

From:
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LEADERS AS PLANNERS

If you're like me, this is what happens when you can't find your umbrella. You first dart around to all the obvious places—closet, front door, kitchen—exclaiming peevisly, “Where *could* I have left it?” As the mystery deepens you think of other possibilities—in the car, in the bathroom?—and become a little paranoid. Someone must have “borrowed” it. What you do not do, if you're like me, is sit down and ask why, when, and where you last had the umbrella.

There is a simple reason why you rush around rather than stop and reconstruct. Thinking is difficult, as it calls not only for recall but for patient analysis. It means questioning assumptions and considering alternatives. Have you in fact actually used the umbrella since last winter? Did you leave it at the office because it was not raining when you came home? You have to step back for a moment and see possibilities in a wider view.

Quite the opposite happens when, instead, you desperately rush about. Your horizons narrow as you focus on immediately finding that darn umbrella. You lose possession not only of your umbrella but of your perspective, reacting so obsessively that you become a victim of the situation.

In our day-to-day activities most of our thinking is reactive. It is spurred by immediate needs and demands. It takes things as they are; the problem is to adjust to them, make them workable, acceptable. We adjust as best we can—to low incomes, aches and pains, the neighborhood, bad weather, problems in school or at the workplace. Our thinking is practical, expedient, sometimes shrewd, usually short-run. We cope.

Of a qualitatively different nature is thinking that looks not to cope with things but to alter them. It, too, is in a sense reactive, but it is a considered response to deep and fundamental needs and it seeks solutions—changes—that go to their roots, that are significant and lasting. To think this way is to think transformationally. When you reform an institution, establish an innovative business, foment a revolution, write a book urging change, build an arts complex, you are initiating immediate changes that, as you carry forward your intentions, hold fast to your purpose, may produce a transformation.

All this requires planning, the process of constructing a future sequence of significant actions to bring about the desired change. Planners, like chess grandmasters, must proceed step by step, but with a constant strategic grasp of the interplay of forces on the wide field of action. The pursuit of real change not only involves broadening circles of collective effort but typically sets off counteraction by opponents of change, defenders of the status quo, as well as competitors, rivals, critics, hostile publics. Since planners cannot operate in some cordoned-off enclave of society, every step draws them into a widening arc of external support and obstruction.

Plans go awry, of course, much to the satisfaction of later historians who know that spectacular flameouts and epic disasters attract hosts of readers—witness Wilson's tragic failure with the League of Nations, as well as the doom of Antony and Cleopatra, the charge of the Light Brigade, the sinking of the *Titanic* on its maiden voyage, the American debacle in Vietnam. But planners score successes as well as failures. What do both tell us about the role of leadership in the process of transformational change?

THE WINDS AND WAVES OF WAR

Of all planners the military have both the hardest task and the most at stake. Civilian planners must analyze complex terrain, estimate their own resources, and plan for contingencies of weather, shortages, disease, incompetence. Military planners face all these problems but much more—an enemy with little-known tactical plans and military strength. Hence the confusion and blunders in the fog of war that Tolstoy loved to expose. So we can only look back in awe at the story of the Grand Armada, one of the most ambitiously conceived and meticulously planned yet strategically miscalculated and tactically mishandled military expeditions

in history, a venture that almost came off at the cost of over fifteen thousand seamen.

Philip II of Spain planned his diplomatic and military strategy for several years before launching the Armada in the summer of 1588. First he had to secure his backyard—the Mediterranean—against attack by the Ottoman Turks while he concentrated his forces in the north. He negotiated a series of truces with Istanbul. Then he set about isolating England from other European powers. He achieved this by careful diplomacy with the French and the Austrian courts. The pope himself helped mightily in lining up Catholic regimes, though the shrewd Sixtus V made clear that no cash would be forthcoming until the goal was achieved.

That goal was indeed audacious: an assault into the heart of England. The Spanish navy would deliver infantry to a carefully selected target within a few leagues of London. Soon Queen Elizabeth would be captured, or at least sent packing into the hinterland. Catholicism would be restored, Protestantism suppressed, and the execution of Mary, Queen of Scots the year before avenged.

Implacably, month after month, Philip assembled military and economic resources from the Continent. He did not spare his own country; his agents—including a skinny poet named Cervantes—ransacked shops and homes for grain, fodder, and oil, simply appropriating what they needed. Upon all the planning Philip kept an autocratic hand. When he summoned the Duke of Medina Sidonia to captain the Armada, the duke piteously tried to beg off; he was simply not up to the task, which he believed impractical, and was prone to seasickness. But Philip insisted, and of course the king had his way.

Philip consulted, however, as well as commanded. While he had no war cabinet in the modern sense, he conferred and corresponded day after day with aides, diplomats, admirals, generals. After long consideration of alternatives, Philip reached his core strategic decision, and then even the doubts of his top commanders would not shake it. The king's fleet would storm through the English Channel and anchor off Flanders, long held by seasoned land and naval forces commanded by the Duke of Parma. Then, as the Armada screened off the attacking English, Parma's transports would dash across the channel and unload troops on the English coast. Philip warned that the fleet must "sail in the name of God straight" for junction with Parma and not be drawn off to attack the enemy. Ship captains who strayed would be hanged. Still, in the event

that Elizabeth's swift, seaworthy ships swarmed out of channel ports to harass the slow-moving fleet, the galleons and galleasses were instructed to protect themselves by cannonading the English, and then exploit their favorite and fearsome tactic, boarding.

Early in May 1588 the vast Armada—130 ships packed with thirty thousand men including eighteen thousand soldiers, thousands of horses and mules, twenty-five hundred siege guns and other ordnance, and many millions of pounds of biscuits, bacon, cheese, beans—headed north to England.

As the Armada, stretching two miles, entered the English Channel, ships were cleared for action. Gun decks were flooded with water a foot deep to prevent fire. Sailors placed vats of vinegar and water to cool the guns. Behind cover the surgeons lighted their braziers and collected turpentine and bandages. Musketeers and harquebusiers assumed their positions. Pilots maneuvered to take the enemy forces from windward and then to heave alongside, poop to prow. Shear-hooks would claw holes in the enemy's protective nets, while armed boarders prepared to vault over the rails and cut down their foes.

Watchers on the Plymouth cliffs sighted the advancing Spanish ships just after dawn on July 30, 1588. They touched off tar-soaked beacons, igniting a chain of watchfires to London. They also touched off panic. England was not ready to stave off a huge battle fleet. English intelligence about Spanish intentions was contradictory or misinterpreted. The critical question for Elizabeth and her advisers was, where would the Spanish land? They could not decide, and so the home forces were scattered in small garrisons along the coasts. Many were untrained; equipment was lacking; and the maps even of coastal areas were inaccurate.

Off Plymouth, Lord Admiral Charles Howard, Sir Francis Drake, and their colleagues faced an immediate dilemma. Their fleet was bottled up in the harbor and sound by an unfavorable wind. Had the Spanish attacked, the war might have ended before it had properly started. But the Spanish command was indecisive, divided over Philip's order to proceed directly to Flanders, and lost its chance literally overnight: in a bold, brilliant improvisation, the English fought their way against a damp wind into open waters, and when the Spanish awoke next morning they found the enemy behind them to windward. Soon the fleets bore down on each other in full battle array. They expected a showdown, but none occurred. Her Majesty's

ships cannonaded the enemy with their long guns, but at such a distance that they could not inflict lethal damage. The Spanish tried to close in for boarding but the English were too nimble for them. The real commander in chief was the wind, as each side shifted direction to get to the windward of the other. Medina Sidonia lost two major ships, but to mishaps, not enemy fire.

Day after day the Armada plowed slowly east, fighting off attacks so skillfully that even the English had to credit their discipline and courage. But as the fleet approached Flanders, Medina Sidonia faced a new crisis. The Duke of Parma's fleet with its thousands of soldiers soon was supposed to sally out into the straits and join the Armada for the climactic assault on England. But Parma had not been heard from. Letter after letter, dispatched on the sea by pinnaces or sent overland, went unanswered.

Assailed by ships as fierce as hornets, and in growing numbers, Medina Sidonia sought safe anchorage off Calais, twenty-five miles down the coast from Parma's planned embarkation point at Dunkirk. There he finally heard from the duke. It was catastrophic news: Parma could not bring out his forces—twenty-seven thousand soldiers—for *six days*, and then only with Medina Sidonia's support in beating back a Dutch threat to his defenseless troop transports. Parma simply was not ready to sail.

At this critical moment Howard launched eight fireships against the bunched-up Spanish fleet. Filled with combustibles and with guns that fired automatically when heated, the "hellburners" panicked the Spanish. Ship captains cut their cables and scattered "in a thousand directions." Howard's big ships moved in and hounded the Armada out to sea. A hard southerly wind pushed the battered fleet up the east coast of England, farther and farther from Flanders—and from Parma. Little more than a week after the Armada was first sighted off Plymouth, the expedition was over.

Could the amphibious invasion have succeeded? Parma had assembled troops from all over Europe—even Ireland—to back up his own crack Spanish forces, and from the fertile lands around him he had collected provisions to feed them. He had hundreds of boats, mainly shallow craft that could each carry two hundred men and their equipment onto the beaches. But to embark such an army in good time required the most precise planning as well as the closest coordination with Medina Sidonia. Parma ever after maintained that he had learned of the Armada's arrival in the channel only on August 6, when the fleet had already

reached Calais. Those siding with Medina Sidonia in the search for blame pointed to “the delays of the Duke of Parma,” who “(whether through malice or carelessness) had failed to carry out his orders.”

After thoroughly canvassing possible landing sites in England, Philip and Parma had chosen the area between Dover and Margate near the mouth of the Thames. The first assault would secure a beachhead, from which the attackers could advance along either bank. The Spanish had little doubt that they could brush through scattered English forces and descend swiftly on undefended London.

None of this was to be. As the Armada fled up the North Sea with the Royal Navy in full pursuit, Parma pulled his men off the invasion boats. The Armada rounded the Shetlands to the far north essentially intact but on the voyage south, west of Ireland, the fleet encountered gales and even a hurricane of a ferocity beyond the memory of any sailor present. Great ships were blown onto the reefs and rocks of the Irish coast. Hundreds of Spanish sailors and soldiers were drowned or slaughtered on shore by nervous troops fearing an invasion. The survivors were starved and diseased. Still, almost two-thirds of Medina Sidonia’s fleet made it back to Spain.

If Philip had had better luck, *if* the winds had blown differently at critical times, *if* one pinnace had brought a timely message between the two dukes. . . . But nothing fails like failure. Today Philip is remembered as a stubborn man fatefully obsessed with Elizabeth and her England. His indomitability, his absolute focus on the goal, was what most characterized him as a military leader and made the Armada militarily a near success. Even so, Philip’s aim went beyond simple invasion of England. He wished to convert the country—indeed, to transform it.

In this he would certainly have failed. Philip imagined that he had “better information and advice” on England “than anyone else,” yet, not surprising in a ruler who absolutely dominated his own subjects, he underestimated the determination not only of the queen and her commanders but of the English people. Even before the Armada sailed, the counties had mobilized. “High and low,” wrote historian Winston Graham, “rushed to offer their arms to the Queen.” A successful landing would have ignited a long guerrilla resistance by men fighting for church, queen, and country. The English would have repelled Spanish rule in the hinterland, just as people two centuries later in little towns called Concord and Princeton threw off the imperial yoke of Elizabeth’s successors.

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What is the situation? This is the most commonly asked question in military operations. When a company commander comes back from the front to report to a battalion headquarters, that will be the first question, as it will be when regimental headquarters queries the battalion. Battle planning can be defined as constant groping for an understanding of the situation. In civilian life, too, this will be the first question a fire chief asks of his men, or a surgeon of a nurse. The next question is predictable too: what can be done to maintain or change the situation? Generals must be analysts of causation.

Through all the success and failures of his plans, Philip II held stoutly to his own theory of causation—God’s will. And as Defender of the Faith he identified God’s will with his own, once writing to a subordinate, “You are engaged in God’s service and in mine—which is the same thing.”

It was by God’s will and his own religious values that Philip justified his purpose of conquering England. An ardent supporter of the Papacy and of the Inquisition—during his reign, an inquisitor later wrote, “the Inquisition experienced great felicity”—Philip’s opposition to the Protestant heresy mixed piety with power politics, fanaticism, and war. In the Netherlands, Spain’s great trading outpost, he had thousands of restive Protestants executed and their religion proscribed. “No prince,” Philip wrote two years before the Armada sailed, “allows to his subjects any other religion than his own.” And no prince, in this time of religious upheaval, could combine Philip’s determination, aggression, and power in a plan to subject England and its people to his—and God’s—will.

Yet though God steeled Philip’s motivation, the Lord did not make clear where He left off and humans must take over. This helps explain why Philip left crucial matters to Providence and was himself at times indecisive and at other times inflexible. The weather was a wild card in the king’s plans, yet he ordered the Armada off in a season when the prevailing winds were unfavorable to his fleet and with no channel port for haven, trusting that “God will send good weather.” Historian Geoffrey Parker noted Philip’s “complete confidence that God would make good any deficiencies and errors” in planning or execution. When God did not, though the king prayed for a miracle, and the Armada failed, his faith suffered only briefly. Soon he was planning a new invasion of England: “I shall never fail to stand up for the cause of God.”

DREAMERS WITH SHOVELS

Between the second decade of the nineteenth century and the second decade of the twentieth, while Europeans found surcease from the mass killings of world war, some leaders poured their imaginations and energies into a less murderous activity—transforming the earth. They gouged out huge waterways, diverted rivers, constructed big dams, tunneled down into iron and coal seams, erected skyscrapers. New kinds of leaders arose: builders, engineers, promoters, architects. Like military heroes, many had moments of great fame and then steep falls.

Like great generals, too, these leaders were planners. They would not leave things to chance, to the errant winds and waves of fortune. They would dream about their work, then lay it out and get it done, come what may. But like all power wielders, they found that they could not dike off their plans from the people in the political and economic worlds around them.

Of all their enduring works, the most extensive and remarkable were the canals. The salty seas carried most of the world's commerce, but even engineers could not alter the shape of the ocean, only adjust to it by building ports, quays, lighthouses, coaling stations. Internal waterways, however, they *could* make. And of all the canals that were built in that century of relative peace, two above all touched off the soaring imaginations of the great builders, those in Egypt and in Central America. Others might connect this lake with that river, but Suez and Panama would each cut apart continents and unite seas. They would create vast new currents of travel and trade.

Linking the Mediterranean to the Red Sea had been the dream of three millennia. According to Herodotus, Egyptians late in the seventh century B.C.E. began a canal extending east from the Nile, but quit after a hundred thousand workers perished and their king, Necho, was told by an oracle that he was only clearing the path for a barbarian enemy. That enemy came less than a century later with the Persian invasion. "With the power of Persia," Darius boasted in a stone inscription, "I conquered Egypt. I ordered this canal to be dug from the river"—the Nile—to the Red Sea. But Darius quit as well on hearing that the Red Sea was many feet higher than the hinterland and hence Egypt would be flooded by a canal.

The dream seemed to attract strong men who were not quite clear about the lay of the land. Napoleon became inspired with the hope, while his forces occupied Egypt in 1798, that by building the canal he could bring

“the free and exclusive possession of the Red Sea to the French Republic.” But his surveyors reported mistakenly that the Red Sea at high tide was thirty-two feet higher than the Mediterranean at low tide, and after inspecting ancient, choked-up canal beds the First Consul left his dream in the desert.

Still, the dream refused to die. In 1832 it captured the mind and heart of a young Frenchman in Egypt, Ferdinand de Lesseps. Born in 1805, son of a well-connected diplomat and educated at the Lyceum Napoleon, de Lesseps quickly won attention for brilliant service in consular posts in Egypt—from gaining a close relationship with the ruling viceroy, Mohamed Ali, to risking his life in personally succoring victims of a plague. After a tour in the Netherlands and the ambassadorship in Spain, de Lesseps was sent to Rome in 1849 to handle a matter of urgency. He was unfairly accused of exceeding his instructions and forced to retire. At forty-four he appeared to have no future.

De Lesseps had never forgotten a book he had read on his posting to Alexandria in 1832, when his ship was quarantined in the harbor because of a cholera epidemic. It was the story of Napoleon’s exploits in Egypt. What excited the young consul was not Bonaparte’s military campaign but his ambition to pierce the Suez isthmus. De Lesseps could not get the idea out of his head. In 1854, the retired diplomat got word that Mohamed Ali’s young son, Mohamed Said, whom he had befriended as a child in Cairo, had ascended to power on the death of his father. De Lesseps saw his opportunity at once. Soon he was in Cairo hobnobbing with the new viceroy and filling him with enthusiasm for the grand project.

The obstacles ahead were not in Cairo but in Istanbul and London. Egypt was under the rule of the Turks, who in turn dared not arouse the enmity of the British, and the British insisted on their right to be “consulted.” For no great power had a stronger interest in the Suez connection. Her Majesty’s Navy and English merchantmen had to sail more than ten thousand miles around the Cape of Good Hope to maintain lifelines with India and the rest of Asia. A canal would reduce the distance by four thousand miles. As usual de Lesseps hurried to the place of decision, London. He lobbied journalists, cabinet ministers, members of Parliament. But he found the government hostile and the press, headed by the *Times*, full of scorn. De Lesseps decided to take his case directly to the people of England. In 1857 he toured the British Isles, appealing to merchants, ship owners, and the public, touting the canal as not merely a commercial ven-

ture but a moral one: by uniting East and West, the canal would break down the barriers dividing humankind.

The government was unmoved by the crowds and applause he attracted. The prime minister, Lord Palmerston, dismissed de Lesseps's dream as a "bubble scheme" palmed off on "gullible capitalists." But now de Lesseps resolved to go ahead on his own.

His plans took shape. He would receive from his friend the viceroy a ninety-nine-year concession to cut the canal between the two seas. All nations would be charged the same tolls, and none would receive special advantage. To raise the 200 million francs in capital needed, shares would be sold to the public, with half reserved for non-French investors to maintain the project's "universal character." The governing board would be drawn from a number of interested nations. Thus—and at the heart of de Lesseps's strategy—the canal would be internationally funded and controlled.

In the event, the shareholders were less than "universal." Mohamed Said became the principal investor, while the shares allocated to the United States, England, Austria, and Russia went unsold. Yet, as de Lesseps had hoped, many middle- and working-class Frenchmen subscribed, moved as much by national pride as by the investment opportunity.

During this planning phase de Lesseps came into his own as an extraordinary leader. He had earlier been known for his boyish enthusiasms and infectious charm; now he also was demonstrating steady commitment, endless resourcefulness, and a versatility in seizing opportunities to advance his goal.

He was proving his mettle as a planner, a diplomat, a promoter, and something of a philosopher; what he was not was a hands-on engineer. He knew where talent could be found, though, and he surrounded himself with some of the best engineers in Europe. The diplomatic and financial problems settled at last, on April 5, 1859, at Port Said, the first shovelful of sand was dug up. Once begun, work on the Suez canal moved steadily. The engineers experimented as they went along, particularly in creating and perfecting huge dredging equipment. De Lesseps stayed on the job with them, dealing with daily decisions and crises. It was collective leadership at its best.

What actually built the canal—or at least excavated the first few tens of millions of cubic feet—was the forced labor of twenty thousand fellahin supplied by the Egyptian government. Many died, and many complained that they had not come on their own but were "driven by sticks." After a

British campaign against the forced labor, the canal company began to recruit "free" workmen—French, Italians, and other Europeans, as well as Arabs. Yet the workforce remained largely fellahin, now voluntary laborers and paid fair wages. Intensive mechanization gradually reduced the need for human labor. On August 15, 1869, the two seas were joined.

By the time of the triumphant opening of the canal three months later, de Lesseps had become the most celebrated man in Europe, his fame comparable to that of only Wellington and Nelson of earlier days. The president of France saluted him as "*le Grand Français*." The French Academy admitted him as one who had "marked out a great battlefield for the future." Doubtless the most delectable tributes for de Lesseps came from the naysayers of old. Even the *Times* of London gracefully apologized, noting that Britain, the canal's greatest opponent, had become its greatest beneficiary.

De Lesseps was in his mid-sixties when the canal was finished, still a man of remarkable vigor. His imagination soared again. Like victorious generals—Caesar or de Lesseps's hero Napoleon—he looked for new conquests, not of empires but of the earth. And what could be more challenging than another dream, another splitting of continents that would link two oceans? Cutting through the Isthmus of Panama, a long-debated enterprise, would create a more direct route between Atlantic and Pacific, eliminating a detour of thousands of miles around Cape Horn.

De Lesseps was not only intoxicated by the success of Suez but fatally wedded to the strategy he used to achieve it. Suez was a canal without locks, and so must be the Central American one, even though Panama was hilly compared to the desert flatness. Suez had been financed mainly through private capital, so must Panama, and de Lesseps wanted middle-class investors to make money from Panama as they eventually had from Suez. And once again he would direct the project, which would be carried out by the best engineers—French engineers. Over and over, when de Lesseps met obstacles in Panama, he would promise to solve them "as we did at Suez."

But once the work began, in February 1881, the obstacles proved insurmountable. De Lesseps's Panama venture proved as colossal a failure as Suez had been a success. Why?

The planners underestimated the excavation needed for a sea-level canal without locks. Landslides and floods slowed the already arduous work of digging through marshy jungles. The French engineers, and many of the workers, were ravaged by yellow fever. Excellent hospitals were built, but what was needed was prevention, and the French did not know yet

that mosquitoes caused yellow fever. Sanitation was primitive. Finally de Lesseps agreed to “temporary” locks, cutting down the amount of earth removal, but it was too late.

De Lesseps had to raise more money, but Panama bonds had never sold to his expectations. Desperate, he turned in 1885 to the idea of a lottery loan. This, he reminded the skeptical, was how he had rescued the Suez venture. But a lottery loan needed parliamentary authorization, and this ensnared de Lesseps in the corrupt politics of the Third Republic. Whether or not he was involved directly, money changed hands. Investigations were spurred by a press that now denounced the canal builder as blatantly as it had once lionized him. Some members of parliament were convicted of bribery, but all eyes were on de Lesseps and his son Charles, both of them charged with fraud.

The verdict, on February 9, 1893: guilty of swindling subscribers. De Lesseps and Charles were sentenced to the maximum of five years in prison. By a technicality—the statute of limitations was found to have expired—the sentence was never carried out, but the old man, sick and broken, was spared few other indignities.

Still another indignity, years earlier, might have been the worst of all: in 1875, the British had bought out the Suez shares of Mohamed Said’s bankrupt successor and now in effect controlled the canal. The very British who had done so much to obstruct Ferdinand de Lesseps’s great venture!

There was much moralizing: “Pride goeth before destruction.” But de Lesseps’s failure in Panama was less moral than intellectual. He had drawn assumptions from a situation in one part of the world that fatally compromised his work in another. Sometimes nothing fails like success.

THE POWER OF STEAM SHOVELS

Leadership takes many forms—visionary and opportunistic, collective and individual, transforming and transactional. Not often has the complex interplay of these forces been more potent than in the planning and building of the Panama Canal. De Lesseps’s tragedy served as the prelude to more episodes in which the actual digging of earth seemed at times to symbolize a wider wielding of power.

The idea of a direct link west to Cathay was almost as old as the vision that led to Suez. Aristotle and Seneca had speculated that the Indies of Asia

could be reached by sailing west from Spain. Columbus was searching for that route when he found a new continent. The colonizing Spaniards talked of building a canal until Philip II, with his pipeline to God, was said to have found it contrary to Divine Will to link two oceans that the Creator had made separate. He decreed even discussion of it a capital crime. Madrid settled for a “royal highway”—in fact, a crudely paved jungle trail—over which they carried the silver stolen from the Incas of Peru.

North Americans claimed a special interest in the canal idea. It would provide a water passage to the west coast and the wider Pacific thousands of miles shorter than the voyage around treacherous Cape Horn. And as the fledgling republic began to feel its strength, a canal under American control would represent an assertion of authority against the colonial powers in the hemisphere. President Thomas Jefferson, with his sweeping imagination, probably discussed such a passageway when he met in 1804 with Alexander von Humboldt, the famed naturalist who had journeyed for five years through Spanish America and later became an ardent advocate for a *Nicaragua* canal. The completion of the Erie Canal in 1825, connecting the Great Lakes with the Hudson River across almost four hundred miles, and its stunning impact in opening the Midwest to trade and settlement, further heightened the American appetite for an isthmian canal—and confidence that it could be built. The California gold frenzy ignited in 1848 made it seem imperative.

But every expedition into the hinterland between the Atlantic and the Pacific brought tales of horror—blinding deluges, slime-covered swamps, bottomless muck, bugs, vermin, dysentery. An American navy party of twenty-eight men sent into the jungle in 1854 lost its way soon after it arrived and suffered seven weeks of sickness and starvation before it reached the Pacific. That only seven of the men died was considered a miracle.

Still, there stood that enticingly narrow strip of land separating the great oceans, and the fear that some other nation would grab the isthmus first. Officials in Washington—and American bankers—greeted de Lesseps’s private venture coldly. President Rutherford B. Hayes warned that “the policy of this country is a canal under American control,” and support grew for a competing canal in Nicaragua. De Lesseps’s collapse and then the acquisition in the Spanish-American War of the Philippines renewed American attention to Panama.

Many Americans were much taken by the doctrines of Alfred Thayer Mahan, whose genteelly titled *The Influence of Sea Power upon History* cloaked

a potent theory that military and economic power depended largely on control of the oceans—and a blunt assessment of American naval weakness. What better application of the doctrine than control of an isthmian canal? Writing in 1890, Mahan foresaw the “piercing” of the isthmus, “a strategic center of the most vital importance,” as a tonic to American isolationism. “Whether they will or no, Americans must now look outward” and assert “a weight of influence proportioned to the extent” of their interests.

But was a canal feasible, after the bitter experience of the French? By the turn of the century American engineers were confident they had the skills and technology necessary for the giant venture. They also had the benefit of a multitude of studies, including those by the French. As for managing the effort, there was the simple assumption that only the United States government could take on the task. It would hire the personnel, buy the machinery, lay out the plans, and own the product.

Then there were the Colombians. They owned the real estate. As early as 1869, the United States had negotiated a Panama canal treaty with Colombia, but the Senate had voted it down. After the flirtation with a Nicaraguan route, the United States came back to Bogotá in earnest, completing negotiations on a new treaty. It was the turn of the Colombian Senate to reject the canal—by unanimous vote in August 1903.

By now a boisterous new element had been added to the parallelogram of forces, President Theodore Roosevelt. Along with a faith in Mahan’s big-navy doctrine, Roosevelt brought to the table some Anglo-Saxon prejudices. He simply could not see a “backward” country as an equal in negotiations. By holding up the canal, the “contemptible little creatures in Bogotá” were simply trying to gouge more money out of him.

Teddy Roosevelt could do more than name-call. He discovered he had a wonderful card to play. Ever since Panama’s incorporation into Colombia in 1821, separatists had waged campaigns for independence, only to be suppressed. Colombia’s rejection of the canal treaty brought new calls to remove the “halter around the neck” of Panama. Here was the opportunity: why not make a deal with the rebels, help Panama win its independence, and sign a canal treaty with *them*? All that was needed was a leader who would take the initiative.

That leader was Roosevelt. Bursting with impatience to bring off a feat that had eluded previous presidents, he saw the canal as above all a strategic project. With the two fleets united, America would be a Pacific as well as an Atlantic power. But TR knew that he could not openly “take

Panama"; isolationist-minded Americans already were uneasy with his brand of "big stick" diplomacy.

So Roosevelt rebuffed the rebels' pleas for direct military assistance but agreed that if they were able to capture Panama City and Colón, the American navy would prevent Colombian reinforcements from landing. Thus encouraged, the rebels seized Panama City and on November 4, 1903, proclaimed the Republic of Panama. Meanwhile the U.S.S. *Nashville* had assumed a station off Colón, and the next day, after a tense standoff, the last Colombian troops left the city.

Three days after the secessionists declared independence, the United States recognized the new republic. Within two weeks Roosevelt had the treaty he wanted, granting the United States not only the right to dig and control a canal, but also near-sovereign possession "in perpetuity" of a canal zone ten miles wide across the isthmus. In return, the United States guaranteed Panama's independence.

Roosevelt was publicly discreet about his central role in the affair. It was only in 1911, three years after he left office, that he took complete credit. The "Panama Canal would not have been started if I had not taken hold of it. . . . Accordingly I took the Isthmus." In fact, of course, TR had not acted alone but with many collaborators—diplomats, lobbyists, rebels, as well as those excellent foils in Bogotá he called "foolish and homicidal corruptionists." And the president, who always had to clothe his actions in a moral frame, needed assurance from his cabinet that he had done the right thing. Shortly after the affair, he asked them whether he had answered the charges against his conduct. "You certainly have, Mr. President," spoke up War Secretary Elihu Root. "You have shown that you were accused of seduction and you have conclusively proved that you were guilty of rape."

With the canal zone secured, and the president impatient for action, the way seemed open for quick mobilization. Instead the Americans got off to a poor start that reminded some of the blunderings of the French. Curiously, for a job that called above all for single and focused direction, a Washington-based commission was appointed of seven members of equal power—and of equal inexperience in administering large construction projects. The first chief engineer was fired; the second quit out of frustration.

But disarray and delay among the project's leaders in Washington were countered by gradually increasing momentum on the ground in Panama. American canal builders approached the challenges there much as the North had beaten down the South in the Civil War—by pouring

masses of men, money, and machinery into the breach. The key weapons were ninety-five-ton steam shovels, three times the size of those used by the French. These were ordered by the dozen. It seemed vastly appropriate that the most symbolic photograph from the canal's building was of TR, attired in tropical whites, determinedly sitting at the controls of one of these huge digging machines.

The hero of the construction battle of Panama, though, was a forty-eight-year-old colonel from the Corps of Engineers, George Washington Goethals, the project's third chief engineer, appointed in 1907. Experienced in major harbor and river works, Goethals brought a steely leadership to Panama, seeking and gaining supreme command from Roosevelt. "If at any time you do not agree with his policies," Roosevelt said to the colonel's associates, "do not bother to tell me about it—your disagreement with him will constitute your resignation." Goethals quickly justified Roosevelt's faith in his talents. As an administrator he proved demanding but fair, encouraging everyone on the project to freely air grievances and concerns. He treated workers "like human beings, not like brutes," an associate recalled, and in return they gave him "the best service within their power." As an engineer, Goethals was decisive and bold, dramatically revising the canal's plan and reorganizing the work until it ran like an "endless-chain system of activity in perfect operation."

Another battle was medical, the war against yellow fever. For a time the Americans simply repeated the French experience. Men would sicken and die horribly, sometimes within a week or two of arrival. In 1905 a fear of epidemic among Americans working in the canal zone led almost three-quarters of them to flee for home. The hero of this battle was Dr. William C. Gorgas, the project's chief sanitary officer, who embraced the long-controversial theory that yellow fever, as well as malaria, was caused by mosquitoes.

Gorgas organized a massive fumigation campaign of military efficiency and took it beyond the zone to Panama City and Colón. By 1906, after a year and a half, he had virtually eradicated yellow fever in all of Panama. Malaria, spread by a different mosquito breed, proved more resistant, but Gorgas's aggressive efforts cut its incidence and its death rate.

Even with all this talent, knowledge, and technology, the digging of the Panama Canal proceeded slowly and exacted a terrible toll in lives. Men died from dynamite blasting and heavy machinery as well as from disease. There was an inequality of misery and death as the unskilled con-

struction workers—thousands of West Indian blacks, Chinese, Spaniards, Italians—often toiling in debilitating heat, sickened and died in far greater proportion than skilled workers, most of them white Americans. Working for ten cents an hour, ten hours a day, six days a week, they found their housing and sanitation conditions as miserable as their work site; blacks suffered most of all, living segregated in squalid, regimented barracks.

The building of the Panama Canal was often compared with a battle, appropriately enough. The casualties, the yard-by-yard progress, the disease and the filth, the gap between ranks—all this would be made even more familiar in the war that broke out in Europe on the same day early in August 1914 that the humble cement boat *Cristobal* became the first oceangoing ship to pass through the canal.

Within a decade, five thousand ships a year were sailing the channel, as many as at Suez, fulfilling Mahan's vision of the canal as an inter-oceanic bridge with transformational impact on American naval power. Soon the United States would consolidate its dominion in the Western Hemisphere and project its influence far into the two great seas. With his imperializing eye, Roosevelt had foreseen much of this, well before he had taken the first step to accomplish it. We must build a canal, he had said, and grasp "the points of vantage which will enable us to have our say in deciding the destiny of the oceans of the east and west."

So it had not seemed appropriate, somehow, that the president who, a year before the *Cristobal* sailed, had pressed a button in Washington to explode a crucial charge of dynamite down in Panama had been Woodrow Wilson, not Theodore Roosevelt. Nor that the first passage of the American Pacific fleet through the locks occurred late in 1919, seven months after TR's death. Its prime mover never saw the completed Panama Canal, or the consequences of his vision. Among all the vagaries of the French and American builders of the link between the seas, not least were the vagaries of leadership.

THE TRANSFORMATION OF HARVARD UNIVERSITY

Early in the nineteenth century Harvard had the distinction of being the oldest American college but was otherwise not so different from struggling rivals like Princeton and Yale. Small, parochial, Unitarian, Harvard

offered dull recitation courses, remote professors, inexperienced classroom teachers, and compulsory chapel. Its main concern, even during the antislavery struggles, was not the grand issues of the day but how to maintain discipline among students, some of whom contrived to blow up a college building.

If you had been one of the overseers searching for a new Harvard president in the late 1860s, among the last candidates you would have considered was a diffident, thirty-five-year-old chemistry professor, even though his name was Charles William Eliot. Though his family had long been connected with the place and had helped run it, and he had shown some administrative skill in various jobs around Harvard Yard, there were other Harvard “names” available, and he had displayed no great distinction or originality as a scholar. Indeed, in 1863, after losing out to another chemist for a prestigious chair, he had left Harvard for a European tour and a job at MIT. And with all this he had a distant, even frosty personality, not helped by a birthmark that scarred the right side of his face.

Not a likely candidate! Yet enough overseers saw some kind of promise in Eliot to elect him president by a 16–8 vote in May 1869. Five months later Eliot inaugurated a presidency that would last forty years and transform Harvard.

Eliot began by raising professors’ salaries from \$3,000 to \$4,000—a move that enabled him to draw and retain a brilliant faculty over the decades. He then proceeded to reorganize departments, immensely strengthen professional schools and create new ones for business and education, abolish compulsory chapel, and—above all—offer students a free choice of courses in place of the venerable prescribed curriculum. Meanwhile he raised a lot of money, preached his educational views around the country, and kept his eye out for talent. He knew the marketplace; when an able young professor came in ostensibly to ask Eliot’s advice about attractive offers elsewhere, the president said he had obviously come in to get a pay raise—and he gave it to him.

Still, all these achievements did not necessarily create a transformed institution. Other presidents—not only of universities but of huge financial and industrial entities—were expanding and improving their enterprises. Yet by the turn of the century Eliot was indisputably the most admired and emulated university president in America, as well as a national and world leader in the realm of ideas. Why?

His aspiration to create a great university? All rival presidents had high ambitions for their institutions. His fund-raising ability? Others surpassed Eliot on this score. His self-discipline, manifested by his pledge, in a self-confrontation when he was ten years old, that he would never let his birthmark stand in the way of his goals? But other nineteenth-century leaders, some of them scarred in military service, overcame their disabilities as well.

The explanation for Eliot's transforming leadership lies in an extraordinary combination of clear goals and relevant means, the strong values by which he measured both goals and means, and a broader economic and social environment of change that gave him myriad possibilities for leadership, which he seized.

His major goal for Harvard—and what came to be viewed as his single most important success—was free electives, or open course selection. Student choice was a burning question in Eliot's time (and remains a simmering issue today). The idea of giving freshmen—teenage boys!—the right to pore through course catalogues and concoct their own “menu” was anathema. Didn't the faculty know best? People marveled not only at Eliot's faith in free electives but in his persistent and uncompromising demand that his elective system be extended to all courses, from freshman to senior, from introductory to specialized.

Eliot's absolute conviction on this score was grounded in his supreme value: the liberty of the individual, his right to freedom from intellectual coercion. This faith was common enough in the nineteenth century, almost as common as its violation in fact. Eliot did not compromise or brook exceptions. Freedom, he believed, would bring out the best in the students—their self-determination, maturity, responsibility, sense of discrimination—just as civil liberties could do for all Americans. He extended this doctrine even to the point that most grated on some faculty nerves—student freedom to attend class or not.

This radical individualism plunged Eliot into conflict, but the struggle seemed not to deter him, only to encourage him. He jostled with eminent professors, vocal students, complaining parents, interfering politicians, rival presidents—indeed, presidents in Washington—over not only academic freedom but Harvard's new secularism, its emphasis on professionalism,

and the like, and also over his support for political causes such as civil service and the League of Nations. Boston reporters avidly seized on his latest unorthodox pronouncement. He liked student agitation; a “quiet term,” he said, was hardly the acme of success.

But conflict changed *him*, too. His commitment to the first principle in the American pantheon of democratic ideals—liberty—slowly broadened out to include the second, equality. He believed in equality of opportunity, not of condition, but he began to see that real equality of opportunity would call for sweeping changes in American society as well as at Harvard. He insisted that the school be inclusive, admitting Catholics, Jews, blacks, Chinese, even women (to Radcliffe College). W. E. B. Du Bois, one of a small band of African-American students at Harvard and later a brilliant radical critic of American orthodoxies, remembered the place in a kind of golden haze—visiting William James in his home, reading Kant with George Santayana, talking with Josiah Royce. One professor “invited” a southerner who objected to sitting beside Du Bois to leave his classroom.

For all his individualism Eliot came to see, in historian Hugh Hawkins’s words, that it was necessary to “embrace collective solutions to social problems.” His own leadership was collegial. Despite all the plaudits showered on him as a lone prophet and dissenter, he was dependent on the extraordinary faculty he had gathered at Harvard, on the patronage of wealthy Boston financiers, and, later, on the heightening progressive tone of American life at century’s end. He lived long enough, to age ninety, to see that his reforms were not perfect—even his cherished electives had been carried too far—that Harvard sports and clubs, which he had criticized, had escaped unscathed, that he had not done enough to improve the lives of undergraduates in the Yard and outside. Still, his transformation of Harvard largely stood intact, and served as a beacon for other education leaders.

Underlying Eliot’s achievements at Harvard was his deeply rooted faith that humanity was “meant for progress” and “in the main improving from the beginning, though weak and wandering.” Some such faith in transformational goals—that change is possible, in Ferdinand de Lesseps’s phrase, “*pour le bien de l’humanité*”—is a precondition of planning leadership. But their achievement—the difficult, step-by-step advances, the overcoming of obstacles, the constant adjustments to means and ends—cannot be the

work of a single person, however “great.” De Lesseps’s friend the Egyptian viceroy Mohamed Ali had advised him that “when you have something important to do, if there are two of you, you have one too many.” Eliot had been closer to the mark when he noted that change was the product not of any individual will but of “combinations of many men working to common ends.” Planning leadership is inevitably collective, “combinations” whose leaders move and empower followers, who in turn empower and impel their leaders—become leaders themselves—in the complex, far-reaching dynamic of transforming action.