

the ground. It looks like it could kill you even though you know that Michael Jordan could stroll under it without getting scalped. It's a sort of scary joke on the idea of being dominated by mom, or maybe not by mom herself, because the "mothers" are plural, but by some primeval powers "enthroned in

solitude sublime," as Goethe said—and very effective. It's a bigger idea than Creed usually works with, yet for once he makes you wonder whether the piece hasn't outgrown its idea. Still, I can't deny that it held me there, observing it warily, a good long while. I didn't race past. ■

Turning Oil Into Water

by **FREDERICK DEKNATEL**

A little-known fact about Saudi Arabia: it was until recently the world's sixth-largest exporter of wheat. From 1980 to 2005, the Saudis spent some \$85 billion, nearly 20 percent of the total oil revenue accumulated during the period, on subsidies for wheat farmers. In a country with a quarter of the world's known oil reserves but no natural rivers or lakes, the environmental cost of cultivating wheat was extraordinary. The Ministry of Agriculture and Water had by the 1980s built some 200 dams, seeking to trap and redirect precious, finite water from oases and ancient underground aquifers. One economist estimated that the irrigation cost for Saudi wheat farms from 1980 to 2000—more than 300 billion cubic meters of water—was "the equivalent of six years' flow of the Nile River." An American delegation to the kingdom likened "the growing of cereals at an exorbitant cost in the desert" to "planting bananas under glass in Alaska."

Another little-known, but more fantastic, fact about Saudi Arabia: in the late '70s the Saudi government entertained the idea of wrapping a 100 million-ton iceberg in plastic and towing it from Antarctica to the Red Sea, where it would melt and provide much-needed fresh water. One of the king's nephews, Mohammad al-Faisal, spearheaded the project, and his consultants included French engineers and a polar explorer. He invested millions of his fortune in a start-up called Iceberg Transport International, "a company whose sole purpose was to haul icebergs to the water-poor," as Toby Craig Jones writes in his provocative book *Desert Kingdom: How Oil and Water Forged Modern Saudi Arabia*. The company didn't last. Its high point came on the campus of Iowa State University, where in 1977 Faisal, "at considerable personal expense," successfully displayed a 4,785-pound "mini-berg"

Desert Kingdom

How Oil and Water Forged Modern Saudi Arabia.

By Toby Craig Jones.

Harvard. 312 pp. \$29.95.

shipped from Alaska for "a conference on iceberg utilization." At the conference, the berg was crushed into bits used to ice delegates' drinks. But no amount of capital or limelight could make towing icebergs feasible. "Once you get north of the equator," an American engineer told Faisal in Iowa, "you'll have nothing but a rope at the end of your tow." As it turned out, higher-ranking royalty in government had already abandoned Faisal's iceberg scheme and committed their oil wealth to building dozens of expensive desalination plants for watering the kingdom.

Saudi authoritarianism may be founded on the Al Saud family's "grand bargain" with the Wahhabist clergy, Jones writes, but religion has not been the sole instrument of state power. It has often been complemented by the government's management, manipulation and control of natural resources, most of all water. "Over the course of the twentieth century, capturing, controlling, engineering and even making freshwater have been just as important to Saudi political authority as controlling oil," Jones writes, even though the ability to do the former is funded by the latter. "The process has virtually turned oil into water."

On the Red Sea and Persian Gulf coasts, more than twenty desalination plants, at a cost of billions in oil revenue, make seawater fresh for the country's 28 million people. Today four cities are being built from scratch in the desert, hopeful future job hubs for the kingdom's younger generation. Their names may be banal, but at least they reveal intent: King Abdullah Economic City, Knowledge Economic City, Prince Abdulaziz bin Mousaed Economic City, Jazan Economic City. Rather than invest in

the crumbling, historic center of the port city of Jeddah, or the slums in the sprawling capital, Riyadh, the government has elected—in keeping with urban planning trends across the region—to build anew, on the desert periphery, in drab suburban tracts and glass towers that are thought to signal progress. The first coeducational university in the kingdom, the King Abdullah University of Science and Technology, or KAUST, recently opened on the Red Sea coast north of Jeddah, with an endowment of roughly \$10 billion. The scale of development suggests that the Saudi government has solved its water crisis. Otherwise, how else could high-rise cities reliant on air-conditioning and potable water sprout in the desert?

The question hinges on a truism common to histories of Saudi Arabia: that oil has been a benevolent lubricant of progress, a gift that has brought highways and cities, and even gated American-style suburbs, to the harsh and empty desert. Thanks to oil, modernity has overtaken traditional society.

Robert Vitalis attacked this view in *America's Kingdom: Mythmaking on the Saudi Oil Frontier* (2007). He explained how in the 1930s and '40s the conglomerate Arabian American Oil Company (Aramco), which had exclusive rights to drilling in the kingdom, imported to Saudi Arabia a Jim Crow-like system long established in the oil fields of Texas since Reconstruction. Vitalis extracted from company archives and personal diaries evidence of the informal but deliberate "laws" that Aramco imposed on its employees on the Saudi oil frontier. The new industrial city of Dhahran, Aramco's capital on the oil-rich eastern coast, was home to gated compounds for American Aramco employees and their families. Nearby were the squalid living quarters of the Saudi oil workers, which were mostly hidden from the view of visiting dignitaries. Oil brought to Saudi Arabia "a system of privilege and inequality which we know as Jim Crow in the United States, as Apartheid in South Africa, and as racism more generally," Vitalis wrote. The "color line" between American and Saudi compounds was strictly enforced: Saudis were forbidden to live with Americans; Aramco employees "who pursued contacts with nearby Arab families" were deported. The investment of oil profits into schools and technical training for Saudis was derided by the American oilmen of Aramco as either a waste of time or a potential future threat to their hegemony of expertise.

Vitalis's study broke with the historiog-

raphy that defined the kingdom's political dynamics through one of three factors: the strict Islam of its founders, a reductive view of tribal politics or a championing of oil enterprise. Aramco's labor policies presaged the current exploitation of workers, many of them South Asian, who have built the skylines of Dubai, Abu Dhabi and other gulf cities—only to be sequestered in distant camps, paid a pittance and sent home. But *America's Kingdom* also linked Saudi Arabian development and the pursuit of oil to the political culture of the United States. Vitalis even wrote that his book "is not about Saudi Arabia. It is about America. It just takes place and tells you more than others have about somewhere else." The industrial myth of a "miracle-making" oil giant revealed the dynamics of the Saudi-American "special relationship" and the politics of oil extraction.

Jones's *Desert Kingdom* is unquestionably about Saudi Arabia, specifically its eastern province, which, as the kingdom's oil frontier, is the focus of *America's Kingdom*. Jones's research, however, is often more convincing than his analysis, which expresses surprise at the general nature of a state to use what natural resources it has to secure those it lacks. "Saudi Arabia's citizens, many of whom continued to work the land for their livelihood late into the century, came to depend on the government for access to water, land, loans, and technology," Jones writes. "This is just what the kingdom's central authorities desired." Saudi Arabia may be fragmented, but isn't this what most state authorities want? Jones admits that control over land administration "has long been a basic instrument of domestic statecraft worldwide." Yet he treats many examples of outsize Saudi engineering as exceptions to this very rule.

Still, *Desert Kingdom* is a much needed addition to the small shelf of Saudi Arabian histories based on archival research and political economy rather than caricatures of oil wealth and the desert. The connection of geography to political power is compelling, especially the idea of oil wealth being used as patronage, not only in the form of housing or allowance handouts but in well-irrigated farmland and freshwater. The Saudis paid for their conquest of nature with oil money, and in doing so expanded the borders of their political authority. Expensive engineering schemes overseen by foreign experts helped the Saudi state assert control over natural resources in Arabia, but development was a two-way street. The Saudis were not passively being advised on how best to secure water and massively profitable oil reserves. The

monarchy understood that a monopoly on resources, enabled by science, was necessary to maintain control. The state in the 1960s stressed the bonds of science, development, modernity and Islam to frame unchecked development as a threat to Islamic values. "Our crisis is a trilogy," the late, exiled Saudi novelist Abdelrahman Munif said: "oil, political Islam, and dictatorship." Jones makes the case for a quartet.

Among the Saudi government's costly and unsuccessful engineering schemes was a huge irrigation project in the oil-rich eastern province completed in 1971. The region, known as al-Hasa, is also home to a wealth of oases that are a verdant contrast to the sand and brown mountains of the Hijaz, in western Arabia, and the Najd, the central heartland of Ibn Saud and his followers. Before the discovery of oil, al-Hasa was more than a way station for caravans and desert travelers. It was a center of date agriculture and settled commerce near the shore where hundreds of thousands of mixed Sunni and Shiite farmers and merchants lived—a level of diversity not found anywhere else in Sunni Arabia. The Shiites were a slight majority but were mostly part of the working class of a sectarian hierarchy; many of the large farms with access to the best springs were owned by Sunnis.

The al-Hasa Irrigation and Drainage Project (IDP) was meant to redirect precious oasis water and maximize date farming. The IDP was a technical failure—the amount of arable land actually shrank—but it also further ostracized an already marginalized, mostly landless class of Shiite date farmers who blamed the government's drainage scheme for their environmental plight. Though the completion of a huge oasis canal system in a land of deserts was touted by the international press and the government's public relations machine, it enflamed the Shiites of al-Hasa. They directed their ire at the government and Aramco, the engineer of uneven economic development on the oil-boom coast. In 1979, the same year that hardline Sunni rebels led by Juhayman al-Utaybi took over the Grand Mosque in Mecca to challenge Saudi religious authority, which in their minds had been corrupted by oil wealth and close American ties, the Shiites in the eastern province rebelled. It was an uprising, Jones writes, "fueled by a combination of revolutionary fervor, environmental activism, and anger at having been left behind in the age of great oil wealth." An Aramco consultant had carried out the survey of al-Hasa

that underpinned the drainage scheme, and it duly noted the sectarian tensions of the oasis. The consultant, Federico Vidal, was a member of the company's Arabian Affairs Division, an intelligence arm of the oil giant modeled on the Cairo branch of the Office of Strategic Services, the precursor to the CIA. These foreign technical advisers, Jones writes, "lent themselves to the project of legitimizing Saudi political authority because of the claim that science and expertise were, in fact, apolitical." With the IDP, the state was not only trying to secure needed water supplies but to control a restive religious minority that threatened its absolute, authoritarian rule.

After the unrest of 1979, however, the kingdom adopted a more outwardly religious mantle to justify political rule. The seizure of the Grand Mosque by Sunni rebels signaled a shift in internal Saudi opposition away from Pan-Arab nationalists who rejected Wahhabi rule in Arabia, and the Saudis responded accordingly. In 1986 King Fahd officially adopted the title "Custodian of the Two Holy Mosques" to stake out his legitimacy against mounting Islamist critics. After all, the Arab nationalist opponents of the '50s and '60s had been replaced, in the words of historian Timothy Niblock, by "Wahhabi militants whose social base was in the Najdi heartland and whose fathers and grandfathers had formed the backbone of the *Ikhwan* who had fought for 'Abd al-'Aziz" in founding the modern state. With these critics seeing science and development as materialist threats to the kingdom's Islamic values, the royal family has responded, as it did in the '60s, by claiming to be "both the agent of progress and the custodian of tradition," as Jones writes. "What is old is new again in Saudi Arabia."

The ailing 86-year-old King Abdullah is overseeing that newness, which as always is underwritten by oil and water. But the extent of his much-touted reform agenda is limited to grand vanity projects, from cities and public transportation to KAUST. Overblown development precedes political rights and liberalization in Saudi Arabia, but at least there are signs of change. Soon after the opening of the coeducational university, a leading cleric, Abd al-Aziz al-Shethri, who was a member of the Council of Senior Ulama, the kingdom's highest religious authority, said that gender mixing was forbidden and that the university was teaching alien ideologies, like evolution. Al-Shethri demanded that a committee ensure that teaching there would not violate Islamic law. King Abdullah responded by promptly dismissing him. ■