The Lantern-Bearers of the History of Technology

Rosalind Williams

14 October 2013

Abstract

Historians of technology need to focus more on studying human experiences of technological change rather than technological objects. Aesthetic debates over "realism" and "romance" in the later nineteenth century suggest that greater attention to the inward world of lived experience can enhance our understanding of historical experience. The well-known writer Robert Louis Stevenson experimented with a variety of new forms of romance to write about contemporary events in the South Seas with primary attention to inward experiences of technological change, as opposed to accounts of technological objects.

Keywords: History of technology, concepts of technology, literary romance, engineering, Robert Louis Stevenson, William James, South Pacific.

Introduction:

In general, historians of technology are not big on subjectivity. This subfield of history, now almost sixty years old, emerged from the conviction that more attention should be paid to objects made and used by humans. In the first generation, the rallying cry was to "open the black box," to study the design, construction, and operation of machines, tools, instruments, and other useful artifacts. In the second generation, the call was for "context," defined as social, economic, political, military, cultural and other components of the historical setting of the black box. In the words of founding father Melvin Kranzberg, for historians of technology "truly to understand our technological age," they need to study machines both "internally and externally—that is to say contextually." ¹

The third generation emphasized external forces even more, advocating the study of the "social construction" of the box. As the adjective "social" suggests, constructivism directs attention more to behavior, especially aggregate behavior, than to the subjective experience. Indeed, the methodology of the actor network makes a virtue of putting conscious and non-conscious agents on the same level. Pasteur and the bacterium are not at all equally capable of subjective experience, but in an actor network they are equally agents.

It is not that historians of technology study things rather than humans. From the start they have studied individuals and groups who invent, innovate, and build devices and systems, with special attention to heroic engineers and teams who create or even give soul to new machines. More recently users, consumers, maintainers, and enthusiasts, among others, have been recognized for their active roles in the history of technology. However, attention to subjectivity has not been a significant part of the subfield. Historians of technology may argue whether artifacts have politics, but the common assumption remains that careful attention to artifacts is what defines

their mission. The core of technological reality is out there in those objects. Inward, subjective experience may tell us how people feel about "technology," but it is not itself technological. The real stuff is out there in objects.

Such bias against inward reality is by no means limited to historians. In an 1899 essay William James analyzed "a certain blindness in human beings," which keeps us from entering into "the feelings of creatures and people different from ourselves." Ever the pragmatist, James explained that this blindness arises because "We are all practical beings, each of us with limited functions and duties to perform." In order to get them done, we readily fall into the role of "judging spectators," the role most useful to us in our daily business. We are always aware of the strength of our own feelings, as subjects judged by others, but this inward world is largely hidden from and unappreciated by other judging spectators. Despite our awareness of our own subjective reality, we turn a blind eye to that of others: "The subject judged knows a part of the world of reality which the judging spectator fails to see..."

In his essay James quotes at length, with fulsome praise, another essay by Robert Louis Stevenson, titled "The Lantern-Bearers," published just over a decade earlier (1888). The title comes from Stevenson's recollections of boyhood fun on the Scottish coast north of Edinburgh in those precious autumn days just before returning to school. The boys would equip themselves with a tin bull's-eye lantern, available at that season in any general grocery store, lighting it and hiding it under their top coats. Then they would venture out after dark, criss-crossing the sands of the coastal plain, running into each other in the dark. The whole game was to keep the lantern hidden so only those in the know would realize you had one under your coat, and you would reveal the lantern only to them. The boys would prowl around looking unremarkable, but had the thrill, "all the while, deep down in the privacy of your fool's heart, to know that you had a bull'seye at your belt, and to exult and sing over the knowledge."

Stevenson draws the lesson that what is most real and powerful in human experience is not related to external objects but "the mysterious inwards of psychology." Those "inwards" are missed by "the observer (poor soul, with his documents!)," who is deceived if he looks at the man and misses the "true realism" of intense inner experience:

The true realism, always and everywhere, is that of the poets to find out where joy resides, and give it a voice...For to miss the joy is to miss all.⁴

James endorses Stevenson's assertion. Even if we remain limited by the demands of our "single specialized vocation," each person should be alert for the moment when "hard externality" gives way, when we open ourselves to "the vast world of inner life beyond us, so different from that of outer seeming..."⁵

What would the specialized vocation of the history of technology be like if its starting point were not the object--the bulls-eye lantern--but the usually hidden inner world of the lantern-bearer--the joy of getting and lighting and carrying it in the dark? What if we seek "truly to understand our technological age" (in Kranzberg's words) with probing the reality of subjective experience ("the true realism," in Stevenson's words) rather than that of objects?

In running this thought experiment, there is no better place to begin than with Stevenson himself. In his practical trade as a writer, he was much engaged in debates about literary theory, most

notably with contemporaries like Walter Besant and Henry James, William's brother. "The Lantern-Bearers" is one of a series of essays Stevenson wrote in the 1880s championing romance against realism as a literary mode. The latter had come to be defined by naturalist writers such as Emile Zola, whose works focus on the shaping of humans by external material reality, especially in grim and degrading ways. In "The Lantern-Bearers," Stevenson criticizes such supposed realism for its "haunting and truly spectral unreality...for no man lives in the external truth among salts and acids, but in the warm, phantasmagoric chamber of his brain, with the painted windows and the storied wall." Instead, "The man's true life, for which he consents to live, lie[s] altogether in the field of fancy."

This was not just a literary quarrel – or, more precisely, it shows that aesthetic debates often involve the deepest and most fundamental issues of what is true and real in human life. Stevenson himself stressed that the debate about realism vs. romance was not only about works of fiction. In another essay, titled "A Humble Remonstrance," Stevenson proposed that Besant and James were discussing not just the art of fiction but the greater "art of narrative." which also includes history: narrative is "in fact, is the same, whether it is applied to the selection and illustration of a real series of events or an imaginary series." History may be "built indeed of indisputable facts," but these facts too must be selected and ordered. The historian's "phantom reproductions of experience" may be factually true, but they lack the "vivacity and sting" of lived experience. Given the gap between historical fact and historical experience, to equate "truth" with the accumulation of facts turns "truth," Stevenson declared, into "a word of very debateable propriety, not only for the labours of the novelist, but for those of the historian." Instead the historian, as much as the novelist, should be guided by the quest for the true realism of lived experience.

Stevenson himself wrote historical narratives ranging in topic from Scotland (the Pentland uprising, his first work, published by his father) to Samoa (titled *A Footnote to History*, one of his last works). He also write what would now be called history of technology, including a biography of the well-known engineer Fleeming Jenkin, essays about his father Thomas Stevenson's work and his own education, and an edited volume of his grandfather Robert's diaries recording projects in civil engineering in the early nineteenth century (*Records of a Family of Engineers*). Robert Louis Stevenson was of the clan of the "lighthouse Stevensons"—notably his grandfather and Robert's three sons, including Thomas—who collectively constructed dozens of lighthouses around the northern coast of Scotland and also enjoyed a thriving practice in less glamorous river and port improvements throughout Scotland and England.⁸

When Robert Louis Stevenson entered the University of Edinburgh in the fall of 1867, around the time of his seventeenth birthday, it was taken for granted that Louis (as his family called him) was headed for a career in engineering. He studied with Jenkin and took mathematics from Philip Kelland at a time when few engineers had an academic education. In the summers he undertook internships at building sites associated with the family firm. He completed his degree, writing a prize-winning thesis on intermittent lighthouse illumination.

Soon thereafter Louis renounced the family business, to the bitter disappointment of his father. This prodigal son of a family of engineers pursued a very brief career as a lawyer and then settled into making himself a writer. In his critical writings about literature, Stevenson draws upon analogies from engineering to make the argument that the romance writer (as opposed to

the realist) understands the necessity of simplifying the welter of detail and complexity in the material world by applying to it the power of imagination. In writing about his grandfather in *Records of a Family of Engineers*, Stevenson explained how the engineer must know the formulas and rules of the external world, but in practice

the engineer has need of some transcendental sense....The rules must be everywhere indeed; but they must everywhere be modified by this transcendental coefficient, everywhere bent to the impression of the trained eye and the *feelings* of the engineer.⁹

There is much more to say about the influence of engineering on Stevenson's practice and theory of imaginative writing, ¹⁰ but the rest of this essay will go in another direction. It will show how Stevenson, in the last years of his life, exploring and eventually settling in the South Pacific, would try to write the contemporary history of that part of the world with primary attention to inward experience rather than to material objects. Although the South Seas were a new world for him, he maintained his conviction that in describing it, he should seek its "true realism," even—or especially--in a time and place where the outward changes that we would now call "technological" were overwhelming and manifold.

Stevenson wrote "The Lantern-Bearers" while he and his family were spending a frigid winter in Saranac Lake, New York, as he sought relief from his ailing lungs. Over that winter an American publisher offered him a deal: the publisher would pay for a chartered ship so the Stevenson family could cruise the South Seas if the writer would send back letters telling about his adventures that could be published in a New York newspaper. How could Stevenson refuse? The deal would bring him income, a warmer climate, and maybe better health and longer life. All he had to do was to dash off some charming letters. At least that was the plan. Instead he ended up in a life-consuming, often frustrating, but also soul-satisfying quest to express the experience of Polynesians as they confronted massive technological change.

Writing the South Seas: The Big Book

Nothing could be more romantic than Stevenson's account of the late July morning in 1888 when the *Casco*, the sailing vessel his party had chartered, approached the island of Nuku Hiva in the Marquesas:

The first experience can never be repeated. The first love, the first sunrise, the first South Sea island, are memories apart and touched a virginity of sense. ... The first rays of the sun . . . pricked about the line of the horizon; like the pinnacles of some ornate and monstrous church, they stood there, in the sparkling of the morning, the fit sign-board of a world of wonders. ¹¹

When the Casco found a good anchorage and the anchor is thrown overboard

it was a small sound, a great event; my soul went down with these moorings whence no windlass may extract nor any diver fish it up; and I, and some part of my ship's company, were from that hour the bondslaves of the isles of Vivien. 12

This is not history: this is myth, a rediscovery of Eden, a transcendental moment. But almost immediately the romance fades and history asserts itself, as people living on the island paddled out to the *Casco*. They clamber on board, speaking an unknown tongue, squatting and grunting and terrifying Stevenson, who has no idea what was happening. Stevenson quickly assures his readers that before long he would begin to learn the language, both in speech and body, and realize that no harm was meant. But from this encounter onward, he also begins to learn what we would call "technological progress" means to the South Sea islanders.

A few days later, Louis and Fanny visit the son and daughter-in-law of Tari, a native of Hawaii. haunted by happy memories of his lost homeland. Tari's son and daughter-in-law, who bring their infant daughter with them, ask Louis to tell them about the Britain. As far as he is concerned, its modern history has been a disaster. He tries to describe, with gestures and props such as shells, "the over-population, the hunger, and the perpetual toil." There is a pause; he is not sure they understand. Then the mother holds out her baby, who had been suckling at her breast, saying, "Tenez—a little baby like this; then dead. All the *Kanaques* [people] die. Then no more." ¹³

Stevenson is taken aback by "so tranquil a despair" on the part of a mother who foresees this same fate for her own flesh and blood. The father sits there making a cotton bag; the baby flails at a jar of raspberry jam, which Stevenson brought as a gift of friendship; and suddenly he has a vision of universal death, global extinction, not just of the people of the South Pacific but of people everywhere, of human cultures everywhere, a rolling apocalypse:

in a perspective of centuries I saw their case as ours, death coming in like a tide, and the day already numbered when there should be no more Beretani [whites], and no more of any race whatever, and (what oddly touched me) no more literary works and no more readers.¹⁴

In just a few days, in just a short trip across the beach, Stevenson had gone from perceiving the dawn of new life and health in a world of wonders to a coming tide of universal death. From that point on, he is intent on understanding the subjective experience of the mother who is mourning in anticipation the death of her child, of her people. He assumes the role of witnessing the destruction of their world, not just as externally experienced, but as the inward reality of grief. He begins to compose a historical narrative, not of progress, but of invading forces that are destroying Polynesian civilization and would, he believes, ultimately extinguish the current victors too.

During the rest of his time in the South Seas, Stevenson tried to piece together, from a multiplicity of discrete events, encounters, and observations, the historical forces at work in decimating the native Polynesians. He never uses the word *technology*, but there are plenty of technologies in his account. We have already seen examples, beginning with the vessels, both sailed and paddled, that Westerners and Polynesians use to move around this world of water. There are the cotton bag and raspberry jam, typical trading items. There are the coconut palms harvested to make liquor and copra.

At the end of the first voyage on the *Casco*, when the Stevenson party spent five months in the Hawaiian Islands in early 1889, Louis became especially aware of the presence of Westernized

technological systems. As a famous writer, living in a city with up-to-date systems, he found that the phone was always ringing and letters begging to be answered. Crowds of people swarmed around their cottage. His wife Fanny later recalled that "the change from our simple, quiet life to the complications of civilization . . . proved confusing to a degree almost maddening." Hawaii provided Stevenson with a glimpse of an ugly future, in which the "complications of civilization" submerge and drown every other possible way of life.

While in Hawaii Stevenson began to make comparisons between the Western and the Pacific worlds in favor of the latter. He showed the first signs of political engagement in South Seas affairs. He visited the leper colony on the island of Molokai, where he was moved by the suffering of the indigenous people and by the example of the Catholic priest Father Damien, who had recently died after ministering to the lepers for sixteen years. Stevenson also had conversations with King Kalakaua at a time when it was becoming clear that the Hawaiian monarchy was soon to be replaced by American rule. ¹⁶

Stevenson took notes and kept a journal to fulfill the business deal, but he also began to daydream of writing a "big book" about the new world he had discovered, at the edge of advancing doom. He decided to reserve his accounts of Hawaii for the big book, but in his published letters about the Marquesas he did mention the fate of Tari, the native of Hawaii who was the grandfather of the baby whose mother assumed it would soon die. Stevenson ponders the falseness of Tari's dream at a time of headspinning changes:

I wonder what he would think if he could be carried there indeed, and see the modern town of Honolulu brisk with traffic, and the palace with its guards, and the great hotel . . . or what he would think to see the brown faces grown so few and the white so many; and his father's land sold for planting sugar, and his father's house quite perished, or perhaps the last of them struck leprous and immured between the surf and the cliffs on Molokai. So simply, even in the South Sea Islands, and so sadly, the changes come. ¹⁷

In such passages, Stevenson does much more than use the word "nostalgia" as a marker of subjective experience. Tari's understanding of external reality is incorrect, but the "true realism" here is that of his inner grief.

Stevenson continues to seek the "true realism" of human experience of such changes. After leaving Hawaii, the Stevenson party spent some time on two different islands in the Gilberts. There Stevenson considered how they offered a sort of middle timescape in historical terms. Some changes had been introduced, not too disorienting in themselves, but omens of a much greater tide of change:

In the last decade many changes have crept in; women no longer go unclothed till marriage; the widow no longer sleeps at night and goes abroad by day with the skull of her dead husband; and, fire-arms being introduced, the spear and the shark-tooth sword are sold for curiosities. Ten years ago all these things and practices were to be seen in use; yet ten years more, and the old society will have entirely vanished. We came in a happy moment to see its institutions still erect and (in Apemama) scarce decayed. ¹⁸

His prophecy that this moment would be brief was fulfilled. Only a few years later, the Gilberts were annexed by Britain in 1892, and one of the most powerful native rulers was dead. The native world of the Gilberts was, in Stevenson's words, "a thing that can never be seen again..." 19

As Stevenson spent more time in the South Pacific, what began as a pleasure-and-recuperation voyage mutated into a sort of research cruise. He became fascinated by Polynesian tongues with their range of cognates and also by the pidgin of the South Seas called Beach-la-Mar. He waded into the waters of the Pacific with a hammer to collect specimens of coral as evidence of Darwin's findings about the formation of coral reefs. He studied the folklore of the islands. Most of all, he tried to understand the demographic collapse of so many, but not all, of the island populations. After testing various hypotheses, he concluded that "change," whether promoted by business or missionaries, was a primary cause of depopulation, independent of the type of change: "Where there have been the fewest changes, important or unimportant, salutary or hurtful, there it perishes. Each change, however small, augments the sum of new conditions to which the race has to become inured." 20

Fanny Stevenson thought her husband was wasting his time with such research. In a number of letters to Sidney Colvin, her husband's close friends and literary advisor in London, she complained that

Instead of writing about his adventures in these wild islands, he would ventilate his own theories on the vexed questions of race and language. He wasted much precious time over grammars and dictionaries, with no results. . . . Then he must study the coral business. . . . Never had any man such enchanting material for a book, and much of the best is to be left out.²¹

She complained that he was too interested in the "impersonal" evidence rather than his "personal" experiences. Louis himself believed his own adventures in the South Seas were insignificant compared to the historical, cultural, and social experiences of the peoples there. The true realism lay not in the details of tropical life, nor in episodes that happened to him. He envisioned his big book about the South Seas as a tragic narrative, a nonfiction "prose-epic" about the "unjust (yet I can see the inevitable) extinction of the Polynesian Islanders by our shabby civilization."

This is not what the newspaper publisher wanted. Much of what Stevenson submitted for publication was rejected and never printed in his lifetime. He kept working on "the big book" after deciding early in 1890 to build a house on Upolu, the main island of the Samoan group, and later that year deciding later in the year to settle there permanently. Eventually, though, he gave up on this ambitious project. Part of the reason was his wife's objections ("I prefer her [Fanny's] peace of mind to my ideas" but he also never surmounted the difficulties of finding a design adequate for his material. The unrevised letters were published after Stevenson's death under the title *In the South Seas*, as part of the Edinburgh Edition of his works. ²⁴

In the meantime, Stevenson turned to two other, smaller-scale ways of expressing the true realism of the South Seas. Both are experimental hybrids that recast the traditions of romance to convey modern experiences of loss and change. They all represent the art of narrative—that is, the power of a story, rather than analysis only, to integrate inner and outer experience. The first such shorter work is the aforementioned *A Footnote to History*. This is a non-fictional account of the Samoan wars that had taken place just before the he and his family settled there.

A Footnote to History is a remarkably innovative work of historical narration, a forerunner of what in the 1960s would be called New Journalism—a passionate, engaged account of contemporary events, when those events include changes in attitude as well as in circumstances. At the same time, Stevenson began to write short works of fiction, which in his opinion even more successfully portrayed subjective realities—especially ones involving sex and violence--as evidence of the larger historical story, the collapse of the Polynesian way of life.

Writing the South Seas: Historical Narrative

The title *A Footnote to History* is laden with irony. Stevenson was well aware how his decision to settle in the South Seas had bewildered most of his friends and fans back home. (Henry James was one of the few loyal exceptions.) In many ways the Pacific was an even "darker" part of the world for Westerners than the "dark continent" of Africa because it is not a continent at all, but a world of water. Yet in some ways the geopolitical stakes there were higher, since the perceived need for maritime superiority was a major theme in the military strategies of the time.

Stevenson wanted to show that a supposed footnote was really the main narrative of history at a time of profound technological innovation in warfare. He wrote the account without pretending to be a dispassionate narrator. He hoped his journalism, both imaginative and engaged, would help bring some measure of self-determination to the Samoans, or at least to quash the dominance of Germany in a part of the world contested by that country, the United Kingdom, and the United States.

Stevenson begins his description of Samoa not with a top-down view, or with statistics, but by inviting his Western reader to take a walk with him from one end of Apia, the main settlement on Upolu, to the other. "He will find more of the history of Samoa spread before his eyes in that excursion, than has yet been collected in the blue-books or the white-books [in other words, statistical summaries] of the world." The stroll begins, with Stevenson as guide, at the western end of the island, dominated by coconut-palms planted by German companies. It continues through the settlement of Apia (bars, stores, Catholic mission, cathedral), over a bridge to the east end of the island where the British and new American consulates are located. On the way Stevenson points out mini-frontiers separating white-controlled areas, neutral territory, and the east end where "Europe ends, Samoa begins." ²⁵

Stevenson emphasizes the intertwining of geography and technology in the military conflicts of Samoa, especially from the point of view of the natives. They controlled the bush on one side, while the colonial powers controlled the harbor of Apia. Their gunboats could bombard the land at will, with firepower far beyond what the Samoans might muster:

No native would then have dreamed of defying these colossal ships, worked by mysterious powers, and laden with outlandish instruments of death. None would have dreamed of resisting those strange but quite unrealized Great Powers, understood (with difficulty) to be larger than Tonga and Samoa put together, and known to be prolific of prints, knives, hard biscuit, picture-books, and other luxuries, as well as of overbearing men and inconsistent orders.²⁶

The most important outcome of this battle is subjective: the realization on the part of the Samoans that they could successfully resist the outside invaders.

This event of consciousness would soon be manifest in further military encounters. Towards the end of 1888, German soldiers landed on the beach, intending to disarm the followers of the native chieftain Mataafa. A German battleship hurled shells towards the land, wrecking part of one village and causing the inhabitants to flee. However, Samoan warriors, armed with guns and hiding in the bush, managed to kill or wound fifty-six of the one hundred forty-odd German soldiers. The battle broke the spell of technological determinism. "All Samoa drew a breath of wonder and delight. The invincible had fallen; the men of the vaunted war-ships had been met in the field by the braves of Mataafa: a superstition was no more." 27

The supposed invincibility of technological might was again shown to be illusory when a hurricane struck the islands in the spring of 1889. It wrecked dozens of warships—British, American, and German—all clustered in the harbor of Apia, since no Great Power wanted to ride out the storm in the open ocean for fear of what the others might do while they were absent. Stevenson concludes that the hurricane "made thus a marking epoch in world-history; directly, and at once, it brought about the congress and treaty of Berlin; indirectly, and by a process still continuing, it founded the modern navy of the States. Coming years and other historians will declare the influence of that." Far from being a "footnote to history," such wars in faraway places, where Great Power technologies were of dubious efficacy, would henceforth be a principal feature of world history. ²⁹

Writing the South Seas: Short Fiction

In November 1890, after Stevenson had decided to settle permanently in Samoa, he was bushwhacking around the area where he was building his house, when an idea for a story "just shot through me like a bullet in one of my moments of awe, alone in that tragic jungle." During the next two years, at the same time he was writing *A Footnote to History*, he also worked diligently to turn this moment of awe into a text. When at last he finished *The Beach of Falesá*, he wrote jubilantly to Sidney Colvin, a dear friend and literary advisor back in England, that the story is "extraordinarily true: it's sixteen pages of the South Seas: their essence":

It is the first realistic South Sea story; I mean with real South Sea character and details of life; everybody else who has tried, that I have seen, got carried away by the romance and ended in a kind of sugar candy sham epic, and the whole effect was lost—there was no etching, no human grin, consequently no conviction. Now I have got the smell and look of the thing a good deal. You will know more about the South Seas after you have read my little tale than if you had read a library.³¹

The paradoxical breakthrough with *The Beach of Falesá* is that a work of fiction is more realistic than nonfiction. Stevenson explained to Colvin:

This is a piece of realism \grave{a} outrance nothing extenuated or adorned. Looked at so, is it not, with all its tragic features, wonderfully idyllic, with great beauty of scene and circumstance? And will you please observe that almost all that is ugly is in the whites?³²

It is ugly. The plot turns on a sham marriage contract that allows the white protagonist to enjoy exploitive sex with a native woman. As a result, despite the author's best efforts, it was not published in the form he wrote it during his lifetime.³³

Stevenson kept working with hybrid works of short fiction that used elements of romance in order to convey "real South Sea character and details of life." In some instances he did this by retelling a Polynesian tale, as a way of connecting Western readers with the subjective experience of Polynesians. The most successful of these is the "The Isle of Voices," which he described as having "a queer realism . . . the manners are exact." On the beach of this imagined island are gathered all the inchoate signs of imperial domination: the wealth of shells, the babble of voices, slaughtered natives, an elusive and untrustworthy wizard, a decimated forest. The "queer realism" of the tale conveys the sense of magic inherent in such domination, when effects seem out of proportion to causes, when disembodied babble appear to make things happen, and when natives as well as colonizers join in confused conflict motivated by desire and fear.

Among these short works of South Seas short fiction, Stevenson's masterpiece is the novelette *The Ebb-Tide*, completed in June 1893. He described the story as possessing a "grimness... not to be depicted in words," a "bestial ugliness" worthy of Zola. Its four main characters were such "a troop of swine" that he wondered in retrospect how "I have been able to endure them myself until the yarn was finished." But the naturalism of the tale is only one element of it. It starts on a grungy beach, but from the start the story carries the swinish beachcombers, as well as the reader, to an island landfall reminiscent of Stevenson's in 1888. In the dawn of the South Pacific, as the sun rose

the whole east glowed with gold and scarlet, and the hollow of heaven was filled with daylight.

The isle—the undiscovered, the scarce-believed in—now lay before them and close aboard...The beach was excellently white, the continuous barrier of trees inimitably green; . . . so slender [the island] seemed amidst the outrageous breakers, so frail and pretty, he would scarce have wondered to see it sink and disappear without a sound, and the waves close smoothly over its descent. ³⁶

The illusion of the South Seas is that of a virgin world of wonders: that is the subjective experience that draws so many Westerners to this part of the world. As they settle there, they both find and confirm the South Seas as a setting for greed, vengeance, and murder.

The climax of *The Ebb-Tide* takes place on its beach, in a bizarre and brutal scene where villainy and cruelty are concentrated in the killer Attwater, a religious zealot, capitalist entrepreneur, and killer wrapped up into one imperialist wizard. In this tale that juxtaposes swinish Westerners and

Attwater's treasure of pearls, Stevenson's writes a short book that concentrates the "true realism" of the unwritten big book: the story of the drives and passions that are transforming the South Pacific. This reality is summarized in its first sentence, one of the great opening lines in English literature:

Throughout the island world of the Pacific, scattered men of many European races and from almost every grade of society carry activity and disseminate disease.³⁷

Conclusion

Stevenson and his family lived in Samoan, actively engaged in Samoan affairs, until his death at the end of 1894. The cruise that was intended to let Stevenson dash off some letters to the home folks turned into a "romance of destiny," reorienting his life and work. As Stevenson explored this (for him) new world, he constantly tried to learn more about its language, geology, economics, politics, and much else. Yet he was never only (to borrow his description from "The Lantern-Bearers") "the observer (poor soul, with his documents!)." He was also constantly participating, analyzing, integrating, trying to understand what was going on as experienced not only by himself but even more by Polynesians. ³⁸

Stevenson's ability to do this demonstrates the value of imaginative literature both as a record of, and even more as a source of insight into, historical experience. Subjective reality has to be expressed in language that is allusive, rich, integrative, and value-laden. Literature approaches the world simultaneously as externally experienced—a field out there--and as internally experienced—inward feelings, passions, and thoughts. It integrates them into "a single, unified conscious field, a subjective awareness of the total conscious experience." There are certainly other ways historians can access subjective reality—for example, sensory studies and those of technology-in-use are two ways this is being done—but literature remains an irreplaceable source of evidence and insight.

Nevertheless, after three generations of habitually giving primary attention to black boxes, historians of technology have their work cut out for them. Old habits die hard, and it is all too easy to produce "another episode in the gigantomachy of objective reality versus subjective illusion," to borrow Bruno Latour's terse summary. 40 Historians of technology face the challenge of establishing the epistemic reality of human experiences of technology such as wonder, nostalgia, grief, greed, aggression, "resistance to change," and many others that Stevenson writes about in connection with the South Seas. The human experiences associated with technology need at least as much attention as the meanest of black boxes.

But historians of technology have an even greater challenge, since the name of our subfield encourages an even more dangerous habit: not only undue attention to material objects, but the reification of *technology* as a general concept dissociated from any particular objects. As Leo Marx has contended, the concept of technology is "hazardous" because it

has been endowed with a thing-like autonomy and a seemingly magical power of historical agency. We have made it an all-purpose agent of change.⁴¹

The same could be said of other concepts, all of them associated with technology, that currently fill the air: Globalization, Mobility, Progress, Development, Innovation. In this neo-realism of abstraction, the powerful agents are shape-shifting ghosts, invisible but all-powerful. Too frequently they are assumed to have objective reality in contrast to the subjective reality of human consciousness, which is supposed to get out of their way, but they too assume (as Stevenson said of realist novels) a "haunting and truly spectral unreality." Like the wizards of the Isle of Voices, these invisible but powerful forces babble away, scooping up shells, setting fires, creating effects that seem detached from any human activities.

The subjective experience of Polynesians, as expressed in a fable like "The Isle of Voices," helps us understand our own subjective tendencies in attributing such powers to mysterious forces. When it becomes the site of massive human intervention, the world is increasingly experienced as unreal, unstable, and uncertain. The expansion, intensification, and acceleration of human powers progressively remove "otherness, the sense of something not ourselves." Instead, on a planet dominated by the human presence, we constantly encounter ourselves in reified forms. It is hard to find external objectivity when there is no escaping humanity, and this is why it is so tempting to create abstract concepts that appear detached from human agency. When the everyday world can seem so fantastic, and everyday language so inadequate in describing it, the division between world as objective fact and literature as subjective fiction is shaky at best. Forces are multiplying that cannot be understood within the framework of ordinary matter of fact. Instead we live in a world that seems reenchanted by forces beyond our understanding, even if we ourselves have created them.

The next, fourth generation of historians of technology needs to take subjective experience more seriously. This endeavor will help overcome the habitual blindness we share regarding the inward experiences of others, and will also help clarify our own understanding of "our technological age." The black box we need to pry open is that of human historical experience.

¹ Kranzberg, "Comment and Response," 406-7.

² James, Life's Ideals, 3, 4, 6.

³ Stevenson, "Lantern-Bearers," 144.

⁴ Ibid., 149.

⁵ James, *Life's Ideals*, 18.

⁶ Stevenson, "Lantern-Bearers," 148-9.

⁷ Stevenson, "Humble Remonstrance," 83.

⁸ Bathurst, *Lighthouse Stevensons*, passim.

⁹ Stevenson, *Records*, 10:311.

¹⁰ Williams, Chap. 10, "Romantic Engineering and Engineering Romance," *Triumph*, 237-60.

¹¹ Stevenson, *In the South Seas*, 6.

¹² Ibid., 7–8. Vivien is the enchantress of the Arthurian legends.

¹³ Ibid., 22.

¹⁴ Ibid., 23.

¹⁵ Campbell, "Travels," 39.

¹⁶ Robinson, ed., *Stevenson: Best Pacific Writings*, 143, 145. Father Damien was canonized by the Roman Catholic Church in 2009.

¹⁷ Stevenson, *In the South Seas*, 20–21.

¹⁸ Ibid., 156.

¹⁹ Stevenson to Sidney Colvin, August 7, 1894, *Letters*, 8:344.

²⁰ Stevenson, In the South Seas, 33

²¹ Fanny Stevenson to Sidney Colvin, January 1891, *Letters*, 7:79–80.

²² Johnstone, *Recollections*, 103.

²³ Stevenson to Sidney Colvin, April 18, 1891, *Letters*, 7:101–2.

²⁴ Rennie, Intro. to Stevenson, *In the South Seas*, xxv, quoting Colvin's editorial note regarding *In the South Seas*, vol. 20 of *The Works of Robert Louis Stevenson*, Edinburgh Edition, (Edinburgh, 1896), x. As Rennie describes, a century passed before another edition was prepared, based on many manuscripts and proofs rounded up from four libraries on two continents.

²⁵Stevenson, *Footnote*, 19.

²⁶ Ibid., 72.

²⁷ Ibid., 99.

²⁸ Ibid., 120.

²⁹ For a recent appraisal of the role of the Samoan hurricane of 1889 and related events in reconfiguring naval power in the Pacific, see Wolters, "Recapitalizing the Fleet," 103–26.

List of References

Bathurst, Bella. The Lighthouse Stevensons. New York: HarperCollins, 1999.

³⁰ Stevenson to Sidney Colvin, November 7, 1890, *Letters*, 7:27.

³¹ Stevenson to Sidney Colvin, September 28, 1891, *Letters*, 7:161.

³² Stevenson to Sidney Colvin, May 17, 1892, *Letters*, 7:282.

When *The Beach of Falesá* was submitted for publication in *The Illustrated London News*, the editor did not want to include the sham marriage certificate used to trick Uma. Stevenson resisted because then there would be nothing left of the yarn, but the editor omitted it anyway. What appeared in the magazine Stevenson described as "the slashed and gaping ruins" of his "little tale." For the publication of *Beach* in *Island Nights' Entertainments*, Stevenson gave in to a compromise, showing the marriage certificate as running for ten days rather than one night. He was disgusted by this evasive maneuver and also unhappy that *Beach* was published along with folk tales, since it was of such "a totally different scope and intention." See Jolly, Intro. to Stevenson, *South Sea Tales*, xx, xxiv–xxv; Buckton, *Cruising*, 217, 243; and Stevenson, *In the South Seas*, 200.

³⁴ Stevenson's comment is quoted in Robinson, ed., *Stevenson: Best Pacific Writings*, 62. See Stevenson, "The Isle of Voices," in *South Sea Tales*, 103-22.

³⁵ Stevenson to Henry James, June 17, 1893, *Letters*, 8:107.

³⁶ Stevenson, "Ebb-Tide," in South Sea Tales, 187–88.

³⁷ Ibid., 123.

³⁸For more on Stevenson as a proto-social scientist, see Williams, *Triumph of Human Empire*, 304-8.

³⁹ Searle, "Can Information Theory Explain Consciousness?," 54.

 $^{^{40}}$ Latour, "Some Experiments in Art and Politics." Section 2, "Who Owns Space and Time?" [n.p.]

⁴¹ Marx, "Technology," 577.

⁴² Frye, Secular Scripture, 60.

Buckton, Oliver S. *Cruising with Robert Louis Stevenson: Travel, Narrative, and the Colonial Body.* Athens, Ohio: Ohio University Press, 2007.

Campbell, James. "Travels with Robert Louis Stevenson." *The New York Times Book Review*. November 5, 2000.

Frye, Northrop. *The Secular Scripture and Other Writings on Critical Theory, 1976–1991.* Joseph Adamson and Jean Wilson, eds. Toronto and Buffalo: University of Toronto Press, 2006.

James, William. On Some of Life's Ideals (New York: Henry Holt, 1912 [1899, 1900], 3-46.

Johnstone, Arthur. Recollections of Robert Louis Stevenson in the Pacific. London: Chatto & Windus, 1905.

Kranzberg, Melvin. "Comment and Response to the Review of 'In Context." *Technology and Culture* 33, no. 2 (1992): 406-7.

Latour, Bruno. "Some Experiments in Art and Politics." e-flux journal #23 (March 2011).

Marx, Leo. "*Technology*: The Emergence of a Hazardous Concept." *Technology and Culture* 51, no. 3 (2010): 561-77.

Robinson, Roger, ed. Robert Louis Stevenson: His Best Pacific Writings. Honolulu: Bess Press, 2003.

Searle, John R. "Can Information Theory Explain Consciousness? [review of Christof Koch, Consciousness: Confessions of a Romantic Reductionist]." *New York Review of Books*. January 10, 2013.

Stevenson, Robert Louis. *A Footnote to History: Eight Years of Trouble in Samoa*. Rockville, Md.: Serenity Publishers, 2009.

- --- "A Humble Remonstrance." In *Stevenson on Fiction*, ed. Glenda Norquay, 80-91. Edinburgh: Edinburgh University Press, 1999.
- --- In the South Seas. Neil Rennie, ed. London: Penguin, 1998 (1896).
- --- "The Lantern-Bearers." In *Stevenson on Fiction*, ed. Glenda Norquay, 139-50. Edinburgh: Edinburgh University Press, 1999.
- --- *The Letters of Robert Louis Stevenson*. Bradford A. Booth and Ernest Mehew, eds. 8 vols. New Haven: Yale University Press, 1994–95.
- --- Records of a Family of Engineers. In The Works of Robert Louis Stevenson. Charles Curtis Bigelow and Temple Scott, eds. 10 vols. Philadelphia: John D. Morris, 1906 (Samoan edition de Luxe).

---South Sea Tales. Roslyn Jolly, ed. Oxford: Oxford University Press, 1999 [1996].

Williams, Rosalind. *The Triumph of Human Empire*. Chicago and London: University of Chicago Press, 2013.

Wolters, Timothy S. "Recapitalizing the Fleet: A Material Analysis of Late-Nineteenth-Century U.S. Naval Power." Research Note. *Technology and Culture* 52, no. 1 (2011): 103–26.