

Craft Beer's Unlikely Alchemist

Abstract: In 1965, Frederick (Fritz) Maytag III began a decades-long revitalization of Anchor Brewing Company in San Francisco, California. This was an unexpected venture from an unlikely brewer; for generations, Maytag's family had run the Maytag Washing Machine Company in Iowa and he had no training in brewing. Yet Maytag's career at Anchor initiated a phenomenal wave of growth in the American brewing industry that came to be known as the microbrewing—now “craft beer”—revolution. To understand Maytag's path, this article draws on original oral histories and artifacts that Maytag donated to the Smithsonian Institution's National Museum of

American History via the American Brewing History Initiative, a project to document the history of brewing in the United States. The objects and reflections that Maytag shared with the museum revealed a surprising link between the birth of microbrewing and the strategies and culture of mass manufacturing. Even if the hallmarks of microbrewing—a small-scale, artisan approach to making beer—began as a backlash against the mass-produced system of large breweries, they relied on Maytag's early, intimate connections to the assembly-line world of the Maytag Company and the alchemy of intellectual curiosity, socioeconomic privilege, and risk tolerance with which his history equipped him.

ONE DAY IN APRIL 1971, bottles of Anchor Steam Beer clinked down the bottling line of San Francisco's Anchor Brewing Company, a jaunty blue anchor on their labels. The brewery that had produced this beer was not new. Anchor had been in operation since 1896, pausing only for Prohibition's thirteen-year ban. Nor was the style of beer in these bottles novel. Anchor's “steam beer,” a style unique for having originated in an American city, had flowed from area taps for decades.¹ The particular batch of beer that filled these bottles in 1971, however, was something original: the first modern bottling of a historic brew and the result of a revitalized recipe that announced new ambitions. From the hands of an unlikely maker—Frederick (Fritz) Maytag III, a Stanford literature major and member of the Iowa-based washing machine-making family—this beer's influence would ripple outward from San Francisco to transform how the world made and enjoyed beer. Anchor Steam Beer was the first “microbrewed”—a term that later became synonymous with “craft”—beer.²

Anchor Steam Beer is a lager, a family of beer styles introduced to the United States and popularized by European immigrant brewers in the mid-1800s (Pilcher 2016; Alberts 2018).³ A lager is distinguished by its yeast, which settles to the bottom of fermentation vessels, drawing impurities down with it and typically leaving clarity above (Oliver 2012: 532–33). American beer drinkers of the 1960s and 1970s were lager drinkers, to be sure. But they were accustomed to the outputs

of very large breweries like Anheuser-Busch, Miller, Schlitz, and Pabst that were so light in body and neutral in flavor that the beer nearly disappeared on the tongue (Mosher 2017: 254–64). Following Prohibition's repeal in 1933, the American brewing industry had consolidated and, in the eyes of many, grown ever blander (Acitelli 2013: 32–35; Ogle 2006: 318).⁴ Maytag's Anchor Brewing Company served as the initial attempt at something different: a small-scale brewery helmed by a self-taught brewer. He used traditional ingredients to make European styles that had fallen out of favor in the U.S. or were little known to begin with. Accordingly, his interpretation of Anchor Steam Beer featured the rich, amber color and flavors of malted barley (toast, caramel) balanced by the gentle bitterness of hops.⁵ With new depth of flavor, this beer straddled past and future, giving drinkers a peek at a new universe of beer to come.

And a new universe did come. With origins in the counter-culture, the consumer movement, and the “good food movement,” microbrewing's impact would ripple across realms of the social, the economic, and the gastronomic alike.⁶ Today's United States counts more than six thousand breweries, more than 99 percent of them small operations (Alcohol and Tobacco Tax and Trade Bureau 2018).⁷ In 2017, U.S. drinkers spent more than \$119 billion on beer, nearly double what they spent on wine (Beer Institute 2018; Wine Institute 2018). Granted, the craft sector accounts for a minority of beer sales in the U.S., with a little more than 13 percent of the

market share in 2018 (Brewers Association 2019a). Yet the pace of craft beer's growth from the 1980s onward and its self-styled identity as cool, renegade, and artisanal—qualities that also earned it criticism as elitist and exclusive (Rausnitz 2016; Crouch 2016)—gave craft beer an outsized profile in the media and food and drink culture (Gargan 1994; Hsu 2012; Thompson 2018). This late-twentieth-century “revolution” in beer—and the creation of new or changed relationships among growers, brewers, equipment manufacturers, marketing representatives, distributors, retailers, the media, and consumers—began in many respects with Maytag's 1971 Anchor Steam Beer. Yet surprisingly enough, this innovative, influential brew came from the efforts of someone who was not especially interested in beer (at least at first) and whose path could have gone in many directions other than to a brewery.

One way to understand this story is through Maytag's own telling, placed in a larger historical context, and in companion with the material culture that enabled his development as a brewer. In 2017, Maytag recorded an oral history for the American Brewing History Initiative, a project to document and collect the history of brewing in the United States for the Smithsonian Institution's National Museum of American History.⁸ In the interview, he spoke about his time at Anchor's helm from 1965 to 2010 and the experiences that had led him there. Maytag's remarks drew attention to a collection of objects that he relied on throughout his career. These emerged during his oral history as the valued things—the *stuff*—that underlay the early history of craft beer. And like Maytag's own path, they were unexpected.

These artifacts and the oral history that helped give them life revealed a surprising and personal link between the birth of microbrewing and the strategies and culture of mass manufacturing. The romanticized origin story of microbrewing—as an inspired venture waged by scrappy upstarts rebelling against the establishment—came from the movement's start as a backlash against the consolidated world of big beer (Jackson-Beckham 2017). Paradoxically, though, Maytag's invention of American microbrewing was possible only thanks to his early experiences in the assembly-line world of the Maytag Washing Machine Company, run by his family, and the alchemy of intellectual curiosity, socioeconomic privilege, and risk tolerance with which his history equipped him. His story, and that of Anchor, thus suggest a more complicated relationship between mass production and craft beer at the latter's point of origin. In this history, microbrewed beer grew out of the lessons and structures of industrial manufacturing even as it fought to define itself in opposition to those very systems. For multiple reasons, then, Maytag proved an unlikely yet, ultimately, ideal figure to renew the American brewing industry. He did it with a microscope, a

textbook, blue cheese, and washing machines. These were the ingredients of the recipe for a revolution in beer.

“Oh my God, I can still hear the noise in D3, which was the machine shop,” Maytag recalled. “And the smell of oil, and the porcelain ovens It was a fantastic feeling that in that little building ... they dominated the washing machine business” (Maytag 2017). Born in 1937, Maytag grew up in Newton, Iowa, ensconced in the world of the Maytag Company, which his father ran, as had his grandfather and great-grandfather (McCombe 1949). Maytag employees made washing machines, airplane engine blocks during World War II, and washing machines again once peacetime returned. Maytag remembered his childhood awe watching assembly-line workers churn out “little white porcelain enamel aluminum tub washing machines. [There] used to be one on the back porch of every house in America” (Maytag 2017). Newton may have been small, but Maytag sensed the national, if not global, importance of the products assembled in his family's factory.

The influence of growing up in a family of entrepreneurs ran deep for Maytag, but in ways that would surface only years later, forging an unplanned link between washing machines and beer. After attending Deerfield Academy, a boarding school in Massachusetts, Maytag went to Stanford University in 1955 to study American literature (“I wanted to study ideas”) but still felt upended by “the evils” of World War II. “I had kind of given up on the West,” he explained, in his oral history. “[L]ike so many young people, I was ready to think of other things ... [a]nd the Orient appealed to me very much” (Maytag 2017). Maytag began graduate study at Stanford in Japanese language and literature but stopped on the verge of completing his degree.⁹ Soon, his career veered definitively away from the Iowa path trod by three generations of Maytags before him.

In 1965, Maytag bought a controlling stake in San Francisco's long-standing but struggling Steam Beer Brewing Company, whose Anchor Steam Beer he drank (with some indifference, in his telling) while socializing with friends (Maytag 2017). Fred Kuh, proprietor of the Old Spaghetti Factory, a bohemian North Beach restaurant that Maytag described as his “local,” had urged his young customer to pay a visit to the brewery shortly before it was set to close.¹⁰ Even without knowledge of brewing, Maytag had noticed the beer's erratic quality. Speaking in 2017, he admitted, “I went down to see the brewery not because I loved the beer, I really was not a beer enthusiast.” Rather, he explained, “I had had a lab, a room in the basement as a boy that I called my lab.” Maytag had been a science enthusiast since childhood, in conjunction with his later affinities for

language and literature. Accordingly, when he walked through the brewery's doors he found himself love-struck, though not by aromas of brewing beer or its intoxicating result. "I remember there was a giant copper coil hanging on the wall. I had no idea what it was ... but it had a magic effect on me." He purchased the company, went to work, and explained, "I just fell in love. I was made for it [T]here's nothing more interesting than a brewery in terms of a combination of chemistry, physics, biochemistry, engineering. It's a wonderworld of basic science" (ibid.). As a consequence of Maytag's curiosity and the unusual financial means at his disposal, Anchor Brewing Company became Maytag's new lab: a factory with flaws to fix in the realms of raw ingredients, equipment, and production. These were matters for science as well as the palate.

If Maytag brought his entrepreneurial heritage and ample resources from his factory town upbringing to the brewery, so, too, did something tangible travel from one world to the next. When Maytag was fifteen, his father had gifted him a 1938 Bausch & Lomb microscope (Figure 1). Maytag used the tool in his boyhood lab. A shade over twelve inches tall, when not in use it sat inside a custom wood case with a locking door. The microscope became Maytag's favored companion when it came time to leave Newton. He brought it with him to boarding school in Massachusetts, to college at Stanford, and eventually to Anchor.¹¹ When Maytag purchased the business in 1965, he placed samples of beer under the lens of his microscope in order to understand and fix the brewery's sanitation problems (Burkhart 2018). "I have seen more horrible bacteria in beer and in wort than any other brewmaster in history," Maytag explained in 2017. "I had the last medieval brewery." Before Maytag's arrival, it had been standard procedure to leave beer unrefrigerated and exposed to the elements on the brewery's rooftop level. Maytag said, "I came in one morning and there were pigeons in there, sitting above the wort. I can still remember what the wort looked like when the microscope was on. Unbelievable" (Maytag 2017). Fixing this was the first step in what would be Maytag's life's work.¹²

He tackled these problems by bringing skills learned in his humanities education into the brewery. Maytag devoured books, especially *A Textbook of Brewing*, published in 1957 by Belgian brewer and scientist Jean de Clerck (Figure 2). "I literally wore out one set [of de Clerck]," Maytag said. "I had to buy another, it was just falling apart. I used to fall asleep with de Clerck in my lap almost every night in my early years." Maytag may have been a science enthusiast, but he was a literature major; he read in order to become a brewer. "I built the brewery on those books," Maytag avowed. "Under[standing] what brewing, biochemistry was, microbiology was about. And the ... physics of it all, engineering of it

all. I got it ... from books" (Maytag 2017). With the guidance of an unusually erudite owner, Anchor's historic steam beer recipe improved. Maytag continued with recipes that swung ever farther from the mainstream, as he experimented with European styles he had tasted while traveling (Mosher 2016). In the 1970s, as most American beer wallowed in a rut of adjunct lagers, Anchor bottled a porter, a dry-hopped ale, a barleywine, and its first annual Christmas Ale.¹³ Malted grains, hops, yeast, and water were the ingredients at Maytag's disposal; he blended them in a range of proportions and combinations to make beers so unique he could barely sell them.

The motivation behind such experimentation came from the same place as Maytag's childhood microscope. Reflecting again on his boyhood lab, Maytag commented, "I have since come to realize it wasn't so much chemistry that intrigued me as alchemy. I ... hav[e] this magic sense of mixing things together ... to see what will happen" (Maytag 2017). Maytag's allusion to alchemy was telling. For centuries, alchemists around the globe sought to convert common ingredients into gold. Their process was scientific to an extent, with space allowed for an element of magic or mystery as they sought to transform base materials into a pure, valued metal (Principe 2013). Alchemists even conceived of their efforts as a form of fermentation; fermentation produced wine, beer, and gold alike. "By means of the ferment a purifying and refining process is set in action," one author wrote in 1880, describing alchemists centuries earlier. "[M]any efforts were made to discover a general ferment by whose instrumentality it would become possible ... to transform the baser metals into gold" (Salem 1880: 34–35).¹⁴ Coincidental or not, beer often goes by the nickname "liquid gold" (Chipperfield 2014; Rail 2006). In San Francisco of the 1970s, Fritz Maytag used his microscope and textbooks to style himself into an alchemist in the brewery: a student of literature and chemistry who converted humble ingredients into a newly valuable, inventive beer.

Knowledge of business, science, and literature could be useful in many professions, but Maytag made a particular kind of product: one designed to please the taste buds. His pursuit of simplified ingredients and the notion of authentic flavor with respect to beer was not an obvious vocation for a man with no brewing training or particular affinity for beer. Yet early in life, Maytag had learned the pleasure and value of opening his mouth and trying something new, opportunities that came in part through the financial resources that resulted from his family's industrial success. Maytag's mother was East Coast-raised and had a cosmopolitan palate, he recalled. She "was a little



FIGURE 1: *Fritz Maytag's childhood microscope inspired his passion for "alchemy" and helped him revitalize Anchor Brewing Company when he purchased it in 1965. Microscope, 1938.*

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more aware of ethnic or exotic food," as he put it, and would go to a Des Moines delicatessen to purchase smoked salmon or brie cheese, items presumably unavailable in Newton (Maytag 2017).¹⁵

Maytag's father offered his young son a separate, though no less formative, experience in the realm of taste—via a food that figured as a hobby and eventually a side business for this entrepreneurial family. A single passage of Maytag's oral history described the shaping of his palate and, with it, his worldview:

[M]y father ... loved really strong, flavorful cheese ... and he had his own refrigerator. It was years later that I realized why, which is my wife complains because our refrigerator frequently has a very strong smell And I can just see my mother saying, "Alright, Fred, you get your own damn refrigerator. I'm tired of this." Anyway, he would hand me a piece of cracker, bread with cheese on it, and he would say, "This is man's

cheese." By which I think he meant ... you know, your mother doesn't like this stuff, but I really do. And don't be afraid to eat things with strong flavors because, come on, we're in the big world, and don't have a narrow point of view. Open your mind to things that ... smell terrible. ... And he opened my mind. (Maytag 2017)

This moment shared by Maytag and his father excluded his mother physically, in the delineation between separate refrigerators, as well as on sensory if not philosophical planes. When father and son ate "man's cheese," understood as having flavors too harsh for a woman, the food, and specifically how it smelled and tasted, functioned as a lesson about intellectual adventure and sophistication and their relationship to gender. This interaction taught Maytag that the realm of food and drink were arenas in which he could, and should, take risks in order to expand horizons.

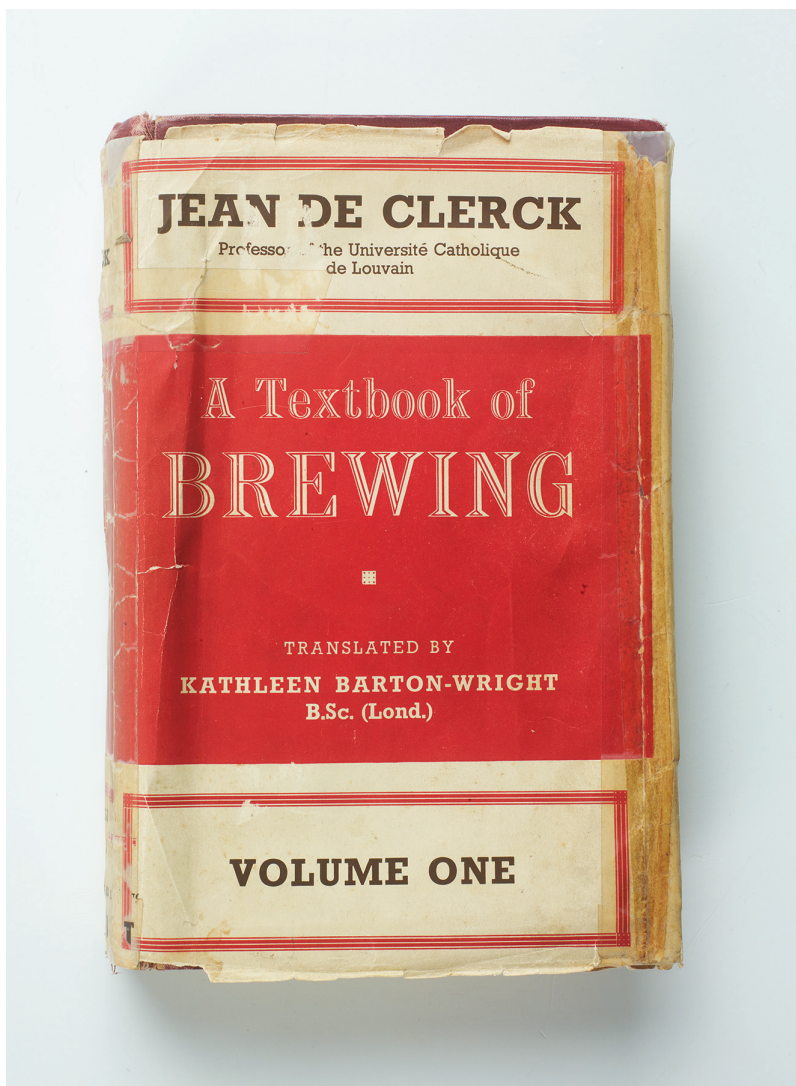


FIGURE 2: A Stanford University literature major, Fritz Maytag used this textbook to teach himself how to brew beer after purchasing Anchor Brewing Company. *Textbook*, 1957.

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Years later, Maytag broke with generations of family tradition when he bought a brewery. Such a divergence appeared more explicable, however, when viewed through the lens of this early—and gendered—experience of taste and risk. The thrill of consuming “man’s cheese” had presaged the young Maytag’s career path. Yet it also foreshadowed at a small scale the tensions that would later become embedded in the craft beer industry, especially with respect to gender. Many decades after this episode, craft brewing would struggle with allegations of inattention to or exclusion of women.¹⁶ Maytag’s early—and fleeting—experiences in this realm did not direct the industry’s future, to be sure, but they nevertheless offered a glimpse of dynamics to come.

If a childhood bite of cheese shifted Maytag’s perspective on the relationship between taste and risk, a Maytag family cheesemaking venture would teach him an equally important lesson regarding expertise—where it resided and how to access it—that he would convey to brewing beer. In 1919, Maytag’s grandfather had established a prizewinning herd of Holstein cattle and a dairy that he developed while running the Maytag Company. Inheriting the dairy in 1940, Fritz’s father, Frederick Maytag II, started a cheese-making “endeavor,” as Fritz described it—the now well-known Maytag Blue Cheese—with advice from an Iowa State University professor. Decades later, when Fritz Maytag bought Anchor Brewing Company, he sought to gain expertise from a similar academic resource: the

University of California at Davis, another land grant school, across the bay and north of San Francisco. “I went to Stanford but I’ve been going to Davis ever since,” Maytag joked (*ibid.*).¹⁷ At the time Maytag purchased Anchor, UC Davis had a famed department of viticulture and enology. Its brewing science program was just beginning, but, under the guidance of Michael Lewis, an English-born biochemist, it would become a premier training center for American brewers—Maytag among them—for decades to come (Lewis 2017).¹⁸ “You go to the land grant college and ... you have money ... ambition ... creativity and eccentric attitudes of something different or better ... and they give you advice. It’s a marvelous thing,” Maytag remarked (Maytag 2017).¹⁹

The Maytag family’s experience of land grant schools was atypical at the time. In 1862, the federal government had established the system of colleges and universities—several dozen, eventually, spread throughout the country—to train students in agriculture, engineering, and the sciences (Gavazzi and Gee 2018; Sorber 2018). Land grant schools supported the industrialization of American farming and husbandry, especially after World War II. Thus, the Maytags’ use of land grant schools to enable “eccentric,” even boutique, ambitions in cheese and beer was unusual, yet fundamental in enabling their success. At the same time, the family’s involvement in crafting a product with agricultural origins harkened back to the schools’ founding purpose. Here, again, Fritz Maytag represented the vanguard of coming change. Northern California would serve as the epicenter of the approaching micro-beer, wine, and farming movements, and UC Davis would train many of their leaders.

Watching his father’s efforts to perfect his blue cheese—the side project to a career managing a factory floor—offered the young Maytag yet one more point of instruction about marketing a small-batch, specialty product that would also flow directly into beer. “Maytag sold their cheese at a premium price by mail,” he recalled. “[It] took me a long time to realize that that might have been an influence on me.” When Maytag first tested the market with the beers he was brewing at Anchor, drinkers shunned them. “[I]t was terrible. We had a horrible time selling any beer,” he said. “[I]t was just impossible.” Success came slowly, especially as Anchor began to package its beer in bottles. Maytag’s great challenge: “How in the world could you charge a premium for an American beer?” He priced his beer carefully, well above domestic beers, a small margin above imported beers then perceived as lower quality (Japanese and Mexican), and well below imported European beers that customers assumed to be best (Maytag 2017). Maytag chose a price point to elevate Anchor from the pack of American beers and send the message that this was something novel and valuable.

Maytag also made careful use of Anchor’s labels as he designed his brand. “I purposely made our Anchor Steam package very, very plain,” Maytag explained (Figure 3). “[A]s I began to study the packaging [of beers on the market], I took a lot of the beers we were gonna compete with and I lined them all up. And it was obvious to me that they were all trying to look like champagne,” with shiny foil and embellished labels. Maytag chose the opposite tack. For his Anchor Steam Beer label, “It was flat, it was common, it looked like we didn’t know what we were doing. Just [a] real little brewery that didn’t even know how to do packaging. It just made beer. And it worked.” Furthermore, he filled the neck of the label with text—“so small that many people couldn’t read it. ... [I]t sends a message that ... this beer has a story” (Maytag 2017). Maytag aimed to make readers of his consumers before they even opened a beer.

With decisions such as these, Maytag brought his entrepreneurial roots to bear on a new challenge, for a new product, in an untested setting. Nevertheless, he credited his father as the initial innovator in this realm. “[Y]ears later ... I came to realize that it was my father who was a real pioneer in the ... food world [T]here was no question th[at] Maytag blue was the very first craft artisan cheesemaker” (Maytag 2017). His son would serve a similar role for beer (Puzo 1984; Endicott 1979; Hillinger 1972a).

And yet the mid-century American beer industry was an arena all its own, with respect to size, consolidation, and the degree to which the nation’s biggest breweries had entrenched themselves among consumers. Even with the advantage of financial resources, Maytag’s decision to purchase the Steam Beer Brewing Company in 1965 had been more than impulsive. He had thrown his money into a business model that appeared to have every odd stacked against it. In 1965, about 200 American breweries made approximately 108 million barrels of beer. About 40 percent of this total came from the nation’s five largest breweries and the industry would consolidate even further over the next fifteen years (Stack 2003; Beer Institute 1993: 8). Maytag had grown up in the world of big business, American beer had become big business, and yet he envisioned something small. In 1969, Anchor would produce only 800 barrels of beer (Hillinger 1972b).

Maytag’s leap into a small and seemingly inefficient business model had more to do with his distinctive history and his family’s business experience than with the state of the beer industry when he entered it. Asked to reflect on his decades at Anchor, Maytag foregrounded the brewery’s employee culture, contrasted with that of the Maytag Company during his childhood. Maytag recalled the “animosity, antagonism,



FIGURE 3: Fritz Maytag designed the labels for his Anchor Steam Beer—a modern reinvention of a historic style—to convey the brewery’s deliberate approach and appreciation of history. Printer’s press sheet of beer labels, 1968.

ARCHIVES CENTER BREWING HISTORY COLLECTION, ARCHIVES CENTER, NATIONAL MUSEUM OF AMERICAN HISTORY, SMITHSONIAN INSTITUTION

[and] competition” that had strained the relationship between Maytag management and unionized workers, peaking with a strike in 1938.²⁰ This dynamic, absorbed as a youngster, “had a big effect on my own attitude towards business,” he reflected. Many years later, when Maytag realized that he was the boss at Anchor, he explained, “I wanted to have a company where ... there was no ‘us’ and ‘them’ aspect to it I wanted to have a very small company that treated our employees with fantastic camaraderie” (Maytag 2017). At Maytag’s Anchor, this approach took unique form: white worker’s coveralls, with the brewery seal on one breast and the employee’s name on the other (Figure 4). These coveralls distinguished the wearer as an Anchor employee, a maker, and a member of a team. They referenced Maytag’s assembly-line roots—the pride of precision work that generated a product destined for everyday Americans—and evoked the flight suits

of World War II pilots whom the Maytag Company served. At the same time, they announced a new kind of business that strove for a handmade, rather than factory-produced, ideal.

Just as the Anchor coveralls conveyed specific messages about the people who wore them and the product they made, so did Maytag design the plan of his brewery to serve a purpose, still with his family’s factory roots in mind. In Anchor’s initial facility, Maytag had discovered that cramped quarters resulted, paradoxically, in better beer. “[T]he communication was extraordinary because everybody was bumping into everybody constantly,” he explained. He carried this lesson forward. In Anchor’s Potrero Hill facility, where the brewery moved in 1979, Maytag explained, “[We] put everything we could on this floor” in an attempt to encourage constant, if technically inefficient, human encounters. Furthermore, Maytag said,



FIGURE 4: *The white coveralls worn by brewers at Anchor Brewing Company evoked a product that was made by a team with assembly-line precision. Coveralls, around 2005.*

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“We put the place where we make the stuff right in the middle of the people managing the company.” Maytag installed the brewing equipment in the center of the factory floor and arranged offices all around it. “Everybody that was ... managing the company sat here right around the brewhouse, looking at each other through the windows,” he described. “[I]t was all very intentional ... we were proud of what we did” (Maytag 2017). The brewery’s design reinforced the message that brewing beer was the activity at center stage.


Go small, cultivate a sense of camaraderie and pride among workers and management, and privilege the process of making as well as the human relationships that facilitated the making—these features of Anchor’s business model showed the brewery to be a hybrid of old and new. Or, more accurately, a new way of doing business informed by the old. Maytag based his strategy on impressions gained during his childhood proximity to large-scale production. Generations of craft brewers, in turn, took their cue from Maytag, citing camaraderie among small-scale entrepreneurs as a hallmark of the new microbrewed approach to beer.²¹

Maytag’s revitalized brewery attracted waves of visitors—journalists, beer drinkers yearning for new flavors, and homebrewers curious about how he was making it all work—and the popularity of Anchor’s beer grew. Over the course of forty-five years, Maytag navigated Anchor to the top of a new industry. Craft brewing started slowly in the 1970s, expanded geographically and numerically in the late 1980s—in 1985, for the first time, the U.S. counted more microbreweries than large-scale breweries—and exploded in the early 2000s, its growth curve reaching for the sky (Elzinga, C. Tremblay, and V. Tremblay 2015: 252).²² Maytag shared ingredients with other upstart brewers, like Jack McAuliffe, founder of New Albion Brewing Company in Sonoma in 1976 (McAuliffe 2019). He inspired others from afar, such as Peter Egleston and Joanne Francis, who experienced separate eureka moments tasting Anchor Steam Beer: Egleston in northern California, around 1977, and Francis on a camping trip in western Massachusetts around 1983. Years later, they would collaborate to lead Smuttynose Brewing Company in Hampton, New Hampshire, and Portsmouth Brewery in Portsmouth, New Hampshire (Egleston and Francis, 2018).²³ Maytag’s influence spread broad and deep, reaching across the continent and into younger generations of brewers and entrepreneurs. When he sold his brewery in 2010 to two investors from the spirits world—they vowed to build the Anchor brand into a new beer and spirits endeavor, but would sell the brewery in 2017 to Sapporo Holdings—admirers lauded Maytag as the nation’s first microbrewer of modern times.²⁴

Nevertheless, as craft breweries expanded far beyond Anchor Brewing Company, the notions of camaraderie and collaboration that had figured prominently in narratives of microbrewing’s early years proved—at times—more an ambition than a reality. Some brewery owners appeared to use the romanticized image of brewing for a living as an excuse to offer low pay and no benefits to workers (Ramos 2018; Gershon 2014). Following Maytag’s departure, such troubles came to Anchor as well. Protesting what they described as “poverty wages, inaccessible benefits, and lack of respect” under the brewery’s current owner, Sapporo Holdings, Anchor employees voted to unionize with the International Longshore and Warehouse Union in March 2019 (Anchor Brewing Company Employees 2019; Narayan 2019). Such collective action could be seen as fulfilling Maytag’s dream of his brewery as a setting where workers would come together. Yet the brewers united in opposition to their managers, similar to the Maytag plant workers who had struck almost a century earlier. If microbrewing had originated with some of the strategies and structures of mass production at its heart, the inequities ingrained in big business came to fruition when Anchor became big business, too.

The American craft beer movement originated in a rejection of cookie-cutter manufacturing like that which the Maytag Washing Machine Company perfected. Yet Anchor’s management style under Maytag’s reign, his pursuit of authentic ingredients, and the marketing strategies of the nation’s first microbrewery were all predicated on Maytag’s early exposure to one of the nation’s most prominent assembly lines and the privilege and opportunity that came with his upbringing in that world. Maytag’s childhood microscope instilled a conviction that attention to the smallest details—literally, the microbes that could sour a batch of beer—was the first step required in fixing big problems in business as in beer. Textbooks enabled Maytag to teach himself the history and science of beer so as to breathe new life into the brewing industry. Learning early to embrace unfamiliar flavors—and convince others to embrace them, too—was a first taste in what would be a sea change in the world’s palate in relation to beer. And washing machines taught Maytag aspects of production to love—the thrill of making a thing destined for the intimate scale of the home—as well as those to discard. Was this micro, artisan, or craft? Maytag described his approach to brewing as “[H]istory in the product, tradition in the process, and modern in the environment” (Maytag 2017).

Zooming out, from the micro to the macro, shows the many ways in which the career of Fritz Maytag and Anchor Brewing Company were interwoven with historical trends

beyond beer. Changes in food, drink, technology, politics, and society were stirring around Maytag in northern California when he came to Anchor. Beer participated in the full range of these movements' complexities: innovation, creativity, competition, and exclusion alike. "It's hard to pin down because I was in the middle of it," Maytag said, when asked to reflect on Anchor's place in such transformations. "[W]e were really the only ones in the early days We were sort of there at the very beginning [L]ater ... we saw that it was a movement" (Maytag 2017). A return to slower, artisan production of food and drink following decades of increasing homogeneity, a call for consumer choice during an era of corporate consolidation, and a spirit of entrepreneurial innovation that spurred novel modes of production, packaging, marketing, transportation, and advertising: these trends were foretold by the clink, clink, clink of Anchor Steam Beer bottles in 1971. At Anchor, they were the brainchild of an entrepreneur whose heritage, experiences, and skills seemed to point him in one direction, yet he turned the other way, toward beer. A microscope, a textbook, blue cheese, and washing machines: this was the alchemy that made liquid gold. 

NOTES

1. Steam beer is a black sheep among lagers. The warmer temperatures allowed during its production, historically unavoidable in northern California prior to mechanical refrigeration, enable the development of certain ale-like characteristics. The style likely derived its name from the signature hiss that resulted from tapping a keg of this highly carbonated beer, as well as the steam it produced when sitting in open fermentation tanks on cool Bay Area evenings (Oliver 2012: 761–62). In 1981, Anchor Brewing Company trademarked "Anchor Steam Beer," forcing brewers who make steam beer to identify their beers as "California Common Beer." Current beer style guidelines published by the Beer Judge Certification Program (BJCP) define a successful California Common as "lightly fruity ... with firm, grainy maltiness, interesting toasty and caramel flavors, and showcasing rustic, traditional American hop characteristics" (Strong 2015).
2. The term "microbrewery" appeared in reporting on the 1970s revival of small breweries in the United Kingdom, as in a 1974 *Guardian* photo of one such brewery in Burton-on-Trent ("Part of the process," photo caption, November 30, 1974). Across the Atlantic, an early use of the word surfaced in a 1980 *Los Angeles Times* article, which profiled California "micro breweries" like New Albion Brewing Company, founded in Sonoma in 1976, and DeBakker Brewing Company, founded in Novato in 1979 (Charles Hillinger, "Refreshing Trend: More Small-Label Beers Are Brewing," June 24, 1980). N.B.: In the oral history with Fritz Maytag that informs this article, Maytag claimed, "I invented the term microbrewing" (2017). As for the transition from "microbrewing" to "craft" brewing, the *Los Angeles Times* also printed an early use of the term "craft." A 1992 article defined craft beer as "any beer not made by one of the U.S. beer giants" (Reuters, "Small Brewers Hit the Spot in New England," May 14, 1992). In today's brewing industry, the Brewers Association (BA), the trade group that promotes the interests of independently owned, smaller breweries,

claims authority to define "craft." Presently, the BA defines a craft brewer as "small" (producing 6 million barrels of beer or less per year, equivalent to about 3 percent of U.S. beer sales); "independent" ("less than 25 percent of the craft brewery is owned or controlled ... by a beverage alcohol industry member that is not itself a craft brewer"); and a "brewer" ("has a TTB Brewer's Notice and makes beer") ("Craft Brewer Defined," www.brewersassociation.org/statistics/craft-brewer-defined, accessed June 14, 2019). On craft beer's origins, see Ogle 2006; Acitelli 2013; Hindy 2014; Elzinga, C. Tremblay, and V. Tremblay 2015; Jackson-Beckham 2017; and Carroll and Swaminathan 2000.

3. Lager beer was already well established in New York City nearly a decade before the Civil War. An 1852 pro-temperance piece published in the *New York Daily Tribune*, referring to Maine's recent decision to prohibit intoxicating beverages, named lager as an object of temperance advocates' activism. "A desperate fight may be expected, in which every bloated keeper of a rum-selling oyster house—every tip-grabbing vender of lager beer—every red-faced customer—every rich brewer and distiller of poison ... will bear a hand [against temperance activism]" ("Watering and Liqueuring," May 21, 1852).

4. Following Prohibition's repeal in 1933, approximately 750 breweries operated in the United States. By the 1970s there were less than 100 (V. Tremblay and C. Tremblay 2005; William Carlsen, "For a Success Story, Here's to Beer! Here's to Beer!" *New York Times*, August 9, 1978).

5. Writers and brewers commonly describe Anchor Steam Beer as a "gateway" beer in converting consumers of mass-produced beer to the camp of more strongly flavored craft brews (Oliver 2012: 761–62; see also note 22).

6. On thorough, interwoven changes in wine, food, consumer activism, and environmental activism in the U.S. in the 1960s and beyond, see Briscoe 2018; Davis 2017; Goldstein and Brown 2013; Waters 1982; Nader 1965; and Carson 1962.

7. This statement uses the BA's definition of a small brewery, i.e., one that produces up to 6 million barrels of beer per year. In 2018, the Alcohol and Tobacco Tax and Trade Bureau (TTB) counted 5,964 breweries in operation. Only fifteen produced 6,000,001 barrels or more. The remainder—i.e., 5,949 breweries—produced less. In fact, 5,537 breweries (nearly 93 percent of all breweries) produced less than 7,501 barrels (2018). These figures clarify the extent to which the U.S. counts many very small breweries and a handful of gargantuan breweries. Important to note for the anticipated growth of the beer industry is the number of permits that TTB issues to breweries, which include breweries in planning. By the close of the second quarter of 2019, TTB had issued 10,887 brewers permits (2019). N.B. The Brewers Association counted a higher number of "operating craft breweries" in the U.S. in 2018: 7,346 (Brewers Association 2019b).

8. The research and collecting of the American Brewing History Initiative emphasize the histories of homebrewing and craft beer in the twentieth-century United States. The initiative is supported by a gift from the Brewers Association. For a full project description and summary of research and collecting goals, see "Brewing History," s.si.edu/BrewHistory (accessed June 22, 2019).

9. Maytag specified the assassination of President John F. Kennedy as the event that motivated him to leave graduate school and search for a new direction. He recalled that when he heard the news, "I was translating a sentence about a girl stepping off a bus. I suddenly realized I had to move on." Quoted in Patrick Cain, "Tapping a Fresh Beer Market," *Investor's Business Daily*, February 24, 2010.

10. Kuh's obituary described the Old Spaghetti Factory Café as San Francisco's "first camp-décor cabaret/restaurant" and Kuh as a self-styled "bohemian businessman." J. L. Pimsleur, "Obituary – Frederick Walter Kuh," *SFGate.com*, November 12, 1997 (accessed June 15, 2019).

11. In fall 2017, Maytag donated his microscope to the National Museum of American History. Reluctant to let even professional movers ship the tool to Washington, Anchor Brewing Company historian Dave Burkhart flew the microscope to DC to hand-deliver it to the museum. Maytag also donated the other objects whose photographs appear with this article: his white Anchor Brewing Company coveralls, his two-volume set of Jean de Clerck's *A Textbook of Brewing*, and a 1968 printer's press sheet of Anchor Steam Beer labels.

12. During an oral history recorded with Brad Benson, co-owner of Stoup Brewing in Seattle, Washington, Benson also spoke of growing up in Iowa—he was born in 1968—where he developed a passion for science while using his childhood microscope. Asked to name an object that epitomized his career, Benson likewise specified his microscope. As an adult, Benson passed the microscope on to his son (Benson and Zahaba 2017).

13. Dry hopping involves a second addition of hops to beer after the boiling stage is complete. This technique ensures that the flavoring and aromatic qualities of hops—which convey floral, piney, and citrus notes, for western American hops—are well expressed in the finished beer. Dry hopping is a common technique in the production of India Pale Ales, the most popular style of American craft beer (Oliver 2012: 307–9).

14. In his 1880 history of the brewing industry, F. W. Salem wrote about alchemists of the fourteenth century, if not earlier, conceiving of their work as a form of fermentation. A writer (or writers) who published works on alchemy under the name Basilus Valentinus in the late 1500s and 1600s, as Salem explained, “held fermentation to be a purification by means of which the spirit of wine that already existed in a fluid was put in condition to act.” Beer developed differently, yet still by the actions of a “spirit.” Here Salem cited Valentinus, writing, “Yeast induces in beer an internal quickening that advances of itself and results in a division and segregation of the clear and muddy elements, and after this separation ... the spirit can accomplish its duty successfully, as appears from the subsequent power of the liquor to produce intoxication.” This passage described the final stages of a beer's fermentation, when yeast settles in the fermentation vessel (34–35).

15. With appreciation, Maytag also described how his mother had encouraged him and his siblings to leave Iowa for boarding school in New England; she wanted to snap them out of a future of “being big frogs in a little pond” (Maytag 2017).

16. The majority of beer producers and consumers in the United States are white men. A 2016 study reported that about 75 percent of weekly beer drinkers (craft or noncraft) were men and about 60 percent of weekly beer drinkers were white (Herz 2016). As craft beer grew, many breweries failed to respect women as skilled brewers or discerning consumers equal to men. Sexist beer names and label art and misogynistic cultures on some brewery floors deterred many women from participating in craft beer. In April 2017, the Brewers Association (BA) amended its Marketing and Advertising Code to specify that “Beer marketing should be representative of the values, ideals and integrity of a diverse culture and free of any derogatory or discriminatory messages or imagery” (Brewers Association 2017).

Flying Dog Brewery of Frederick, Maryland, maker of beers such as Raging Bitch Belgian-Style IPA and Doggie Style Pale Ale, withdrew from BA membership in protest of the amended code. Flying Dog CEO Jim Caruso called the BA's action “anti-free enterprise” and “a thinly veiled side door to censorship” (Kendall 2017). On women's efforts to break into the industry and broader discussion on the subject, see Jessica Bartlett, “Women Brewers Struggle to Find Industry Foothold,” *Bizwomen*, May 18, 2018, www.bizjournals.com/bizwomen/news/profiles-strategies/2018/05/women-brewers-struggle-to-find-industry-foothold.html?page=all (accessed August 10, 2019); John Holl, “Taking a Stand against Sexist Beers,” *All About Beer* 38,

no. 1 (February 20, 2017), <http://allaboutbeer.com/article/taking-a-stand-against-sexist-beers/> (accessed August 9, 2019); and Emma Schmitz, “Why Is No One Marketing Craft Beer to Women?” *Vinepair*, March 23, 2017, <https://vinepair.com/articles/why-dont-women-in-craft-beer-care-if-women-drink-craft-beer/> (accessed August 10, 2019). Organizations such as the nonprofit Pink Boots Society, founded in 2007, have helped increase the number of women brewers by funding educational scholarships and helping women in the industry network with each other. See www.pinkbootssociety.org (accessed August 9, 2019). Craft beer has had a similarly complicated history with regard to racial and ethnic diversity among beer makers and beer drinkers. See Cook 2019; Mathews and Patton 2016; Beer Kulture, “Selective Outrage: Does Inclusion Include Us?,” *Beer Kulture*, February 18, 2019, www.beerkulture.com/kulture-tings/selective-outrage-does-inclusion-include-us (accessed June 18, 2019); Bart Watson, “Shifting Demographics among Craft Drinkers,” *BrewersAssociation.org*, June 12, 2018, www.brewersassociation.org/insights/shifting-demographics-among-craft-drinkers/ (accessed June 18, 2019); Julia Herz, “Embracing Diversity in the Beer Biz,” *BrewersAssociation.org*, November 21, 2016, www.brewersassociation.org/communicating-craft/embracing-diversity-beer-biz/ (accessed June 18, 2019); Nielsen poll, “Pleasing Multicultural Consumers' Palates Can Drive Growth for Alcoholic Beverages,” *Nielsen*, June 15, 2016; and Dave Infante, “There Are Almost No Black People Brewing Craft Beer. Here's Why,” *Thrillist*, December 3, 2015, www.thrillist.com/drink/nation/there-are-almost-no-black-people-brewing-craft-beer-heres-why (accessed June 18, 2019).

17. Fritz Maytag would take the helm of Maytag Dairy Farms in 1962, three years before he purchased Anchor Brewing Company, and remained continuously involved. At present, he serves as Chairman Emeritus of Maytag Dairy Farms. “Our History,” Maytag Dairy Farms, www.maytagdairyfarms.com/our-history/ (accessed June 18, 2019).

18. The Department of Viticulture and Enology at the University of California, Davis, has long roots, originating in an 1880 mandate from the California legislature to the University of California. “History,” Department of Viticulture and Oenology, University of California, Davis, <https://wineserver.ucdavis.edu/about/history> (accessed June 19, 2019).

19. Prior to and during his career in beer, Maytag also became involved in the wine industries in California and Chile, in collaboration with his friend Paul Draper (Maytag 2017).

20. In interviews and oral histories, Maytag employees recounted the extensive influence of the Maytag family's business holdings in Newton, which included not just the factory but also housing and stores. On May 9, 1938, workers affiliated with the United Electrical, Radio, and Machine Workers of America closed the Maytag plant with a sit-down strike, protesting a proposed 10-percent wage cut. On July 20, Iowa governor Nelson Kraschel ordered National Guardsmen to Newton to establish martial law. The workers' strike was unsuccessful; the plant reopened on August 4 with the wage reduction in effect. Maytag workers would strike again in 1971, 1974, and 2004. “Demand Troops to Clear Plant in C.I.O. Strike,” *Chicago Daily Tribune*, June 30, 1938; “Iowa Governor Orders Board to Settle Strike,” *Washington Post*, July 9, 1938; “Guard Called Out in Maytag Strike,” *New York Times*, July 20, 1938; “Iowa Chief Acts to Break Strike,” *Los Angeles Times*, August 4, 1938; “Maytag Workers Strike, Closing Iowa Plants,” *NBC News.com*, June 11, 2004 (accessed June 19, 2019). On the 1938 strike, see Feurer 2006 and Stromquist 1993.

21. Many of the oral histories recorded for the American Brewing History Initiative include a discussion of camaraderie and community among craft brewers. This sense of camaraderie began in the early years of microbrewing, when small brewers waged a

seemingly foolish fight against big beer. See Wallace and Doore 2017; Robbins 2017; D. Odell, W. Odell, and C. Odell 2017; Papazian 2017; Johnson 2017; Bouckaert and Callahan 2017; Benner 2018; Benson and Zahaba 2017; Wiegand, Forhan, and Cadwell 2017; and Dupee 2018. Reflections on the nature of camaraderie in beer should be interpreted with a consideration of the American brewing industry's demographics, which are largely homogeneous. See note 16.

22. In 1985, there were 37 microbreweries and 34 "macrobreweries." From the mid-1980s to the mid-1990s, craft beer's growth was "exponential[!]" (Elzinga, C. Tremblay, and V. Tremblay 2015: 252).

23. In multiple oral histories recorded for the American Brewing History Initiative, brewers cited inspiration and admiration if not material support and advice from Maytag and his Anchor Brewing Company. See Carey 2018; Cilirzo 2017; Dresler 2017; Finkel 2017; Grossman 2017; Lewis 2017; Johnson 2017; D. Odell, W. Odell, and C. Odell 2017; and Papazian 2017.

24. "He is the pioneer, the trailblazer . . . He and his brewers resurrected or brought life to many beer styles in the U.S.," said Paul Gatz, then director of the Brewers Association, a couple of months prior to Anchor's 2010 sale. The Griffin Group's press release announcing Anchor's 2010 sale specified, "Anchor Brewers & Distillers intends to establish a 'Center of Excellence' in San Francisco for craft brewers and artisan distillers from around the world. An epicenter of development, education, entertainment and innovation, all designed to further contribute to the culture and heritage of craft beer and artisan spirits." Gatz quoted in Cain, "Tapping a Fresh Beer Market," *Investor's Business Daily*, February 24, 2010; Tom Abate, "Anchor Brewing Co. Sold to Greggor, Folio," *SFGate.com*, April 27, 2010, www.sfgate.com/news/article/Anchor-Brewing-Co-sold-to-Greggor-Foglio-3266099.php (accessed June 19, 2019); "The Griffin Group Acquires Anchor Brewing Company and Establishes Anchor Brewers & Distillers, LLC," press release, April 27, 2010, www.businesswire.com/news/home/20100427006862/en/Griffin-Group-Acquires-Anchor-Brewing-Company-Establishes (accessed June 19, 2019).

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