Engineering the Perfect Cup of Coffee: Samuel Prescott and the Sanitary Vision at MIT

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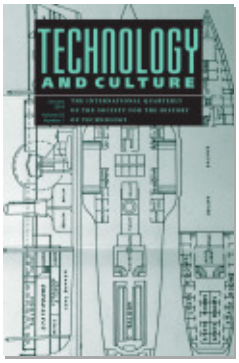

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LARRY OWENS

In 1936, *Fortune* magazine featured a spread on the Massachusetts Institute of Technology as an apostle of science and handmaiden to industry. Twenty-six hundred fresh MIT graduates would soon join a group of alumni that included "the heads of General Motors, General Electric, Goodyear Tire, Eastman Kodak, Stone and Webster—and ten du Ponts."[1] While true, such praise was a little out of date, for Karl Compton, the institute's president, had worked hard since his arrival in 1930 to wrest control of the institute's agenda away from industry and refurbish its reputation in fundamental science.

The *Fortune* piece nicely illustrated the school's move to the cutting-edge, with scenes of sophisticated laboratories and modern instruments, such as a massive six-million-volt Van de Graaff generator. Above a picture of the institute's imposing façade, as seen at night from the Charles River, the magazine arrayed portraits of Compton's three deans: Vannevar Bush, dean of engineering; William Emerson, dean of architecture; and, between them, posed at his laboratory bench, Samuel Prescott, dean of science (fig. 1).

But there was in fact a hidden irony in Prescott's presence in that triumvirate, for, behind the scenes, Bush and Compton were struggling to reform a biology program they considered seriously behind the times.[2]

Dr. Owens teaches in the Department of History at the University of Massachusetts, Amherst. He thanks the many audiences who have listened to and offered advice and criticism about this essay since it was first presented at the History of Science Society meeting in Kansas City, 24 October 1998, and, especially, the archivists at the Rockefeller Archive Center and the Massachusetts Institute of Technology, both in the institute's archives and at the museum, without whom work such as this would be much less enjoyable, if not impossible.

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1. "Massachusetts Tech," *Fortune*, November 1936, 107–14.

2. Warren Weaver diary, 19 November 1936, conversation with Karl Compton and Vannevar Bush, RG 12.1, Rockefeller Foundation Archives, Rockefeller Archive Center, North Tarrytown, N.Y. (hereinafter RAC).

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FIG. 1 Prescott's portrait as it appeared in *Fortune*, November 1936. (Photo courtesy of the MIT Museum.)

Compton and Prescott were cut from very different bolts of cloth, as would have been obvious if the magazine's editors had not cropped Prescott's picture as they did. In the uncropped version (fig. 2), lined up along the top of the cabinet behind Prescott are a number of tins of coffee—indeed, most of the brands of coffee popular during the early part of the century—and lying on the bench in front of him is a folder bearing the words "The New Science of Automatically Controlled Coffee Making." In the flask? Probably fresh-brewed coffee. The magazine, in truth, lost a piece of the past when that photo was cropped, a past that involved a younger Samuel Prescott and a three-year quest for the perfect cup of coffee. It is a story that tells much about a vision of health and happiness at MIT that was simultaneously humanistic and industry friendly.

* * *

As wine has never been just wine to the French, so coffee was never simply coffee to Americans.[3] As much sign and circumstance as substance, by

3. Roland Barthes, "Toward a Psychosociology of Contemporary Food Consumption," in *Food and Drink in History*, ed. Robert Forster and Orest Ranum (Baltimore, 1979).

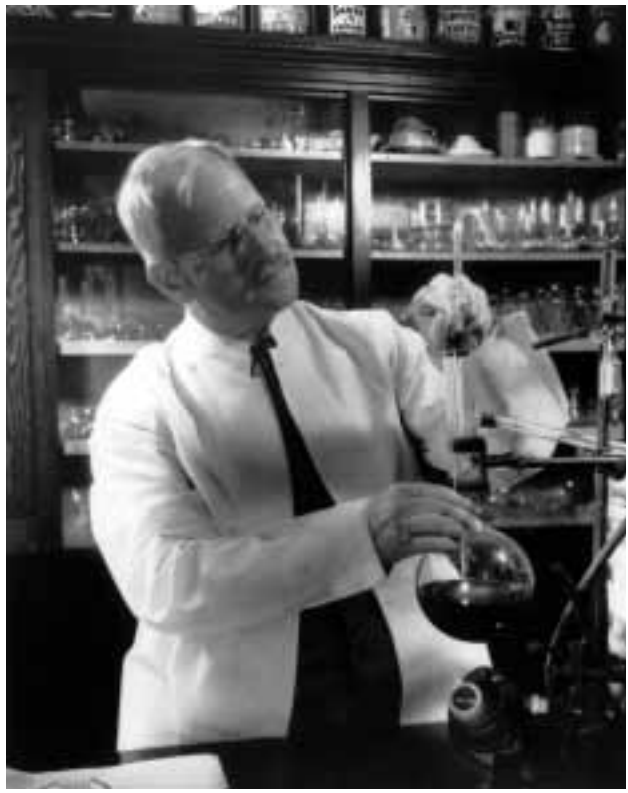

FIG. 2 The uncropped photo of Prescott. (Photo courtesy of the MIT Museum.)

the twenties coffee had become the national beverage, and it encompassed a wide range of attitudes about modernity, the good life, and even the nation's place in the global scheme of things.[4] It could express heroic accomplishment—witness the barbershop porter from Minnesota who drank eighty cups of coffee in seven hours and fifteen minutes and survived, the *New York Times* reported, "in pretty good shape."[5] It soothed the happy home, cemented marriages, and, as "the most grateful lubricant known to the human machine," was a welcome aid to industrial efficiency.[6] It even promised to be a force for the advance of democratic civilization, an aid—as its chief historian noted in 1922—to the "world democracy of right-living and clear thinking" that was to follow the Peace of Versailles.[7] But there

4. Michael Jimenez, "'From Plantation to Cup': Coffee and Capitalism in the U.S., 1830–1930," in *Coffee, Society, and Power in Latin America*, ed. William Roseberry, Lowell Gudmundsen, and Mario Kutschbach (Baltimore, 1995), 42.

5. Ibid., 38.

6. William H. Ukers, *All About Coffee* (New York, 1922), xii.

7. Ibid.

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was ordinary coffee, and there was Samuel Prescott's perfect cup of coffee, a brew that required, in addition to beans, a global economy, an emerging culture of consumption, and the cult of the expert.

From 1830 to 1900, per capita consumption of coffee in the United States quadrupled. The increase resulted from the aggressive commercial network that expanded to link coffee elites in Latin America with financial interests in the United States. In its journey from plantation to cup, coffee moved from poor nations to rich and from subtropical underdeveloped countries to the industrialized states of the temperate north. By the early 1900s, most coffee was produced by Brazil and drunk in the United States. And it was into the United States that most of the wealth produced flowed: 90 percent of the cost of a cup of coffee purchased outside the home went to North Americans and Europeans; one of the twenty-five cents a U.S. consumer paid for a pound of coffee went to workers in Latin America.[8]

For Americans of the Jazz Age, as exemplified by Nicole Diver, the consuming heroine of F. Scott Fitzgerald's *Tender Is the Night*, for whose sake trains ran, factories fumed, men mixed toothpaste in vats, and "half-breed Indians toiled on Brazilian coffee plantations," this globalization was a mark of advancing civilization, and no more than their due.[9] Tropical foods like coffee and bananas triggered visions of romantic paths "leading down into the heart of the Americas," along civilizing railroads whose wheels were "the wheels of progress" and whose headlights were "the illumination of dark countries," down into green and happy valleys onto plantations whose workers seemed to be saying "You did well to come, Senhor: it was good of you to make this pilgrimage to the Shrine of King Coffee. . . . Here are the open spaces that pulsate for all mankind, for here is to be found the kind nepenthe that steals away life's drabness, that adds to the joy of living, that makes for comfort and better cheer. Here is Nirvana!"[10]

Nevertheless, coffee was in trouble. Consumption stagnated at the beginning of the century and the beverage was attracting growing criticism, both medical and moral. Opponents, among them producers of coffee substitutes, claimed it was a "slow poison" that could cause indigestion, nervousness, and induce moral promiscuity, and that coffee roasters had "for centuries been striding with hob-nailed boots over the stomachs and nerves of the nations."[11] Anxious about these threats, the members of the National Coffee Roasters Association asked themselves:

8. Stephen Topik, "Coffee," in *The Second Conquest of Latin America* (Austin, 1998), 58–59.

9. Cited in Neil Harris, *Cultural Excursions: Marketing Appetites and Cultural Tastes in Modern America* (Chicago, 1990), 192.

10. "Leading down" from Charles M. Wilson, *Empire in Green and Gold* (New York, 1947; reprint, 1968), 174; "the wheels of progress" cited in Emily Rosenberg, *Spreading the American Dream* (New York, 1982), 17; "You did well to come" in William Ukers, *A Trip to Brazil* (New York, 1935), 30.

11. *Tea and Coffee Trade Journal*, March 1924, 400; "The Truth about Coffee," *Salinas*

> "What was to be done?"
> "Advertise," said one member.
> "Send out publicity men," said another.
> "Increase capital," still a third.
> "We've done all those things," answered the managers . . . "and yet the sales are not what they should be."
> Finally the real answer was given.
> "Make a systematic, scientific study. . . ."[12]

What the coffee men decided they needed was "coffee with a college education."

The roasters' interest in research went back to 1912, when the association had created the Better Coffee Making Committee for "investigation and research" and figured out that boiled coffee was not the best. In 1920 the publicity men decided they needed a big gun, and they turned to MIT's Samuel Prescott, long recognized for his expertise in food technology.[13] With forty thousand dollars from a publicity fund, Prescott created the Coffee Research Laboratory (fig. 3), reviewed the literature—concluding that "there had been a good deal of rather half-baked theorizing about coffee"—and set to work over the next three years to supply the needed experiments. Prescott told the coffee men: "[A]ny study made at the Massachusetts Institute of Technology will be a scientific study. You cannot use the name of the Institute for advertising purposes, no matter what the outcome is. We cannot promise results. It will take at least two years and at the end of that time we may be very little further along. Most important of all, the results of our researches will be published. For your sake, I hope they will be favorable. But they will be published, none the less."[14]

Was coffee harmful? The literature, although confused, seemed to indicate that it was not; nor was it addictive. The lab heroically force-fed rabbits freshly brewed coffee and determined that a human would need to drink between 150 and 200 cups—all at once!—for it to prove fatal. Very little had been done on the brewing of coffee and, since few of us chew our beans, Prescott proceeded to assemble a "tasting squad" consisting of "the secretaries of his colleagues, young instructors, laboratory workers, stenog-

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[California] Independent, 17 December 1923; Jimenez, 44–45; *Tea and Coffee Trade Journal*, March 1924, 373.

12. Winifred Stuart Gibbs, "What the Coffee Industry Has Accomplished," *American Food Journal* 18 (April 1923): 169.

13. This brief summary of the industry's interest in research is drawn from the *Tea and Coffee Trade Journal*, especially "Progress of Home Coffee Brewing," January 1924, 73–76.

14. Samuel Prescott, "A $30,000 Cup of Coffee," in Maurice Holland, *Industrial Explorers* (New York, 1928), 78. Significantly, Prescott's public disinterestedness vanished in private—later he politely asked permission to publish certain parts of his research—and he surely realized he was providing a useful service for an embattled industry.

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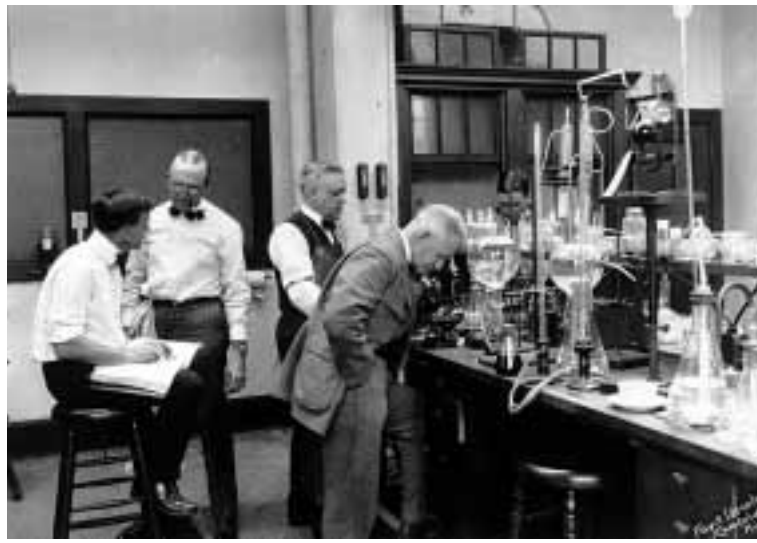

FIG. 3 Prescott and colleagues in the coffee lab. (Photo courtesy of the MIT Museum.)

raphers, and filing clerks." With the aroma of coffee wafting along the institute's corridors, the tasting squad assembled in the ladies' rest room and sampled, over the next several years, coffee brewed under an enormous variety of conditions: boiled, dripped, and filtered, using water of different hardnesses, at different strengths and temperatures, in pots made of aluminum, copper, nickel, tin plate, and glass—all with or without cream and sugar. After three years Prescott was a "coffee-maker without peer," whose expertise allowed him to step into "the kitchen of the American housewife [and demonstrate] that her skill, based on tradition, must give way to facts developed in the laboratory."[15] The "ideal cup of coffee" should be made in glass or stone, with coffee freshly ground, and water a few degrees below boiling. Never boil, and never reuse the grounds.

Much of the coffee lab's results seem, in retrospect, little more than an amalgam of garden-variety science and common sense. Moreover, the "engineering" of the perfect cup of coffee seems hyperbolic. Bridges and coffee aren't, after all, comparable artifacts. Prescott was well aware of this, admitting that "securing an opinion as to the quality of coffee is comparable to securing an opinion as [to] the quality of a symphony from a group of individuals with different degrees of tone perception and musical taste."[16] Nevertheless, the posture of engineering precision—and Prescott's pose of

15. Prescott, in Holland, 82–83, 89.
16. Samuel Prescott, *Report of an Investigation of Coffee* (New York, 1924), 27.

unbiased objectivity—were crucial, precisely to the extent they were displayed. Don't advertise? Are you kidding?!

The coffee trade's counteroffensive had begun earlier in 1919, when roasters and green-coffee men formed the Joint Coffee Trade Publicity Committee and coaxed one million dollars from Brazilian planters and almost three hundred thousand dollars from U.S. subscribers to fund a massive ad campaign touting the virtues of coffee. When Prescott delivered the results of his study in 1923 and announced that coffee was a beverage "which, properly prepared and rightly used, gives comfort and inspiration, augments mental and physical activity, and may be regarded as the servant rather than the destroyer of civilization," the industry had the ammunition it needed.[17]

A series of ads appeared, trumpeting "The Proof at Last!" "The Facts about Coffee," "Coffee is a Safe and Desirable Beverage," "Coffee Gives Comfort and Inspiration," and "Read What This Famous Scientist Says About Coffee." By the campaign's end, Prescott-inspired ads had appeared in over twelve hundred newspapers and magazines with a whopping daily circulation of thirty-six million, illustrating the ingredients of the perfect brew: advertising, consumerism, science, and economic imperialism.[18]

But the story doesn't end here, for Prescott's dedication to perfection went further. Over the course of his career, he pursued not just the perfect cup of coffee but perfect candy, ice cream, milk, bananas (he organized the United Fruit Company's first banana research laboratory in Costa Rica in 1914) and the perfect cow. "Science holds the key to the future food supply of the world, according to Dr. Samuel C. Prescott, head of the department of biology of the Massachusetts Institute of Technology," declared the *Boston Daily Advertiser*. If scientists like Prescott were successful in their studies, the "application of growth-producing rays will bring forth cows the size of brontosauri, roosters the size of pterodactyls." This might seem a bizarre catalogue of obsessions until one realizes that they all reflect themes of happiness, health, and engineering that shaped early biology at MIT. Prescott's interests were formed early in his career, when he learned bacteriology from William Sedgwick and sanitary chemistry from Ellen Richards.

In 1883, Sedgwick had transformed MIT's course in natural history into a Department of Biology with a distinct tilt toward application—specifically, toward industry and food technology on the one hand and sanitary science and public health on the other.[19] He began a long association

17. *Address on a Scientific Coffee Research Delivered by Samuel C. Prescott . . . at the Copley Plaza, Boston, 17 October 1923* (New York, 1923), 7.

18. The publicity committee's advertising campaign is detailed in *Tea and Coffee Trade Journal*, October 1924, 527–29, 550–53; April 1924, 521e–f.

19. Much of the material on Prescott, Sedgwick, and Richards comes from two works by Samuel Goldblith, *Of Microbes and Molecules: Food Technology, Nutrition and Applied Biology at MIT, 1873–1989* (Trumbull, Conn., 1995), and *Samuel Cate Prescott: MIT Dean*

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with the Massachusetts State Board of Health, became the state's consulting biologist in l888, and, over a career of more than three decades, took on the role of the nation's premier epidemiologist and expert on municipal water supplies, sewage treatment, and the purification of rivers. When the young Prescott graduated from the institute in 1894, Sedgwick sent him first to the sewage plant in Worcester before hiring him as his personal assistant and putting him to work applying the new science of bacteriology to the spoilage of canned clams—work for which Prescott, and the institute, became famous with America's canners.

The department's turn to sanitation and public health had been profoundly influenced by Ellen Richards. In the course of a long association with the institute and its Department of Chemistry, her interests had ranged from mineralogy to domestic science, and from school lunch programs and public kitchens to water surveys. In all of this, especially in her course on sanitary chemistry, Richards stressed the importance of "engineering" health and improving the quality of one's surroundings—from air, water, and food to the countryside, the cities, and the children raised there. It wasn't doctors who would solve the problems of the industrial age, Richards once wrote, but sanitary engineers, whose influence would "leaven the mass of sordid living whether of excess or poverty" and help form "a new ideal of rational living."[20] It is a short step from her study of the adulteration of staple groceries, written for the Massachusetts Board of Health in 1880, to Prescott's prescriptions on coffee.[21] Richards, Sedgwick, and Prescott embody what can be called the "sanitary vision," the belief that applied knowledge could perfect the world, making it healthy, wealthy, happy, and efficient.

The expansiveness of the sanitary vision is exemplified by the work of Henry Waite and Claire Turner. A civil engineer trained at MIT, Waite was hired as the city manager of Dayton, Ohio, to rebuild the town in the wake of the great flood of 1913. In that age of progressive sensibilities, Waite's new regime became famous for cleaning up the town and brooming the old politics out of the dark corners of city hall. His administration swept the streets and fixed the water supply and sewage plants, lowered the mortality rate, reduced bacterial counts in local milk supplies, and tidied up Dayton's markets, bakeries, and candy factories. In all of this, Waite acted, it was reported in *Harper's*, as nothing more or less than an engineer.[22] Turner, one

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and Pioneer Food Technologist (Trumbull, Conn., 1993). For a first-rate study of biology at MIT, one that interprets the story very differently than I do, see Joel Genuth, "The Local Origins of United States National Science Policy" (Ph.D. diss., Massachusetts Institute of Technology, 1996).

20. Ellen H. Richards, *Conservation by Sanitation* (New York, 1911), 216.

21. On Richards, see Goldblith, *Of Microbes and Molecules*, chaps. 2–5, and Margaret Rossiter, *Women Scientists in America* (Baltimore, 1982), 67–70.

22. Burton Hendrick, "Taking the American City Out of Politics," *Harper's*, June 1918.

of Prescott's departmental colleagues, in 1920 "appeared before a little group of Malden school children and told them he had come to increase the happiness rate. Here was something new. It was interesting and they listened eagerly while he unfolded a story of a new world the joys of which . . . were to be theirs." Turner's commitment to work in the schools was rooted in the conviction that "rosy cheeks, bright eyes, alert minds, and above all else, happiness" were every child's birthright.[23] Clammy contentment, well-managed towns, happy children—not to mention the perfect cup of coffee—all were destinations on the horizon of the sanitary vision, along "Tech's Road to Happiness."

In 1911 MIT cooperated with Harvard University to establish a Joint School for Health Officers, and by the middle twenties the institute, and in particular its biology department, had become a national force in public health and industrial biology.[24] Prescott became president of the Society of American Bacteriologists in 1919 and head of the biology department in 1922, after Sedgwick's death. In 1932 Compton made him the institute's first dean of science. Yet the Sedgwickian heritage soon faded, and when Prescott retired in 1941, the ax fell. In 1942 the institute decided to get out of public health altogether; in 1945 sanitary science was withdrawn into the Department of Civil and Sanitary Engineering (in the new Sedgwick Laboratories!); and in 1946 food technology was moved into a separate new department housed within the Prescott Laboratories of Food Technology.[25] With the new biology firmly in place by the end of the World War II, the sanitary vision seemed to many shallow, old-fashioned, and even a bit frivolous.

What happened? Why did MIT biology undergo so radical a divestiture? Why has the perfect cup of coffee—and the sanitary vision—vanished so quickly from our sense of what the institute was all about? Four factors proved decisive: (1) antagonism between doctors and engineers; (2) new disciplinary dynamics and institutional ambitions; (3) shifting patronage; and (4) the disappearance of ideals of public service.

Conflict with doctors began early. Ellen Richards had chided physicians for showing little interest in sanitary science and public health: in the new era, the engineer would replace the doctor in the confidence of the public.[26] In 1930, at the moment of Compton's arrival, the biology department was still trumpeting the same theme. But such sentiments met with opposition,

23. "Tech's Road to Happiness Not Paved with Don'ts," *Boston Evening Transcript*, 28 November 1925.

24. On public health at Harvard, see Jean Curran, *Founders of the Harvard School of Public Health, 1909–1946* (New York, 1970), and David Edsall, "The School of Public Health, 1909–28" in *The Development of Harvard University Since the Inauguration of President Eliot, 1869–1929*, ed. Samuel Eliot Morison (Cambridge, Mass., 1930).

25. The early history of the department is chronicled in the Samuel Prescott Papers in the MIT Archives; see also Murray Horwood, "History of Bacteriology at MIT," *Technology Review*, January 1953.

26. Richards (n. 20 above), v–vii, 219.

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especially from Harvard's doctors. The Joint School for Health Officers had been deeply influenced by the engineers, but in 1922, after Sedgwick had left the scene, Harvard had managed to wrench the program away from the engineers, establishing an independent School of Public Health, dominated by the medical school.[27]

The department had more to contend with, however, than opposition from the medical profession. In 1930 Compton had arrived as president with a mandate to transform the institute. The new agenda stressed fundamental research over engineering practice, a more independent stance vis-à-vis business and industry, and the mobilization of new patrons with funds sufficient to support new scientific ambitions. It didn't take Compton long to initiate efforts to, as James Killian put it, "raise MIT biology out of the dull period into which it had drifted."[28]

In truth, the effort began with Prescott himself, who had hired the young John Bunker in 1921 to teach the new field of biochemistry. Efforts to promote fundamental research remained modest, however, until Compton's arrival. Shortly thereafter, Bunker submitted a proposal to the new president, with Prescott's blessing, for a Division of Research in Biology.[29] Over the next few years, Compton, Bunker, and Vannevar Bush crafted a "new deal" which they hoped would resolve an increasingly troublesome situation in public health and redefine the department around a "borderline field" between biology and its sister sciences, especially physics and chemistry.[30] In 1937, citing as precedent the creation of chemical engineering, Compton asked the Rockefeller Foundation for more than a million dollars to help create the "new art of Biological Engineering."[31] The foundation was clearly interested in encouraging Compton's reforms, but rejected the proposal on grounds of timing, staffing, and its anomalous involvement in public health. Compton responded by formulating plans for new hires in the quantitative physical sciences and by promising to withdraw from public health. In 1940, the foundation granted the institute two hundred thousand dollars to help biological engineering become "a rallying point for the gradual development of a new profession."[32]

27. Turner to Prescott, 18 January 1932, and "Extracts from Memoranda Prepared by Dean Prescott for Dr. Compton at his request in 1932 and 1934," AC4 173/4, MIT Archives; see also Curran, 228–29.

28. James R. Killian, *Education of a College President* (Cambridge, Mass., 1958), 207–8.

29. John Bunker to Compton, 6 May 1931, with attached memo to Prescott, AC4 173/4, MIT Archives.

30. "Excerpts from KT Compton's letter to MM," 6 March 1935, RG2, series 1935, box 116/888, RAC. Warren Weaver diary, 19 November 1936 (n. 2 above). Karl Compton to Rockefeller Foundation, 11 January 1937, AC4 30/14, MIT Archives.

31. Compton to Rockefeller Foundation, 11 February 1937, RG 1.1, 224, box 2/20, RAC.

32. Notes of a discussion among Warren Weaver, Karl Compton, and Vannevar Bush, 16 October 1937, RG 1.1, 224, box 1/13, RAC.

In 1941, fulfilling his promise to strengthen the biophysical and biochemical core of the program, Compton hired the neurophysiologist Francis O. Schmitt to head what would become a new Department of Biology and Biological Engineering. The appointment was a watershed. Schmitt had no interest in food technology, public health, or even engineering—however much Compton and Bush invoked the precedent of chemical engineering. He could abide the department's new name, but considered "biology to be pure science and the biological engineering to include mostly the various aspects of food technology."[33] So radical was this break with the past that Schmitt was given private access to the president's office through his own personal "dean," even though Prescott was still department head and dean of science, in order "to afford him independence from the biology of the past."[34] At MIT, applied biology in the service of the sanitary vision was dead.

* * *

Where might one have drunk the perfect cup of coffee? In the "Home That Happiness Built," perhaps, saved for with the Happiness coupons found in every box of Happiness Candy![35] The gulf that stretches between the present and the surfeit of pleasure promised by Happiness Candy gives this tale a kitschy sheen. That was the world, we remind ourselves, of George F. Babbitt, who found satisfaction in his water cooler, character in spectacles, and perfection in his backyard. But is there really so much difference between that concupiscent obsession with the accoutrements of the new consumer culture and our own forms of possessiveness? Beneath that Jazz Age veneer lay a bedrock of a moral seriousness often lacking in twenty-first-century obsessions with material pleasures. If Happiness coupons could invoke the virtues of prudence and thrift, so could the perfect cup of coffee suggest modernity and the unbiased standards of expert knowledge. Entwined with the boosterism of the era was a strong ideal of public service that marked progressive science: Sedgwick and his heirs would have instantly agreed with Babbitt's pronouncement that his religion was "to serve my fellow men, to honor my brother as myself, and to do my bit to make life happier for one and for all."[36]

For Prescott there was a familiar venue on campus in Walker Memorial

33. Compton to Schmitt, 4 November 1940, AC4 30/18, MIT Archives; Francis O. Schmitt, *The Never-Ceasing Search* (Philadelphia, 1990), 119–20; also, Karl Compton and John Bunker, "The Genesis of a Curriculum in Biological Engineering," *Scientific Monthly*, January 1939, 5–15.

34. Killian (n. 28 above), 208.

35. "Save Your Coupons," advertisement, *New York Tribune*, 3 December 1923: "These are the profit-sharing coupons that are given away with every purchase of Happiness Candy and Soda."

36. Sinclair Lewis, *Babbit* (New York, 1922), 170.

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FIG. 4 The Scientist crowned by Hygeia, detail from the Edwin Howland Blashfield mural in Walker Memorial Hall. (Photo by author.)

Hall, where one can imagine him taking a break from his laboratory labors and pondering the perfect cup. In the banquet hall, surrounded by the famous Blashfield murals that grandly mythologized MIT's role in bringing light and order to a dark and chaotic universe, he might have taken special pleasure in the south wall murals, finished only in 1930, as Compton was arriving to transform the institute.[37] There, beneath a brooding Nature,

37. In 1923, Everett Morss, the institute's treasurer, had convinced Edwin Howland Blashfield to design murals for Walker Memorial. Although Blashfield trained as a civil engineer at the institute, class of '69, he had turned himself into one of the nation's premier muralists, drawn by great public spaces and the grand mythological themes to which they lent themselves. Among other projects, he had painted murals for the dome of the Library of Congress, the Manufacturers' Building at the Columbian Exposition, and the state capitols of Wisconsin and South Dakota. Blashfield and his colleague, Vincent Aderente, completed the paintings at MIT between 1924 and 1930. (James R. Killian, "The Blashfield Murals in Walker Memorial, Massachusetts Institute of Technology," *Technology Press*, 1935.)

beset by Famine and the dogs of war and closely watched by the world's statesmen and soldiers, the Scientist is crowned by Hygeia, daughter of Asclepius and goddess of health (fig. 4).

Samuel Prescott and his colleagues found sanitary foods, clean environments, and nurturing schools all linked by the notion of health. In this sense, whether chemists or engineers, Sedgwick's institutional offspring were dedicated to coaxing health from ill-health, perfection from chaos—all in all, a moral universe very different from the one that followed when individual ambition, disciplinary self-promotion, and institutional self-interest transformed MIT and science generally. Today we've got designer coffee a-plenty. But the perfect cup? Ah, that's a will-o'-the-wisp that—along with the sheltering horizon of the sanitary vision and Hygeia's cornucopia—went the way of the Progressive Age, done in by depression, war, and changing culture.