, projects like Wahda City. The initial results of this new wave of development were disappointing, to put it mildly. "The developers built a lot of junk," Alex said. "Awful designs, cheap materials, poorly chosen locations. And there was no one to stop them. The Abu Dhabi Municipality rubber-stamped everything the developers handed them."

This didn't escape the crown prince's notice. He realized that without a comprehensive plan for the transformation of Abu Dhabi's built environment, the emirate risked repeating Dubai's speculative excesses and incoherent urban form. Dubai's frenzied development had



been poorly planned, with projects and buildings scattered across the desert seemingly at random. Most of Dubai barely felt like a city at all; it was instead a mishmash of skyscrapers and housing estates strung together by highways that resembled a plate of tangled spaghetti.

The crown prince wanted no such fate for Abu Dhabi. If anything, he had in mind the example of Vancouver, whose reputation as one of the world's most livable cities had caught his eye. "The Vancouver obsession is one of three things you need to know to understand Abu Dhabi," Alex said. "Actually, it's a dual obsession with Vancouver and Singapore. Abu Dhabi's leaders look to Singapore as the model of success for a small city-state—trade and transportation hub, advanced knowledge economy, Singapore Airlines, global importance and identity, that sort of stuff. And they want it to look postcard-perfect like Vancouver.

"The sheikhs," Alex continued, "are the second thing you need to know about. They control everything here. I keep saying that we should have a 'know your sheikhs' chart that describes what each of them owns and controls. But if our Emirati staff have that knowledge, they aren't telling. Our general manager ultimately answers to the crown prince, but we deal with the other sheikhs all the time, or at least with the companies they control. And what a sheikh wants, he tends to get. And third, the notion of the private sector is far different here. The state owns the oil industry and big chunks of most major companies across the rest of the economy." Alex explained how the sheikhs' personal holdings confused the concept of the private sector even further, as the boundaries between their bank accounts and the state's were often blurred.<sup>5</sup>

In 2007 Sheikh Mohammed invited Vancouver's former principal city planner to bring a team to Abu Dhabi and map out the emirate's transformation. "What they came up with was this," Alex said as he rummaged through the piles on his desk. He pulled out a thick volume with the label *Plan Abu Dhabi 2030: Urban Structure Framework Plan* on the cover.<sup>6</sup> "It's a framework for the broad expansion of metropolitan Abu Dhabi over the next twenty years. The population today is about a million. *Plan 2030* foresees it tripling. The plan channels that growth into specific areas, including some of the nearby islands."

Alex turned to a map on the wall and pointed out several of the larger islands in the archipelago surrounding Abu Dhabi, each of which would be developed with its own distinct character under *Plan 2030*: Suwwah Island would be the new financial district, Reem Island would house nearly two hundred thousand people in a forest of high-rises, Saadiyat Island was envisioned as a cultural district with branches of the Louvre and Guggenheim museums, and Yas Island would be a smorgasbord with an F1 race track, an IKEA, a Ferrari-branded theme park, gigantic marinas, and another hundred thousand residents. Alex also indicated a large empty triangle on the mainland between Abu Dhabi Island and the airport and explained that it would be the home of the new Capital District, containing all the organs of the federal government and another three hundred fifty thousand people.

*Plan 2030* may not have had the benefit of starting from a blank slate like the original urban plan of forty years before, but if anything, its directives were even more sweeping and its aspirations grander. Tripling the population of a city in twenty years would be no mean feat—and that was merely the plan's moderate scenario; its most aggressive projections pegged the 2030 population as high as five million.<sup>7</sup> By way of comparison, it took New York City more than twice that length of time to grow from one million to three million inhabitants.

As I leafed through the plan, I saw that it called for "setting an international example of cutting-edge sustainable growth—that which filters all decisions through environmental, social, and economic criteria."<sup>8</sup> The plan repeatedly emphasized taking a measured approach to development as a means of both protecting the emirate's fragile natural environment and preserving Abu Dhabi's identity as a traditional Arab city. "Abu Dhabi has the rare oppor-





Old versus new in downtown Abu Dhabi. Pictured are closely packed 1970s-era buildings and one of their newer counterparts.

tunity to offer a special combination of features in its urban identity: an authentic and safe but also progressive and open Arab city; a personality garnered from the desert and the sea; a traditional way of life but with the latest 21st century options,” the plan confidently boasted.

Alex explained that the Vancouver contingent had also helped set up a new agency to



oversee the implementation of the plan—the Urban Planning Council, or UPC.<sup>10</sup> The crown prince gave the agency a threefold mandate: first, guide the emirate's growth by producing development policies and master plans ranging from the regional level all the way down to individual neighborhoods; second, review developers' proposals to ensure they complied with those plans and policies; and third, coordinate among the various government agencies and developers to make sure everyone was working in sync.<sup>11</sup> Those three functions were reflected in the UPC's three main departments: Planning Policy, Development Review, and the catchall TIES, which stood for Transport, Infrastructure, Environment, and Spatial Systems.

Within the TIES department, Alex supervised the UPC's transport team, who numbered just four when I arrived. This tiny squad was in charge of the big-picture planning for Abu Dhabi's transport infrastructure, in essence making sure that all the developers' new projects fit together with the mammoth transport investments planned for the city. *Plan 2030* called for the creation of a new subway system, the Metro, along with a network of trams and dedicated bus lanes, and noted, "Abu Dhabi cannot rely solely on the auto when the population reaches three million."<sup>12</sup> It also proposed a new national railway that would span the width of the UAE from Saudi Arabia to Oman. These projects were augmented by more mundane elements such as hundreds of kilometers of new roads and highways. "All of this stuff will be built in the next ten to twenty years. The total price is estimated at something like a hundred and twenty billion," Alex said.

"Dirhams?" I asked. At the fixed exchange rate of 3.67 dirhams to one U.S. dollar, the figure was impressive.

"Dollars." (Correction: the figure was staggering.) "And in case you haven't noticed, the existing roads could use some help. The public realm is a mess, and the traffic keeps getting worse. So we're trying to fix that, too."

I asked what that involved on a day-to-day basis.

"A little bit of everything. We provide transport input to Planning Policy's master plans. We do the same for Development Review when they review developer proposals. And we manage our own projects and initiatives. But we probably spend more time running interference between the various agencies and developers than on anything else. It mostly just takes getting the right people together in one room and trying to make them talk to each other." He smiled. "Like herding porcupines."

I'd battled a growing sense of worry during this part of the conversation. The truth was going to be obvious sooner or later, so I figured I might as well get it out now, even if it meant I would be shipped back home the next day. "Look, I'm not really sure why I was picked for your team, but ... well, I'm not a transport planner."

Alex frowned. "Have you done any transport work in your other jobs?"

"A little, but nothing like what you're talking about."

"What about your academic background?"

I shook my head. "I didn't take a single transport class for my planning degree."

Alex thought for a moment, then shrugged. "To tell you the truth, neither did I. I was supposed to be an urban designer, but somehow all my jobs wound up being transport-related. Don't worry. Most of what we do is at the strategic level anyway. We leave a lot of the technical details to others. Besides, even if you had decades of experience, it wouldn't help you much. Abu Dhabi has a way of turning experts into fools."

He extended his hand. "We're all novices here. Welcome aboard."

I left Alex's office and walked back towards my own. The UPC occupied the former headquarters of the Abu Dhabi Department of Public Works at the corner of Airport Road and Delma Street, near the midpoint of the island. From above, the building's floorplan



resembled a stylized falcon, the UAE's national bird, which the Emiratis' Bedu ancestors prized for its hunting prowess.<sup>13</sup> The whitewashed stucco structure looked to have been built during the initial boom of the early 1970s. The UPC's offices had been remodeled in a contemporary style, complete with sleek new furniture and smoked-glass windows, but they retained a patina of age, from the squat toilets in the bathrooms to the faint aroma of *oud* incense that lingered in the hallways. I liked the feel of the place, with its hints of a bygone era.

As I entered my office I nearly ran head-on into a figure clad in black from head to toe. I recoiled at the sight of the *abayya*, the ink-hued gown that Emirati women wear over their clothes. It wasn't the garment that repelled me, but the prospect of touching an Emirati woman, even accidentally. I had come to Abu Dhabi with an irrational fear of Emirati females, thanks to a friend from graduate school who had worked for years in the UAE. "Emirati women are ice queens," she had warned me. "The only time you'll see them is when they're shopping at the mall, and then they'll act like you and everybody else don't exist. Whatever you do, don't try to shake hands with one unless she offers first, which will probably never happen." Physical contact between an Emirati woman and any male who wasn't a family member was evidently a huge taboo.

I relaxed when I recognized the Emirati in front of me as Mahra, a young woman from the UPC's public relations team. I had met her earlier in the week during my orientation, and she had been kind enough to show me around the office. In between introductions to the other staff, she interrogated me about my background, interests, and family, while proudly discoursing on the traditions and culture of her own society. True to form, she hadn't shaken my hand, and had actually asked me not to try. But apart from that, she proved exactly the opposite of what I was conditioned to expect. Mahra was smart, friendly, and genuinely pleasant to talk to.

"Sorry, I didn't realize you were coming through the door," Mahra said. Beneath the black wrap of her *shayla* headscarf, her face was flushed from our near miss. She had a winsome smile and dark, beguiling eyes, and didn't look a day older than twenty-five. "I just came by to give you this." She handed me a bag. "Remember when you asked me the other day about books on Abu Dhabi's history, and I said there was a very famous one that I couldn't remember? This is it. I hope you enjoy." I reached in and pulled out a copy of Wilfred Thesiger's *Arabian Sands*.

I forced what I hoped was a suitably appreciative smile. Thesiger was the last of the legendary English explorers, a Luddite famed for his vocal disdain of modern advances as well as for his remarkable adventures. During my time in Iraq I had begun reading *The Marsh Arabs*, Thesiger's account of his travels through the riverine labyrinth of southern Mesopotamia in the 1950s. The narrative was as boggy as the marshes and the Englishman's self-importance was excruciating. Thesiger revered tribal societies, such as the Arabs who inhabited the marshes, as the last bastions of mankind not corrupted by modern inventions. He deplored human settlements as scourges on the land, engines of decay filled with weak, slothful people. As one making a career in the development of cities, I did not exactly share Thesiger's point of view.

I was also put off by his seeming hypocrisy. Although Thesiger ranted against the evils of "the motor-car and the wireless," he apparently saw nothing wrong with gallivanting around by plane and spending much of his time back in decidedly non-primitive England, sipping tea and lecturing in the plush drawing rooms of the Royal Geographic Society. Even while traveling, Thesiger enjoyed the comfort of a thermal sleeping bag and dispensed modern pharmaceuticals wherever he went. At times he seemed more a poseur than someone serious



about rejecting modernity and adopting the way of life of his precious tribes. I quit reading *The Marsh Arabs* halfway through the book.

My brain hurt at the mere thought of having to endure another of Thesiger's jeremiads. *Arabian Sands* is his account of his journeys with the Bedu of southern Arabia during the late 1940s, during which he made two perilous treks across the unforgiving sands of the Empty Quarter. The book has become synonymous with old Abu Dhabi; no article on the emirate's history is complete without an obligatory nod to Thesiger's magnum opus. This misconception proves that few people bother to read it. *Arabian Sands* covers Abu Dhabi in barely a dozen pages. Thesiger made only a brief stop at the village and did not particularly care for it: "A large castle dominated the small dilapidated town which stretched along the shore. There were a few palms, and near them was a well where we watered our camels while some Arabs eyed us curiously.... Near us some small cannon were half buried in the sand. The ground around was dirty, covered with the refuse of sedentary humanity.... In the evening, a young Arab came out from a postern gate, walked a little way across the sand, squatted down, and urinated."<sup>14</sup>

Thesiger liked Abu Dhabi even less when he returned in 1977. The high rises and oil refineries of the modern city were for him a nightmare, leaving him "disillusioned and resentful ... as this symbolized all that I had rejected in Western civilization."<sup>15</sup> I felt sure I was in for more of this sunny disposition throughout *Arabian Sands*, but I resolved to skim the first few chapters in case Mahra later asked whether I'd read it.

The book turned out to be spellbinding. Thesiger painted a compelling portrait of the Bedu and their way of life, rendered all the more bittersweet by his knowledge of the inevitable and irrevocable changes that oil, wealth, and modernization would bring. He sometimes slipped into hyperbole when describing the stark beauty of the Empty Quarter, but it was impossible to question his respect for both the harsh terrain and the Bedu companions who kept him alive in it. I would return to the book time and again throughout my own sojourn in Abu Dhabi to seek clues into the mystifying psyches of my Emirati hosts from among Thesiger's observations of their forebears.

Despite my initial reservations about Mahra's gift, her thoughtfulness touched me and I offered my thanks. "No, it should be me thanking you for asking in the first place," she said. "Most foreigners don't show much interest in our history or culture. If you're going to come here, I feel that it's the least you can do to find out about our people. We're very proud of our traditions, you know. I like to think of myself as a daughter of the pearl fishers." Mahra straightened with visible satisfaction at this last thought. In reality, she had told me that her father was in the military, but I didn't begrudge her the poetic license.

Mahra at least seemed to practice what she preached regarding her society's customs. Whereas many foreigners saw the coverings of the shayla and abayya as symbols of female oppression, Mahra wore them with pride. Some of the other young Emirati women at the UPC favored abayyas embroidered with all sorts of sequins and bling, rather defeating their intended purpose as garments of modesty, but Mahra's was a pure, unadorned black. That didn't stop her from shifting as she stood in front of me so that her abayya parted slightly, betraying the sleek dress and designer shoes that she wore underneath. She smiled when she saw that the flare of color had caught my eye. "You like my shoes?" she asked.

Lights flashed and sirens blared as my friend's earlier words of warning came back to mind. Was this a test? I was doomed either way. If I said yes, the Culture Police would jump out and arrest me for having the nerve to set my eyes upon an Emirati woman's footwear. And if I said no, Mahra would obliterate me where I stood. I froze like a deer caught in headlights.



Thankfully she changed the subject. "How have you been enjoying our city so far? I hope you've seen something besides the office and your hotel." I told her that I was still getting to know Abu Dhabi. When I mentioned my walk the previous weekend, she blanched. "You *walked* to the Corniche?!"

"Um ... yes?" Had I committed some strange pedestrian faux pas?

Mahra shook her head. "Nobody walks here. Not unless you have to. I mean, I've walked *along* the Corniche, but never *to* it. I have my driver take me there."

"You don't drive yourself?" I blurted out the question before I realized how rude it was.

She didn't seem offended. "Actually I don't know how. My family has always had a driver, so I never needed to learn." Her tone was matter-of-fact. Mahra's comment hinted at the kind of privileged lifestyle modern Emiratis enjoy, a more luxuriant standard of living than most people can imagine.

Mahra smiled again. "Anyway, enjoy your reading. I'll be sure to quiz you next time we talk." She left, her flowing abayya seeming to glide down the hallway.

The diversity at the UPC was nothing short of extraordinary. In its short eighteen months of existence the agency had hired more than a hundred staff, half of them Emiratis and the others a miniature League of Nations of expatriates. The foreigners included plenty of westerners—North Americans, Europeans, Australians and so forth—but also several from more exotic places like Brazil, Japan, Russia, and even Fiji. There was also considerable representation from other Arab countries and the Indian subcontinent.

Like the UPC itself, the staffers were generally quite young. Few of the department heads were much over forty; the general manager, an Emirati, was only thirty-six. The locals in particular were a wellspring of youth. They had been handpicked from other agencies or scooped up right out of college to become the first cadre of Abu Dhabi's indigenous urban planners. Working alongside their expat colleagues, they would gain the skills and experience that would eventually enable Abu Dhabi to look inward for the expertise to build its future. One day the UPC's eager young Emiratis would run the place.

That day was still a long way off. Planning was a new field for Abu Dhabi. Even *Plan 2030* admitted that it was merely "an interim tool for evaluating development and growth propositions prior to full induction of a planning culture within the city."<sup>16</sup> The Emiratis who joined the UPC faced a steep learning curve. They had all come from different fields and had to be retrained. The general manager himself had to start from scratch when the crown prince picked him to head the agency; his first year or so on the job had been a crash course in the basic principles of what makes a city work. The emirate's first academic planning program at the Sorbonne's new Abu Dhabi branch, then under construction, was still a few years away from graduating its first students. The UPC was thus finding it a challenge to recruit Emirati staff that fit the agency's unique mission. As a result, some sections of the agency were made up almost entirely of expats.

Alex's little transport team was one of them. Our only Emirati was a young civil engineer named Khalid. Clancy, our transit specialist, was a gifted young Australian just a few years out of university. Lakshmi, a serene young Indian woman, was a technology virtuoso who managed the digital maps and population databases we used for our transport plans. Shortly after I joined, the team increased to six with the addition of Carlo, a dapper Italian who possessed his country's fashion sense in spades, as evidenced by his monogrammed shirts and colorful ties. Though he looked to have come straight from a Milan catwalk, in reality he had more in common with Fermi and Marconi than with Gucci and Versace; his analytic mind could rapidly decipher traffic models that looked like hieroglyphics to anyone else.

The UPC's rapid growth made for cramped quarters at the office. I was put in an overflow



room with several other recent arrivals. Liz hailed from Leeds and had joined the environment team. Her diminutive frame packed outsized opinions, which she dispensed with oh-so-proper English. Chris was a Kiwi architect who rarely talked except to complain; he had come to Abu Dhabi thinking he would be designing paradigm-shattering buildings, but he had instead been relegated to the role of a glorified draftsman. Lastly there was Sultan, a young Emirati graduate who worked for Development Review. He seemed like a fish out of water, struggling to adjust to a regular work schedule and learn the planning principles that were required of him.

One afternoon Liz walked into the office, dumped a ream of papers on her desk, and collapsed into her chair with a sigh. When I asked what was wrong, she muttered a single word: "Estidama."

The Estidama project was the UPC's initiative to develop a set of codes for designing and building energy-efficient structures and communities. In essence, Estidama was intended to produce something similar to the internationally accepted Leadership in Energy and Environmental Design (LEED) guidelines, but ones adapted to Abu Dhabi's exacting climate. Although Estidama had begun with the best of intentions, it had quickly gone astray. The UPC in its embryonic state had hired an untested consultancy to develop the codes. Its performance had been lackluster. Estidama became a byword around the office, playing on the dual meaning of the term itself: in Arabic, *estidama* translates as "sustainable," but with a slightly different pronunciation it can also mean "mishap." When Liz arrived, she was given the unenviable task of sorting the troubled project out.

"What's the latest?" I asked.

"The consultants won't make any more changes to the drafts. I've gone back to them with the same edits three times. At first they just ignored me, but now they flat-out refuse to do what I tell them." She nodded at the pile of papers. "This thing's rubbish. Worse than useless."

I leafed through the pages. The quality was amateurish, with elementary spelling errors, grammatical mistakes, illegible diagrams, and entire sections that looked like they had been lifted straight from LEED. "You're not kidding," I said.

"I finally told them just to send me the originals so I can make the changes myself. And you know what? They said they won't give us anything until we pay off the rest of their contract." Her rancor caught the attention of Sultan, who came over from his desk to inspect the documents.

I tried to make light of the situation. "That's what we get for hiring the lowest bidder, right?"

Liz glared at me. "Hardly. Their contract is twelve million dirhams."

I let fly a rather indelicate response before I could censor myself. I glanced at Sultan, concerned he might be offended, but he didn't seem to mind. Because of the cultural stress placed on social harmony, Emiratis rarely criticize anyone directly, and harsh invectives are frowned upon. Still, three million dollars for the garbage in front of us was highway robbery. "I'd call this a waste of taxpayer money if we were in the States," I said, trying to atone for my faux pas, "but I guess that doesn't apply here." Abu Dhabi is a tax-free locale; the government derives its revenue almost solely from oil.

Sultan laid the papers back on Liz's desk. "No, it's not your money they're wasting. It's ours." I could detect no concern in his voice.



## Three

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# The Mean Streets

To me the sun-blistered skeleton of a car seemed infinitely more horrible than the carcass of a camel.—*Wilfred Thesiger, Arabian Sands*

Abu Dhabi's streets are designed to kill." The presenter's blunt statement shocked his audience awake. We were in the second day of a workshop convened to help create a new design manual for Abu Dhabi's streets, one of the UPC's foremost initiatives. The workshop's momentum had begun to drag, prompting the presenter to try and shake things up.

The dapper man at the podium was Dr. Adam, one of the UPC's senior managers some of the staff had nicknamed the Professor. He oversaw the TIES department, including Alex's transport team, and had an air of genius about him. The Professor was in his fifties, a shade over five feet tall, with a Cheshire-cat grin and a shock of hair reminiscent of Einstein. He had left his native England when he was a teenager, hitchhiked through Asia on the Hippie Trail, and eventually landed in Australia. Within a few short years he had picked up a PhD in planning and Australian citizenship. He had that rarest of intellectual combinations: the scholarly mind that was also organized. Finding the life of an academic to involve too much pondering and not enough doing, he had gone into practice, bringing to his work a cerebral touch that had earned him his soubriquet. Although the Professor was Alex's supervisor and thus my uber-boss, he was friendly and approachable, with a witty retort always at hand.

Creating a design manual for Abu Dhabi's streets was the Professor's labor of love. The brutality of the roads had appalled the Professor when he came to the emirate in late 2007 as one of the UPC's first hires. He had proposed creating a manual to guide both the design of all new streets and the retrofit of existing ones. Among its interventions, the manual would reduce the width of Abu Dhabi's gaping rights-of-way by moving certain utility lines beneath the road surfaces. Although such a configuration is standard practice in just about every other city, Abu Dhabi's utility companies had resisted it since the early days of the emirate's urbanization, instead demanding wide underground corridors on either side of main thoroughfares.<sup>1</sup> It had taken months of painstaking negotiations, but the Professor and the members of the UPC's infrastructure team had persuaded some of the utilities to permit their lines to run beneath the streets.

In addition to making better use of space and giving the streets a more human scale, the manual's reduced rights-of-way would also facilitate tightening lane widths to reduce speeds, drawing on recent research demonstrating that driver speeds are more influenced by road design than by posted limits or the velocity of other cars.<sup>2</sup> Slower speeds would in turn render unnecessary the ubiquitous (and ubiquitously annoying) speed bumps that littered Abu Dhabi's smaller streets. The manual would also prescribe how Abu Dhabi's new tram and bus transit systems were to integrate into the street network. It would improve the harsh pedestrian realm with landscaping, bike lines, furniture, and shading. In keeping with *Plan*



2030's recommendation to break the city's existing superblocks into smaller and more navigable clusters, the manual outlined how to accomplish this with the addition of more frequent cross-streets.

At the time, street design manuals were an emerging fashion in the transport field. Agencies such as the United Kingdom's Department for Transport and New York City's Department of Transportation had paved the way with design guidebooks that had significantly improved the safety and aesthetics of their jurisdictions' thoroughfares. The UPC's manual would draw heavily on these precedents. It had taken the Professor more than a year to line up funding and hire consultants to do the legwork, but the development of the manual was now underway.

The street design manual was intended to do more than just prettify Abu Dhabi's streets; it would also make them safer and encourage a better balance between pedestrians and cars. Following *Plan 2030*'s mantra of "all trips begin and end with a walk,"<sup>3</sup> the manual aspired to make walking as comfortable as possible all year round, thereby encouraging residents to walk—especially for short trips. If Abu Dhabi ever hoped to become a leading world city, the manual was absolutely necessary for rehabilitating the city's public realm and image. On a more practical level, the manual would also save lives. The Professor's frank statement to the workshop attendees was no hyperbole: Abu Dhabi's streets were deathtraps, especially for pedestrians.

Having captured everyone's attention, the Professor proceeded to outline some of the more fatal elements of the city's current street designs. He pulled up a slide showing a cross-section of one of Abu Dhabi's ten-lane arterials. "Pedestrian crossings on the arterials, as you're all aware, are spaced too far apart. A pedestrian must walk to either the nearest intersection or the mid-block underpass, if one is present. In this climate, it's unrealistic to expect people to go half a kilometer out of their way. And so we see this." His next slide showed a photo of a group of laborers darting through heavy traffic. "The medians have knee-high curbs and fences to discourage this sort of behavior, but people do it anyway, of course. By slowing them down, the obstructions in the medians merely make them easier targets.

"Now let's consider junctions." The Professor advanced to an isometric view of a typical four-way intersection. "Your average Abu Dhabi junction is an accident waiting to happen. The dedicated slip lanes for right-hand turns are angled so that drivers must crane their necks to look over their left shoulder while turning, rendering them oblivious to any pedestrians in front. The island refuges are concrete blocks with divots for footpaths, barely wide enough to hold one person, and heaven forbid she be pushing a stroller. The split-phase signal timing is confusing and encourages people to jaywalk. Even drivers aren't safe." He switched to a picture of one of the traffic signal poles that protruded from the medians at every intersection. "The signal poles are encased in concrete that comes up to waist height and is half a meter thick. If an oncoming car hits one of those, I assure you, the pole will survive but the driver will not."

The Professor continued lecturing for a solid fifteen minutes, his crisp speech a mix of King's English and Crocodile Hunter. He inventoried all the incongruities of the street environment I had observed while walking the city, as well as many I had missed. Although he was a doctor of philosophy rather than of medicine, his dissection of Abu Dhabi's streets mimicked the clinical precision of a surgeon. By the time he was done, I was halfway convinced that the engineers who had originally designed Abu Dhabi's streets should be charged with manslaughter.

"If any of you wonder why this matters, I'd like to quote from a recent article," the Professor said. He held up a copy of the *National*, a local English-language newspaper, the Abu



Dhabi government had founded in 2008 to experiment with an open press. The UAE's other Arabic and English dailies were little more than government mouthpieces, like much of the press throughout the region. Their front pages favored breathless accounts of Sheikh So-and-So entertaining some foreign dignitary. Not so the *National*, which was given considerable leeway to report on topics that were normally off limits.

"A French tourist was run down and killed yesterday on a pedestrian crossing in Abu Dhabi," the Professor read, "just ninety minutes after he had disembarked from his cruise ship. The victim's wife and a friend managed to jump out of the way as the driver, an Emirati, sped off in his BMW."<sup>4</sup> The Professor rested the newspaper on his lectern. "So far this year, thirty percent of road accidents have involved pedestrians, up considerably from just two years ago. Our surveys indicate that two-thirds of pedestrians don't use crossings because they're too far out of the way. There were nearly six hundred pedestrian accidents last year—one every fourteen hours, many of them fatal. That, ladies and gentlemen," the Professor paused for emphasis, "is why the street design manual matters."

At the lunch break later in the day, the Professor waved me over to his table. "Let me introduce you to Larry, the UPC's distinguished founder," he said. Beside him sat a genial-looking man in his early fifties. I had heard plenty about Larry from my UPC colleagues and was delighted to finally meet him.

Larry had spent most of his planning career with the City of Vancouver, rising through the ranks to become codirector of planning in the 1990s. During his tenure he presided over a huge residential expansion in the form of dozens of condominium towers that rose all over the downtown. International affairs magazines fawned over Vancouver's aesthetics and high-class lifestyle, portraying it as a sort of city-sized Club Med with mountains instead of sunshine. Vancouver's cultural amenities, modern infrastructure, and low levels of crime and congestion earned it a reputation as one of the world's most livable cities.<sup>5</sup> There was some debate over the extent to which Larry and his policies drove this wave of success, with critics claiming he was merely an accessory to Vancouver's rise. Nevertheless, Larry was awarded the Order of Canada for his role in shaping the city.

When Larry left the Vancouver government, the crown prince's people made him an offer he couldn't refuse: a blank check to develop a blueprint for Abu Dhabi's future and also help set up a new agency to implement it. Larry brought along nearly a dozen of his former underlings to serve as the UPC's first staffers. Around the office, they lightheartedly referred to themselves as the Vancouver Mafia and to their kingpin as Legendary Larry. In the year and a half since then, Larry and his acolytes had finished *Plan 2030* and gotten the UPC up and running, after which he had switched roles and become more of a mentor to the agency's senior staff. That, at least, was what I had gathered from my colleagues; after two weeks at the UPC I still hadn't met Larry or even seen him in our offices.

Larry greeted me with a smile. "Welcome to the UPC. What section are you in?"

"The transport team," I replied.

"Transport, great. You know, we have a saying in Vancouver: 'The best transportation plan is a good land use plan.'<sup>6</sup> I thought I saw the Professor roll his eyes.

I had a dozen burning questions for Larry about his experience and his theories on urbanism, but all that came out was inanity: "So ... how do you like living here? I imagine it's quite a change from Vancouver."

"I don't live here," Larry replied. Responding to my confused look, he clarified. "I come out from Vancouver every other month to help the UPC with strategic direction."

"Oh, I'm sorry. No one told me you had moved back to Canada."

"I didn't. I never moved here to begin with."



This came as a surprise. It struck me as odd that someone charged with planning a city's future wouldn't want to live there while doing so, for the sake of understanding the context if not for simple expediency. One must inhabit a city in order to know it.

Redirecting the conversation, the Professor asked, "So, Michael, what's your take on the street design manual?"

I told him how my own experiences with Abu Dhabi's streets underscored the manual's importance. The Professor's eyes flashed and he muttered, "Mmm ... quite right ... mmm." In our previous conversations he had displayed a tendency to slip into this mad scientist mode, acknowledging whomever was speaking with while his mind chewed furiously on something else. Had I told him his hair was on fire, undoubtedly he would have murmured his assent.

Even though the Professor's thoughts were elsewhere, I measured my words. I said that the street design manual was a good start to the desperately needed overhaul of Abu Dhabi's public realm. In reality, while I fully believed this, I also felt something was still lacking. The workshop's discussions and the draft sections of the manual I had read were thorough, but they largely ignored informal or unstructured activity on the part of the people in the street. Indeed, they lacked any mention of honest-to-goodness public spaces, the areas for urban ingenuity that give a city vitality. The manual aimed to regiment every inch of Abu Dhabi's rights-of-way, making them nice and neat and pretty. That was certainly preferable to the current state of affairs, but it was also possible to swing the pendulum too far in the other direction.

The street design manual was not alone in this regard. An obsession with control permeated the documents that were shaping the new Abu Dhabi. The government had produced an ensemble of visions, plans, and policies covering every aspect of the emirate's transformation—including the UPC's own *Plan 2030*, the Council for Economic Development's Economic Vision 2030, the Environment Agency's Environment Vision 2030, and so forth. The government had even gone so far as to create a stand-alone entity, the Office of the Brand of Abu Dhabi (referred to by its amusing acronym, OBAD), to act as the "guardian and patron of the city's brand identity,"<sup>7</sup> largely by making sure that all of the other government agencies adhered to the proper logos, typesetting, and buoyant party-line messages in their public communications.

It was all very slick, but I also felt it was too rigid and utopic, particularly the parts that dealt with the city's built environment. The great irony of urban planning is that disorder and chaos are just as necessary to the health and growth of a city as are organization and command. As Jane Jacobs explained in her seminal *The Death and Life of Great American Cities*, healthy cities are "spontaneous and untidy," and their apparent disarray often masks a complex and elegant organic order.<sup>8</sup> The planner's role is not to squash the chaos but to guide it. While traveling in nearby Qatar in the 1970s, Jonathan Raban met a planner who put it eloquently: "The planner's job is just to make the skeleton, and then wait and see what kind of flesh the people grow on it."<sup>9</sup>

The Orwellian undercurrent of Abu Dhabi's transformational plans reminded me of Alex's statement regarding the leadership's fascination with Singapore. For decades Singapore has enjoyed a reputation as a tightly run ship. The island nation is a police state where chewing gum is outlawed and graffiti is punishable by caning. William Gibson called it "Disneyland with the death penalty, a relentlessly G-rated experience."<sup>10</sup> That was one aspect of the Singapore model Abu Dhabi's leaders might have been better off trying *not* to mimic.

But of course I said none of this to the Professor. I had all of a few weeks in Abu Dhabi under my belt; surely my worries were exaggerated. Besides, he was obviously occupied with weightier matters. No sooner had I finished praising the street design manual's merits than



he said, "Right, well, let's hope our friends at the Department of Transport agree. The way they talk, you'd think they want to make another bloody Dubai."

The UPC's transport team faced an uphill battle. It was our mission to remake not only Abu Dhabi's streets, but also the emirate's entire transport paradigm. Life in Abu Dhabi revolved around the automobile—fitting for a place that owed its modern existence to oil. But the automotive addiction was also one of the emirate's greatest shortcomings and a detriment to its residents' lives.

Visitors to Abu Dhabi and the UAE as a whole are often bewildered at the contradiction of the country's roads, where the first and third worlds collide. In terms of the quality of their design and the extent to which they cover the country's major population centers, the UAE's highways are comparable to in any the West. Their shortcomings are relatively minor. On-ramps and off-ramps, for example, have an annoying tendency to change course mid-turn, so that a driver proceeding down an off-ramp at a reasonable speed can suddenly find himself pointed directly at the concrete barrier lining the ramp's outer edge. Lanes also have a habit of disappearing without warning, resulting in confused scrums as drivers are forced to merge. Setting such annoyances aside, however, the UAE's highways are on a par with North America's great "high-speed slashes of concrete and tar," as John Steinbeck called them.<sup>11</sup> I can vouch that the UAE highways certainly put Michigan's potholed interstates to shame.

Yet these advanced highways are full of drivers who cannot grasp the concept that a motor vehicle can injure or even kill. The result is a road circus that would be hilarious if it did not so often end in tragedy. The U.S. Department of State includes these sobering words in its official advice to travelers: "Traffic accidents are a leading cause of death in the UAE.... The UAE has the highest rate of road fatalities in the Middle East and one of the highest rates in the world. Drivers often drive at high speeds. Unsafe driving practices are common, especially on inter-city highways."<sup>12</sup>

This is a monumental understatement. Unsafe driving practices are legion, and the country's road safety record is appalling. In 2009 the UAE averaged 37.1 road deaths for every one hundred thousand people, the ninth-highest rate in the world, and more than double the global average of 18.8.<sup>13</sup> Traffic accidents are the country's second leading cause of death after cardiovascular disease, ranking ahead of contagions such as AIDS and tuberculosis.<sup>14</sup> In Abu Dhabi, the renewed influx of foreign workers in the post-Zayed years has caused the numbers of registered cars to skyrocket, further exacerbating the chaos. There were a total of 116,487 road accidents in Abu Dhabi in 2009—one wreck every four and a half minutes, an astounding 149 percent increase from just four years before. The chaos is compounded by the policy of leaving accidents in place even if they are blocking traffic. If the drivers involved in a collision attempt to move their cars out of the way, the police will not file a report and the insurance companies won't pay out. Driving the death-defying roads is one of the worst aspects of life in the emirate.

Although Abu Dhabi's Western expats are wont to complain about the dangerous driving of the city's South Asian cabbies and truckers in particular, who presumably honed their skills amidst the chaos of Dhaka or Kabul, all of the emirate's myriad ethnic groups share the blame. The native Emiratis are certainly no exception. They are the driving force behind Abu Dhabi's car craze, piloting the biggest SUVs, the poshest sedans, and the sleekest sports cars. The UAE, and Abu Dhabi in particular, is one of the most lucrative automotive markets in the world, home to fully one-sixth of the three hundred Bugatti Veyrons in existence, each of which costs a cool \$1.5 million. The UAE is Porsche's fourth-largest market after Germany, China, and Russia, countries with anywhere from ten to 137 times its population. Sales of



Rolls-Royces in Abu Dhabi tripled between 2006 and 2007.<sup>15</sup> Cars I used to glimpse only at Detroit's annual auto show are commonplace on Abu Dhabi's roads. After my first few weeks in the emirate, Ferraris, Bentleys, and Maseratis no longer turned my head.

Unfortunately the Emiratis steer their fancy rides as though they have a collective death wish. One popular travel Web site drolly states, "Emiratis are a proud but welcoming people and, *when not in their cars*, are generally extremely civil and friendly."<sup>16</sup> It is standard procedure for an Emirati to cut across six lanes of highway to make a last-minute exit, or to pull out in front of oncoming traffic without looking. Young Emirati men are the worst offenders. A 2011 study by the Emirates Foundation for Philanthropy found that young locals perceive tailgating as a respected behavior, whereas obeying the speed limit, keeping a safe distance, and pulling over to make phone calls are considered "unmanly." Half of Emirati males between the ages of 18 and 33 admitted to not wearing a seat belt or driving on the wrong side of the road. A quarter boasted of reckless speeding, passing in the wrong lane, and bullying, the infamous Emirati habit of bearing down from behind with high-beams flashing, regardless of whether the driver in front can even change lanes. One in six Emiratis said they drive more aggressively in the presence of a foreign driver or even a local with a license plate from another emirate—the tribal Bedu mentality in modern form.<sup>17</sup>

Deplorable as these statistics are, they don't do justice to the horrific human tragedies that Abu Dhabi's road psychosis produces. Shortly after I arrived in the emirate, the *National* reported on three Emirati girls between the ages of four and seven who were killed attempting to cross Airport Road in front of the Carrefour supermarket. Their three Indonesian nannies were also injured, one sustaining such severe brain damage that she died more than a year later after being moved back to her home country. The driver who ran them down, a twenty-year-old Emirati, was jailed for six months, fined five thousand dirhams, and made to pay another three hundred thousand in "blood money" restitution to the parents.<sup>18</sup> With such derisory penalties for the locals, it is perhaps no wonder they drive like mad.

In short, Abu Dhabi's roads in early 2009 were a hot mess. The UPC's *Plan 2030* hoped to change that, primarily by outfitting the city with an extensive multimodal transit system. Transit was an entirely new concept in Abu Dhabi; the city hadn't even had buses until a trial fleet was introduced in late 2008. Those first buses were soon packed to capacity at all hours of the day, confirming what everyone instinctively knew: the pent-up demand for transit was huge. The subway system, trams, and additional bus lines prescribed in *Plan 2030* would give residents an alternative to driving and relieve pressure on the beleaguered roads. Without the transit systems, the emirate's car dependency would simply continue to grow unabated, turning the new Abu Dhabi into a giant parking lot.

The UPC wasn't alone in its quixotic effort to reinvent Abu Dhabi's transport ethos. Among the emirate's other newly formed government agencies was the DOT, the Abu Dhabi Department of Transport. In theory, the UPC and DOT had complementary roles in the transport sphere, the former being responsible for integrating the transport networks within Abu Dhabi's broader strategic planning, and the latter being in charge of policy and implementation.

In practice, the relationship was already bumpy. The DOT's staff tended to see their UPC counterparts as hopeless idealists, whereas we often thought them myopic. The DOT had poached many of its staff from Dubai's Roads and Transport Authority (RTA) in the wake of the downturn that hit the neighboring emirate in late 2008. The RTA exiles brought with them the belief that Dubai's disjointed, unintelligible system of roads was the model to follow. Their canon was the infamous *Policy on the Geometric Design of Highways and Streets* propagated by the American Association of State Highway and Transportation Officials,



which had helped eviscerate many a North American city.<sup>19</sup> For the DOT's traffic engineers, mass transit meant widening highways from four lanes to six.

The differences of opinion between staffs of the UPC and DOT were more than just philosophical: they had significant implications for the city's future form. For example, when I mentioned my reservations about the Wahda City project beside my hotel to Alex, he showed me a study that the DOT had undertaken to estimate the effects of the traffic volumes that the development would generate when finished. Not surprisingly, the results showed seven of the nearest arterial intersections degrading to Level-of-Service F, the lowest grade, meaning that drivers would face waits of ninety seconds or more. In response, the DOT had proposed converting each of those intersections into a grade-separated flyover—in essence, a highway overpass—a move that would have further chopped up the already disjointed urban fabric. The Professor and Alex had managed to kill that idea, at least for now, by arguing that any new transport infrastructure should make the city more connected and not cut it to ribbons. But the incident showed that even within the government there were conflicting views as to how the new Abu Dhabi should take shape.

\* \* \*

“You all understand why this initiative is so important.” The Emirati leaned forward and rested his hands on the immense boardroom table. He was dressed in a snow-white *kandora* robe and matching *gutra* headcloth, the national habiliment of Emirati males. The *kandora* is a striking garment, but not terribly practical for any kind of physical activity. As noted in the film *Syriana*, the *kandora*'s primary purpose is to convey on behalf of its wearer the message “It's hot, and I don't have to work.”

This particular Emirati's garb was even whiter than most, accented by a sundial-sized Rolex watch and a Mont Blanc pen clipped below his collar. These accessories are the other unofficial but ubiquitous elements of the male Emirati uniform, the only means for locals to personalize their monochrome chrysalis while dropping not-so-subtle hints regarding their wealth. In the present case, the accessories were redundant. Even without the trappings of his position, the chairman of the Abu Dhabi National Exhibition Centre (ADNEC) dominated the room. I had come to the Exhibition Centre for a meeting with representatives of Abu Dhabi's major government agencies, which the staff of ADNEC (the term used interchangeably for the centre and the state-owned company that ran it) had convened in order to introduce a new transport-related proposal. Alex had tasked me to join Khalid, the transport team's sole Emirati, in representing the UPC. In addition to Khalid and me there were attendees from half a dozen government departments, the police force, and all of the utility companies. Even the army had a seat at the table. For a private development company to summon such a gathering was certainly unusual in my experience. ADNEC obviously had some importance beyond just serving as a giant showroom.

In fact, ADNEC was one of the most visible showpieces of Abu Dhabi's strategy of economic diversification, designed to lure conferences and exhibits from around the region. When it opened in 2007, the centre was the largest of its kind in the entire Middle East, with no fewer than twelve exhibit halls and 730,000 square feet of floor space. In just its second full year of operation, ADNEC was already hosting over a hundred annual events, including the World Future Energy Summit, the International Petroleum Exhibition, and the Cityscape real estate conference. The most important event on ADNEC's calendar was the International Defense Exposition (IDEX for short), a biennial weapons bazaar that drew dignitaries, defense ministers, and arms dealers from all over the world. Abu Dhabi's sheikhs loved their military toys, and IDEX was a huge source of pride for them.

At the beginning of the meeting the ADNEC staff had proposed a project that would allow them to expand IDEX's footprint and take the show to the next level. They wanted to drop the highway that ran alongside the exhibition centre into a tunnel over which they would construct a concrete plaza fifteen hundred feet long and four hundred feet wide. The plaza would enable IDEX to host its spectacular outdoor demonstrations—tanks bouncing over obstacle courses and commandos jumping from helicopters—without having to shut down the highway, which had caused huge traffic headaches the last time around.

Though the project sounded straightforward, it would be far from easy. The highway in question, named after the Khaleej al Arabi (Arabian Gulf), was one of only three arteries that connected the populous northern half of Abu Dhabi Island with the southern end and the mainland beyond. Khaleej al Arabi ran along the island's western edge, Airport Road went down the middle, and the third arterial, the Shar'a al Salaam (Street of Peace), curved along the eastern edge. The Municipality had already torn up Salaam Street, as the latter was commonly called, in late 2008. In an attempt to stave off the gridlock that all of the city's new developments would produce, the Municipality's engineers had elected to redesign Salaam Street as a free-flowing, grade-separated freeway to channel traffic from one end of the island to the other. Abu Dhabi had thus lost one-third of its cross-town traffic capacity for at least half a decade while Salaam Street was being rebuilt. When I arrived in 2009, the entire northeast quadrant of the city had been chopped into a maze of dead-ends and detours where the freeway's new three-mile tunnel was burrowing its way beneath the downtown. For being the Street of Peace, Salaam had created plenty of strife.

Now ADNEC proposed to do the same thing with another of Abu Dhabi's main arteries, albeit on a smaller scale. While unveiling the concept for the Khaleej al Arabi tunnel, the ADNEC staff had tried to preempt our concerns by promising that they would keep the road open during the tunnel's construction. They would lay a temporary asphalt detour to reroute the highway between the area for the tunnel box and the shoreline roughly two hundred feet away. Even if they managed to squeeze the realigned road into such a tight space, I was skeptical that everything would go so smoothly. During my career I had managed enough construction projects to know that nothing ever went as planned. The representatives of the other agencies evidently shared my concerns. As soon as the ADNEC staff finished their presentation, they faced a barrage of questions and concerns from around the room.

That prompted ADNEC's chairman, who had sat silent while his staff presented the project proposal, to stand up and take charge. His tone was patronizing, as if he were instructing children. He explained to us in no uncertain terms that he expected our various agencies to spare no effort to make his project happen. "This initiative has the full support of top leadership. I trust you all know what that means." I had no idea what it meant.

"We'll need the utmost cooperation from all of you to make sure the project is completed by the next IDEX in 2011," the chairman continued. "That gives us twenty-three months." There were murmurs of disbelief around the room. Two years was an improbable timeframe for such a project, especially considering that all ADNEC had to show so far was a couple of abstract renderings—no design drawings, no engineering studies, nothing substantive. Before anyone could object or even pose a question, the chairman glanced at the enormous horologe on his wrist. "Now if you'll excuse me, I have another appointment. Thank you all for your cooperation." With that, he rose and walked out.

The room devolved into bedlam. What had been a single meeting became ten as factions formed around the table, arguing heatedly amongst themselves. An ear-splitting ringtone jangled from the mobile phone of one of the utility company representatives. He pushed back from the table and cupped a hand over his mouth, evidently thinking this placed him



in some sort of cone of silence, and proceeded to hold a conversation at the top of his lungs. The Indian tea staff entered the room to deliver the drinks we had ordered at the start of the meeting, which compounded the confusion since everyone had since shifted seats. At the time, I thought that this uproar was all just the attendees' flustered reaction to the impossible task with which we had been saddled. Eventually, however, I came to realize that such chaos was typical of every Abu Dhabi meeting.

I slid several chairs down next to Khalid, my colleague from the UPC's transport team. In some regards Khalid and I were like alter egos: same age, same height, even the same olive skin tone. He kept his beard trimmed in the five o'clock shadow favored by Emirati men and wore squarish glasses similar to my own. Like all Emiratis his age (but unlike me), he was married, and had two kids, with a third on the way.

When Alex had first introduced me to Khalid, he mentioned that we would be working closely together on a number of projects. Although Khalid was only in his early thirties, he was one of the UPC's more experienced Emiratis, having worked previously with the Municipality as a civil engineer. I was delighted to be partnered up with someone so knowledgeable. That he happened to be an Emirati was an added bonus. Though I enjoyed being surrounded by the UPC's diverse expat tableaux, I also wanted to actually get to know some locals during my time in Abu Dhabi.

The first few conversations between Khalid and me had been cordial enough, but I didn't feel we were quite on the same wavelength. He spoke fluent English, albeit with an Arabic-inflected grammar and pronunciation all his own that took some effort to decipher. Though I could tell what he was saying, I never felt I knew what he was thinking. There always seemed to be something more going on behind the curtain of his glasses. Khalid's inscrutable demeanor brought to mind Thesiger's description of Sheikh Zayed's older brother Shakhbut: "He was courteous, even friendly, but aloof, and seemed to impose a rigid restraint on a naturally excitable temper. I suspected that he mistrusted all men."<sup>20</sup>

I pulled Khalid aside so we could hear each other over the din. "Is this thing for real?"

He seemed puzzled that I would ask. "Yes, of course. But I dunno if they can do it in time. Twenty-three month for design *and* build? Come on, you kidding me."

"I'm more concerned about the cost," I replied. "Did you hear their estimate—three billion dirhams? For something that gets used only a few days every other year?" Even taking into account Abu Dhabi's bottomless coffers, I couldn't help thinking that the project was excessive. I flipped through the renderings that the ADNEC staff had handed out. They showed a sparsely landscaped slab atop the tunnel, with tiny people milling around on it like ants. The presenters had assured us that the plaza would be a lovely public space for the 96 percent of the time that it wasn't a make-believe war zone. However, they conveniently failed to mention who would use that public space, or why. ADNEC was the only major generator of activity in the area. In Abu Dhabi's climate, there was little chance that the centre's patrons, or anyone else for that matter, would want to wander around outside on a concrete frying pan.

"Well, that's why we here," Khalid replied. "We supposed to keep them honest. If you think we need to do something, we can discuss it with Alex."

"What about that 'senior leadership' bit? What does that mean?"

"It mean sheikh or Executive Council." The Executive Council was the body of high-ranking Emiratis who helped the crown prince run Abu Dhabi. They made the decisions on many of the emirate's administrative affairs and were second in power only to the sheikhs themselves. The UPC's general manager reported to them.

"So if the sheikhs or the Executive Council have already approved this, what can we do

about it?" I asked. Khalid flashed a smile worthy of a politician. "The developers say this about every project, umkak?" I had previously ascertained that his "umkak" meant "okay." "They show their sheikh nice pictures, and he say, go study it some more. Then they turn around and say to everybody, sheikh loves it and wants it tomorrow. Don't worry, these guys not as far as they make it sound."

I wasn't convinced, but I had to trust Khalid's judgment. The inner workings of Abu Dhabi's development arena were still a mystery to me.

After the chaotic remnants of the meeting eventually petered out, I made my way back through the exhibition center's cavernous interior towards the parking lot. From inside, ADNEC had the look and scale of a space-going cruise ship. The partitioned exhibit hall curved around in the shape of a squared-off horseshoe, the inside of which was lined by an airy two-story atrium with floor-to-ceiling windows, stylized elliptical skylights, sliding doors shaped like airlocks, and a host of other futuristic touches. Every surface was white and impossibly shiny.

I detoured into one of the restrooms. Inside, handmade "Out of Order" signs covered two of the three urinals. While I answered nature's call at the third, I noticed that its companions had been installed in clumsy fashion, which explained their malfunction. The porcelain bowls hung on the wall at odd angles and appeared to be held in place by wads of caulk. At the sink, the soap dispenser nearly came off in my hand. On closer inspection, just about everything in the restroom displayed shoddy workmanship. Even the expensive marble tiles on the floor and walls were smudged with dried glue. It was a curious contrast to the flawless sparkle of the rest of the exhibition centre.

I walked back out onto the atrium balcony, but stopped in my tracks after a few short paces. I could feel a slight vibration through the balcony floor. As I stood motionless, the vibration grew more pronounced, then subsided, and then picked up again. Ordinarily such a tremor wouldn't be surprising if there were a subway or some other below-ground source of vibration nearby. But I knew very well that Abu Dhabi had no subways as of yet, and the city was in a seismic zone with minimal earthquake risk.

The only other thing I could surmise was that one of the nearby construction sites was transmitting vibrations through the building's foundations. ADNEC (the company) was building a cluster of more than a dozen high-rise towers—a miniature downtown in its own right—next door. Judging by the quivering of the floor, the vibrations seemed alarmingly close to the exhibition centre's resonant frequency. Although I wasn't a structural engineer, I knew that unchecked resonance could have catastrophic consequences. A structure that absorbs vibrations matching one of its resonant frequencies will oscillate with increasing ferocity until it literally shakes itself apart. The driving forces of these vibrations can come from unexpected sources. For example, when London's Millennium Bridge opened in 2000, its designers were chagrined to discover that the bridge's swaying caused pedestrians to sway along with it, further exacerbating the swing. The issue was so severe that the bridge was closed for two years and retrofitted with dampers to offset the wobble.<sup>21</sup>

As I felt the balcony trembling beneath my feet, I wondered whether ADNEC's designers had taken any countermeasures in light of the construction nearby. I quickly shrugged this off. The architects shaping Abu Dhabi's new skyline were supposed to be some of the best in the world. The emirate was shelling out a fortune on its metamorphosis. Surely the folks in charge had covered all their bases.