

The Kitchen of Futures Past: Using Predictions About the Future of Housework to Teach About Gender, “Progress,” and Historical Perspective

The house of 2005...ought to be no more like the house of 1905 than a motor-car is like an ox-cart.

– *Harper’s Weekly*, August 1905¹

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STUDENTS IN HISTORY CLASS often like to make predictions about the future based on lessons from the past, and this is a practice that most history teachers, myself included, do their best to discourage. And with good reason: perhaps the most important analytical point that a history teacher can communicate to his or her students is that, while particular historical results might be more or less *likely* to occur given a particular context, human history is never *determined* by any one factor. Rather, the past is the uncertain outcome of many complex factors and interactions.

What is certain, however, is that predictions in a wide variety of forms—from formal to informal—are an everyday occurrence. We are exposed to them from the morning’s weather report to the evening’s news prediction about the effects of a changing climate. During lunch, we might read a science fiction book, a literary “prediction” of the next millennium. Yes, most people love predictions, meaning that historians may be alone in expressing a reticence to make predictions about the future and skepticism about

their utility. However, while historians rightly shake their heads as cable-news pundits predict this-and-that, if prediction is indeed such a beloved human activity, then the *history of prediction* is certainly a topic that deserves the full attention of historians.

In this article, I discuss historical predictions about the future of housework as an engaging way to teach about the persistence of gender hierarchy, the idea of “progress,” and the concept of historical perspective. I will first situate our discussion in the historical scholarship on futures past. Next, I will discuss how I use predictions in two of my classes on the history of science and technology in America. I do so by discussing two lessons, one on a series of articles from *Popular Mechanics* published between 1939 and 1999, and the second on Edward Bellamy’s novel *Looking Backward: 2000-1887*, published in 1888.²

Building on the work of James Schick, Fred B. Misse, Jr., and David A. Hackett, who in 1974 described in this journal an experimental course based on the idea of “the future as history,” I argue that, rather than shunning prediction, historians should embrace predictions as an historical phenomenon worthy of a place in the classroom.³ Schick, Misse, and Hackett rightly saw the pedagogical use of predictions as a way to capture the attention of non-history majors and to increase the relevance of history in an age ever more focused on *tomorrow*, with seemingly little regard for the past. To this, I add that historical predictions about the future can also be an effective way to approach common but difficult-to-address problems in students’ understanding of the past and historical change. In particular, historical predictions can help students see the durability of social structures and institutions amid claims about the “revolutionary” impact of new technologies and ideas. Predictions also vividly juxtapose changing notions of what constitutes ideals such as “progress” and “equality,” creating a concrete foundation on which to build discussions of historical contingency, relativism, and universalism. And most importantly, these same past predictions can help students develop historical perspective—the ability to treat the past entirely on its own terms.

The History of the Future

Even as it comprises only a small subset of American historiography, the historical study of prediction has nevertheless

received close attention from a number of scholars, each of whom has examined the question of what predictions can tell us—about the time they were made, about the social and cultural function of prediction itself, and about their connection to meta-narratives of American history.

In “The Future as History,” Schick, Misse, and Hackett argue for the place of prediction in the classroom. Writing in 1974, at a time when the historical profession was actively concerned for the future of the discipline, they argued that historians do themselves a disservice when they shun predictions.⁴ While the study of history was seemingly becoming “increasingly irrelevant,” especially to college students, they argue that “historians do know something about the process of change,” knowledge that is indeed relevant as society confronted questions of class and racial equality, environmental crisis, energy dependency, over-population, and other pressing issues of the present and future.⁵ “Yet most historians have been too reluctant to relate these themes and insights to the present and future. Just mention the present, however, or even occasionally the future, and watch the reaction among the student audience. *This* is their world.”⁶ Schick, Misse, and Hackett suggest that integrating the study of past prediction into historical education could speak directly to this future-oriented generation, while also showing the public more generally that the study of history is directly relevant to understanding the present. Based on this, Schick and his colleagues developed an American history course aimed at the non-history major, focused entirely around historical predictions. The course covered questions about race, urbanization, war, and social and cultural change, each illustrated with past predictions about these topics. These predictions would offer not only insight into the practice of prediction itself (and perhaps build a healthy skepticism about it), but would also offer a window into a past that for students often seemed too distant.

This window represents the most fundamental contribution of historical predictions to pedagogy: a peek into the material, cultural, and political climate of the time when they were made. As H. G. Wells, himself a prolific futurist, wrote, “The more you go ahead, the more you seem to get entangled with the burning questions of your own times.”⁷ For Wells, this is unavoidable, especially for the author of fiction. The further in the future an author sets his or her

plot, the necessarily more fantastical the setting. In order to make the distant future *believable and relatable*, ties to the present must become ever stronger.

Illustrating these ties, Mike Davis provides a riveting example of how historical inferences can be made from fictional accounts of the future destruction of the Los Angeles in *Ecology of Fear*. Los Angeles, Davis observes, seems to be located at the “global epicenter of a sinister convergence of pathological trends and weird anomalies,” and between 1909 and 1996, L.A. has been rhetorically destroyed 138 times, by nuclear bombs, earthquakes, invading hordes, monsters, and the list continues, concluding with one occasion in which L.A. was destroyed by the iconic over-watered and over-fertilized lawns of southern California.⁸

Davis argues that the “abiding hysteria...—the urge to strike out and destroy, to wipe out an entire city and untold thousands of its inhabitants—is rooted in racial anxiety.”⁹ At different moments in history, pulp disaster fiction has reflected the changing demographic configurations of the city and the attitudes of the white population towards the ethnic “other.” Prior to 1970, when the city was “still the most WASPish of large American cities,” pulp predictions focused on invading hordes of ethnic minorities “or their extraterrestrial metonyms,” reflecting underlying fears that the established racial hierarchy was weakening.¹⁰ After 1970, ethnic minorities started to become ethnic majorities, and by 1998, Los Angeles was the largest non-white majority city in the United States. Here, Davis identifies a disturbing change in the dominant literary trope: his mostly white authors shift their focus from invasion to the complete obliteration of the city, tinged, he argues, with the “illicit pleasure” of destroying a city they felt they had already lost.¹¹

For Davis’ authors, predictions served as a way of expressing deep-seated, irrational anxieties. But predictions can serve other cultural roles as well. As Jamie Pietruska argues in “Propheteering,” her study of prediction in the Gilded Age, predictions, forecasts, and prophecies (terms used interchangeably at the time) can be an important way of attempting to bring order and stability to periods of tumultuous economic, cultural, and social change.¹² Even if a supreme confidence seemed to reign during the Gilded Age, doubts about the American future seethed not far below. Prediction, Pietruska shows, was one way to address this increasing anxiety. And they

were all the rage. Weather forecasting, for instance, was emerging as a prominent field with important ramifications for agriculture, and the U.S. government became deeply involved. Tools for economic prediction similarly took on ever greater significance in stock and commodity exchanges. Communicated far and wide by telegraph, these market predictions paved the way for more “rational” economic speculation. And in the cultural realm, predictions in literature purported to offer a glimpse of where the unpredictable social and political path of the day might be headed.¹³ The popularity of these predictions was not founded in their accuracy. Indeed, they were notoriously unreliable, and they collectively revealed that the future was “predictably unpredictable.”¹⁴ Rather than credible glimpses into the future, these predictions provided a *sense of control* in an age where so many things were out of control, and people seemed to turn more and more heavily towards them the more unpredictable their lives became.

The appeal of prediction was not limited to the Gilded Age, and Joseph Corn, in *Imagining Tomorrow*, suggests that prediction is an integral part of American nationalism.¹⁵ More precisely, Corn identifies an abiding faith in the “revolutionary” potential of new technologies, and their place in an ideology of social progress through technological advancement, as a centrally American mythology. This ideology is remarkably durable, even as predictions about new technologies—for instance, atomic-powered cars—proved again and again to be hyperbolic. Furthermore, technologies rarely bring about the social change that their proponents predict; and yet this “fallacy of the technological fix,” as Corn calls it, never seems to leave a lasting impression.¹⁶ Instead, the idea that technological fixes for social problems are possible continues unabated.

This ideology represents a form of technological determinism—the idea that technology drives social and historical change—and is a persistent one in American history, one that often takes on triumphalist tones.¹⁷ Howard Segal, in *Technological Utopianism*, suggests that the idea that utopia can be achieved through technological means is one that solidified in the United States during the late nineteenth century. Segal suggests that “the belief in the inevitability of progress and in progress precisely as technological progress” permeated society at the time and became a fixture of American political and cultural discourse.¹⁸ For Segal’s utopians,

progress is a singular, identifiable thing, something that is universally shared by all. For him, “the real issue here is the extent to which technological change has meant and may still mean genuine social improvement and the extent to which it has not and probably will not.”¹⁹ Indeed, technological advancement *does not* necessarily mean social progress. Often, as the activities discussed below illustrate vividly, “progress” is highly fragmented. Progress for one group often does not include progress for another, and general improvement in social conditions is by no means guaranteed by technological change.

Predictions About Housework, in the Classroom

My initial explorations in teaching with historical predictions were motivated by a number of related questions—What do predictions reveal about their makers’ contexts? What social and cultural role do they play? To what extent do technologies and ideas touted as revolutionary actually bring about social change? And how have notions such as “progress,” and the means of achieving it, changed over time and among different groups?

Predictions have since become central pedagogical components in two of my courses, *Technology and American Culture* and *The Future*. The former, an upper-division lecture course enrolling seventy-five students, is a cultural history of American technology from the colonial period to the late-twentieth century, focusing on diverse narratives that attempt to make sense of the changing relationships among people and their technologies. Two of the core readings are utopian and dystopian futures, Edward Bellamy’s *Looking Backward* and Philip K. Dick’s *Do Androids Dream of Electric Sheep?*, which serve as jumping off points for discussions of technological enthusiasm and technological anxiety, respectively.²⁰ In the latter course, *The Future*, a mixed-level honors seminar enrolling twenty students, the students read a variety of utopian and dystopian novels as a way to explore changing attitudes regarding the social impact of science and technology, and questions concerning the ways that technology mediates relations between the powerful and powerless in society.²¹ The class also spends considerable time working with related contemporary archival materials and primary sources in the University of Minnesota’s archives and

special collections, especially the Wangensteen Historical Library for Biology and Medicine and the archives of the Charles Babbage Institute for the History of Information Technology (see **Appendices A and B** for course syllabi).

Students often come to these classes with strong beliefs in overarching narratives of historical “progress.” Additionally, students often subscribe to a progressive technological determinism, in which new, “revolutionary” technologies will necessarily drive social change for the better. To address these issues, I’ve developed several primary-source-based, small-group activities centered on predictions about new technologies for doing housework. My choice of housework as a topic is motivated by several historical observations. First, the historical study of the home encourages students to broaden their idea of what the history is, from famous people and national events to the study everyday life. Focusing on the history of housework, therefore, encourages students to see even seemingly mundane aspects of their surroundings as parts of ongoing historical processes. Second, the home has seen massive technological change, not the least of which have been plumbing and electrification. Third, despite all of these technological changes, the social structuring of the home, and housework in particular, has remained largely unchanged. To a significant extent, the gendered division of labor that characterized housework in the nineteenth century characterized it in the twentieth and still does so the twenty-first. The home, in other words, juxtaposes significant technological change not with social “progress” but, rather, stasis.

Work in the home—cooking, cleaning, mending, caring for children and the elderly—has historically been considered “women’s work,” and this role has been durable and resistant to change geographically and over time.²² Indeed, as Charles Thwing, President of Western Reserve University and Adelbert College noted in *Harper’s Weekly* in 1904, this role seemed inevitable no matter what else might happen in the world. “The future of my daughter,” he wrote, “is at once more and less uncertain than the future of my boy. It is more uncertain: for it is less under the immediate control of her own preconceived and foreordained plans. It is less uncertain: for, married or unmarried, my daughter should be the head of a home.”²³ At the same time, the home and housework has been the topic of intense speculation on how new technologies will ameliorate, even eliminate, the burden

of housework. Electrification and electrical appliances, such as the iron or stove, were seen as especially significant, and comparisons to magic and the supernatural abounded; in 1917, electricity was declared “a servant more powerful, more magical, more easily controlled, than Aladdin’s genii...eliminating at its entrance a host of cares of the household.”²⁴ Still others pointed to processed, heat-and-serve food as containing “built-in maid service.”²⁵ In 1957, a “kitchen revolution” along with an “emancipation of the housewife has been the result of the impact of technology on modern society.”²⁶

New household technologies, however, rarely, if ever, fulfilled their predicted transformative promise. Instead, as Ruth Schwartz Cowan notes in *More Work for Mother*, we are presented with a paradox: despite the continual flood of new “labor-saving” technologies into the home, women still seem to spend the same, if not more, time doing housework than before.²⁷ In explanation, Cowan argues that improvements in household technologies have historically been accompanied by increases in expectations. While cooking with an enclosed stove might have been easier than on the open hearth, expectations grew that meals should be more and more complex. No longer was a single-pot stew enough; now, several separate dishes were expected. The gendered division of household labor has thereby staunchly resisted even the most “revolutionary” of technological advancements.

In the activities described below, students are presented with the juxtaposition of change and stasis firsthand.

Popular Mechanics’ “*Miracles*” in the Kitchen

Few examples of America’s love affair with technology, and the tight bond in the American mind between technology and “progress,” are clearer than the pages of *Popular Mechanics* and other popular science and technology magazines.²⁸ In this exercise, I ask students to engage with a series of articles that appeared in the magazine between 1939 and 1993 about the future of the home, the kitchen, and housework. I discuss but two of the articles below (see **Appendix C** for the assignment handout).²⁹

These articles, like the entire run of *Popular Mechanics* since 1902, are available on Google Books, making access to these primary sources simple and free.³⁰ Students work first in small groups,

each of which receives a different article to read and discuss. They then present their article and observations about it to the rest of the class, drawing connections between sources as they present. The exercise is designed with two interrelated goals. First, students use the predictions to make inferences about the time they were made, thereby developing their ability to draw reasonable conclusions from primary sources. Second, and more importantly, by comparing what *changes* and what *remains the same* in these predicted futures, students explore the persistence of social hierarchy and the gendered division of household labor even in the face of “revolutionary” technological fixes for the problem of housework.

Article 1, 1939

In 1939, George H. Bucher wrote in *Popular Mechanics* on “The Electric Home of the Future.”³¹ Bucher, the President of Westinghouse Electric and Manufacturing Company, knew something about electrification. Westinghouse Electric Corporation, champion of alternating current, had been Thomas Edison’s arch nemesis as Edison tried to have direct current adopted as the national standard.³²

While the office and factory had been electrified first, Bucher believed that electrification would soon have a huge impact on the home. His writing’s breathless excitement vividly revealed an often forgotten world: an America without ubiquitous electricity. Here, students may for the first time be exposed to the fact that nationwide household electrification is a decidedly mid-twentieth-century phenomenon. In fact, while 85% of homes in urban areas were electrified in 1935, only 11% of farms had electricity, a statistic that placed the United States well behind numerous other countries.³³ Among electrified homes, appliance ownership in 1940 suggests how new this technology was. While 95% of American wired homes had an iron, only 81% had a radio, 60% a washing machine, and 56% a refrigerator. Ownership dropped below half for luxury appliances such as electric vacuum cleaners, coffee makers, and hot plates.³⁴

But according to Bucher, while the house of the late 1930s was only partially, if at all, electrified, “tomorrow’s home will be built around electric power supply and appliances.”³⁵ These would include not only major appliances, but also outlandish technologies, such as a radio frequency oven that could cook a ham in forty minutes.

Lights would change color for different moods. Information and entertainment would flow into the house with television and radio, moving “the amusement centers of Broadway and Hollywood right into our living rooms.”³⁶

Bucher went to great length to outline how each electrified device would improve the situation of women as they conducted their work in the home:

Thirty years ago, the housewife could look forward to washing and drying 28,000 dishes, pots and pans and some 16,000 pieces of silverware every year....Today an electric washing machine washes and dries more than 100 pieces at a time...Before electricity and planning reached the kitchen, this same average homemaker walked 125 miles a year preparing meals....but with the advent of electricity...kitchen mileage was cut seventy-five percent, a savings of...about the distance from New York to Philadelphia. It requires an average of 1,083 lifts of an iron to hand-iron the weekly laundry for a family of four. Since the ordinary iron weighs between four and eight pounds, this means that the housewife lifts more than two tons at each session at the ironing board. Electric ironers do the job without any lifting and iron twenty-four square feet a minute.³⁷

In describing the impact of the dishwasher and the electric iron, Bucher perpetrated a rhetorical sleight of hand, and several students have called this out in discussion. In the semi-electrified 1939, the *person* of the housewife was glaringly present as the one who labors. In the electrified future, the person all but disappears, only to be replaced by seemingly self-acting electrical machines. In this future, the housewife will become a manager, who, from any “number of control centers...can give her commands to appliances at work in the kitchen and laundry.”³⁸ Household labor, it seems, was to become a thing of the past.

The illustrations in the article, in contrast, betray that much will remain the same in the realm of *who does what* in the home. In class, I ask students to note the things that, despite all the new technology, remain the same. In these illustrations, for example, all images of men at home show them at leisure. Another man appears as an engineer.³⁹ All are typically gendered portrayals of male roles—in highly technical employment or resting at home. For men, in other words, the home was a place of leisure, while the laboratory was a place of work. But not so for the women in the article’s illustrations:

even in Bucher's electro-automated future, all but one woman in the illustrations are hard at work, with clothes in an electrified laundry room, with a cake in front of an electric oven, or serving her seated husband in the breakfast nook.

In the breakfast illustration, the sharp contrast between dramatically changing technology and persistent gender roles is clear not only in the parents' generation, but also for the future generation (**Figure 1**). Showing an "artist's rendition of the combination room [living-dining] in the electric home of tomorrow," the illustration highlighted a myriad of new electronic technologies. Yet even with these set pieces, the family of four in the future are engaged in familiarly gendered activities. The man, dressed in a suit, is seated with his newspaper, while his wife walks (in high heels) across the reflectively clean floors to place food on the table in front of him. In the background, the couple's two children are playing, the daughter with her doll, the son with his model airplane.⁴⁰

In sum, Bucher's article provides students both a glimpse into the semi-electrified past, but also an example of how concepts such as "progress" can often be defined solely by one factor while overlooking others. In the persistence of gender hierarchy and roles despite major technological changes, students must also confront the idea that claims about "revolutionary" new technologies may not in fact bring the improvements in social relations that their champions often assume will come.

Article 2, 1950

In "Miracles You'll See in the Next Fifty Years," Waldemar Kaempffert, the science editor for *The New York Times*, gave the reader a tour of tomorrow, full of transformative technologies.⁴¹ To tell his story of social progress through technological advancement, Kaempffert used a hypothetical family, the Dobsons, and their home, located in Tottenville, "a hypothetical metropolitan suburb of 100,000."⁴² "Drop in by rocket plane on Tottenville, the sootless garden city where you'll live in scientific comfort in A.D. 2000. You'll cook by solar heat, [and] shop by television in the world just around the corner," proclaimed the caption to the first-page illustration, which featured radially symmetric suburbs fed by wide, multi-lane freeways, the above-mentioned rocket-powered

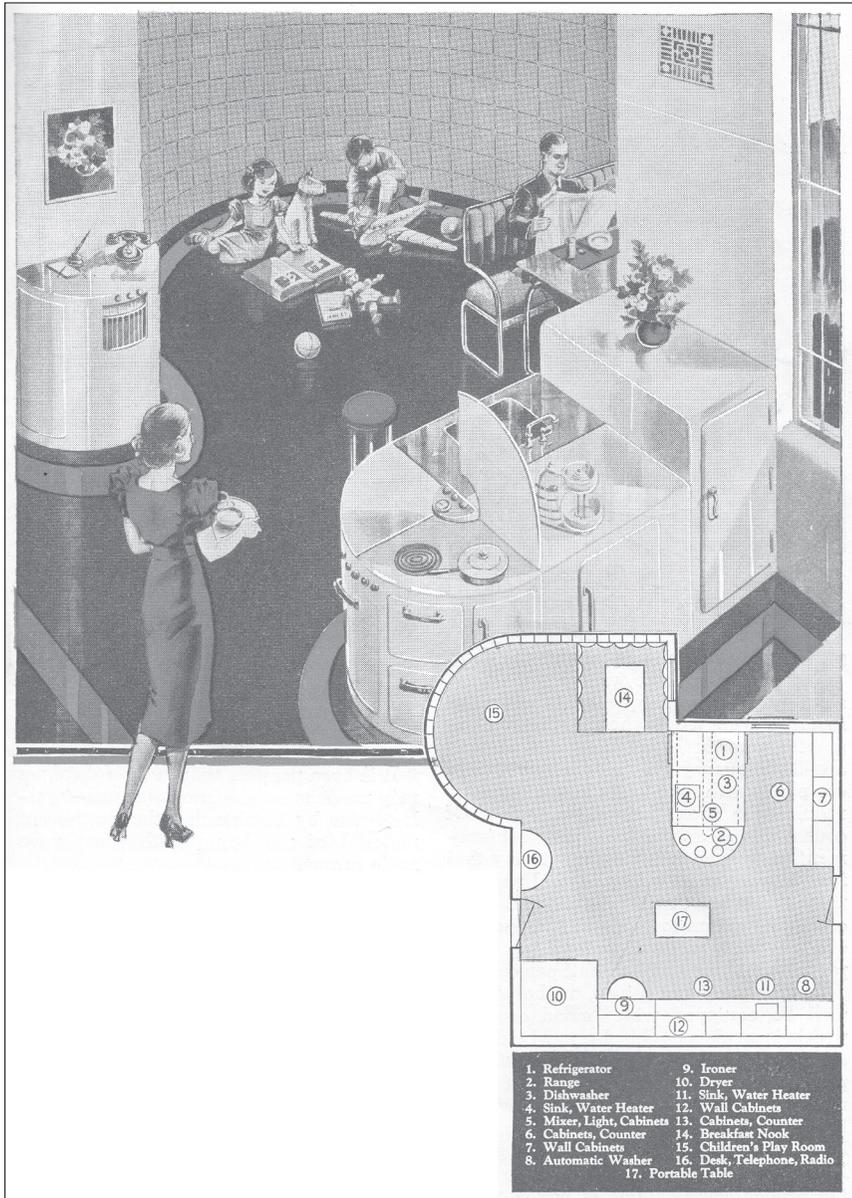


Figure 1: “An artist’s rendition of the combination room in the electric home of tomorrow (see floor plan...and the various electric equipment engineers expect the room to contain). Note the glass brick walls.” Source: George H. Bucher, “The Electric Home of the Future,” *Popular Mechanics*, August 1939, p. 163.

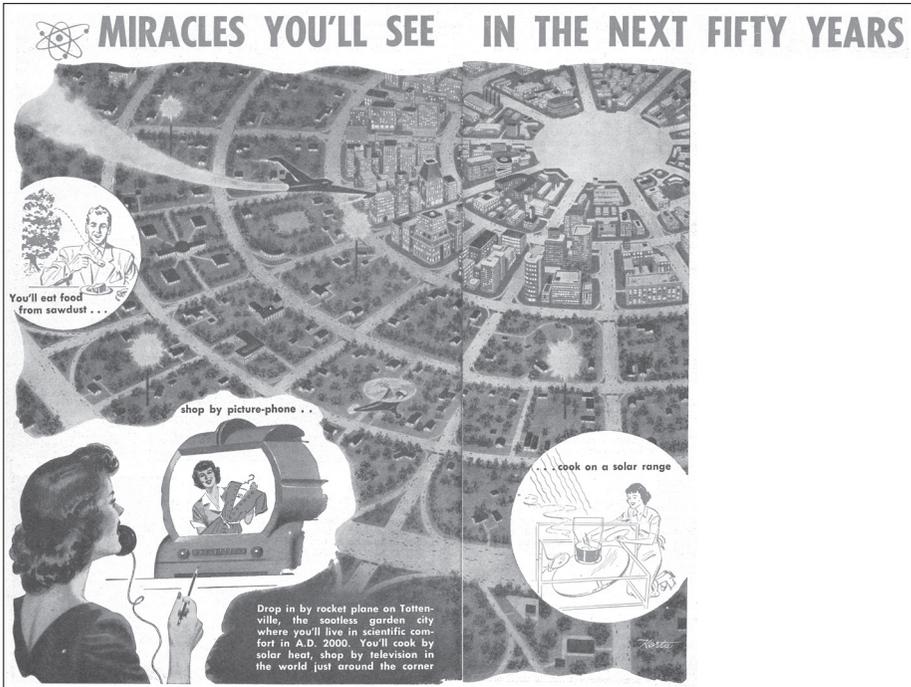


Figure 2: “Drop in by rocket plane on Tottenville, the sootless garden city where you’ll live in scientific comfort in A.D. 2000. You’ll cook by solar heat, shop by television in the world just around the corner.” Source: Waldemar Kaempffert, “Miracles You’ll See in the next Fifty Years,” *Popular Mechanics*, February 1950, pp. 112-113.

commuter plane, and insets of a man eating “food [made] from sawdust,” a woman shopping via television-telephone while being assisted by an on-screen saleswoman, and another woman cooking on a solar range (**Figure 2**).⁴³

In class, when groups present this and the Bucher articles side-by-side, the changes in historical context are clear. In the Dobson house, electricity will be a given, as with air conditioning, full plumbing, and bathrooms. But the house, despite its eight rooms, is surprisingly cheap—only \$5,000, thanks to the mass-produced components that will have gone into its construction. The house will draw power from solar cells, while in other, less sunny parts of the world, huge atomic power plants will supply electricity. “Electric suns” towering 200 feet above the ground will provide illumination, while atomic ocean liners will ply the world’s seas.”⁴⁴

In this prediction of the future, students can easily identify the enthusiasms and anxieties of the 1950s. Concerns about environmental limits seemed few: “No body in 2000 sees any sense in building a house that will last a century.”⁴⁵ Enthusiasm for the prospects of atomic energy were mixed with seething trepidation about a future on the brink of nuclear war.⁴⁶ Mass-produced homes, like those of Levittown, signaled the full incorporation of mass production into the domestic sphere. A solidifying consumers’ society provided a market for the wartime production capacities of the United States following the end of World War II.⁴⁷ The new, but sadly already congested highways, had led to ever expanding suburbs, setting the stage for an America dominated by the automobile.⁴⁸

Meanwhile, inside the house of the future, many things will have changed as well. “Everything about the Dobson house is synthetic in the best chemical sense of the term,” Kaempffert notes, and these technologies create time savers for Jane Dobson.⁴⁹ While for Bucher, the electric dishwasher was a centrally important indicator of “progress,” for Kaempffert, no dishwasher will be needed at all. Instead, “housewives in 50 years may wash dirty dishes—right down the drain! Cheap plastic would melt in hot water.”⁵⁰ Similarly, the electric range of Bucher’s future is a thing of Kaempffert’s past. While some “die-hards still broil a chicken,” most people, Jane Dobson included, use a microwave oven to heat pre-prepared, frozen meals.

But housework will nevertheless remain, and here students are again confronted by the juxtaposition of massive technological change and social stasis. Illustrations of men in the article include a man eating food, dissolving his beard in preparation for a trip aboard the commuter rocket plane to the office in the city, a man working on technical innovations, and a man on a construction site. Illustrations show women, on the other hand, preparing food, shopping and selling via television, dissolving dirty dishes, and involved in daily cleaning of the house (**Figure 3**).

Yes, *daily*. Here, I use the opportunity to introduce students to Cowan’s argument in *More Work for Mother*—ostensibly labor-saving technologies in the home often had the paradoxical effect of increasing housework, not reducing it. To wit: in the future, new synthetic materials will make furniture durable and waterproof, thereby streamlining cleaning. In fact, it’s so easy, Jane Dobson

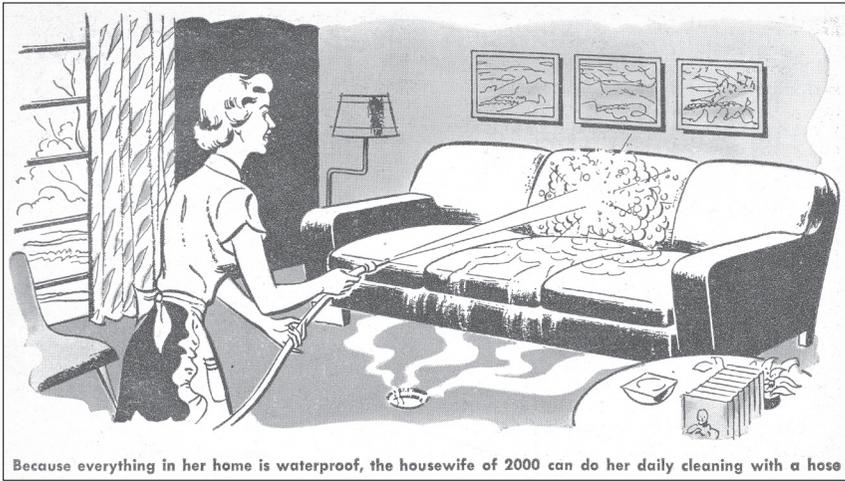


Figure 3: “Because everything in her home is waterproof, the housewife of 2000 can do her daily cleaning with a hose.” Source: Waldemar Kaempffert, “Miracles You’ll See in the next Fifty Years,” *Popular Mechanics*, February 1950, p. 118.

will be able to do it every day: “Because everything in her home is waterproof, the housewife of 2000 can do her daily cleaning with a hose.”⁵¹ When she is done, “Jane turns on a blast of hot air and fries everything. A detergent in the water dissolves any resistant dirt.... Jane Dobson throws soiled ‘linen’ into the incinerator. Bed sheets are of more substantial stuff, but Jane Dobson has only to hang them up and wash them down with a hose when she puts the bedroom in order.”⁵² The result: Jane Dobson, living in a technological wonder, will be able to clean house every single day.

As with Bucher’s article, students are once again presented with an upending of the technological utopian narrative identified by Segal, that of social progress through technological advancement. Instead, social stasis is juxtaposed with technological advancement, highlighting how technologies can ultimately perpetuate or reinforce hierarchies, rather than change them.

Bellamy’s “Martyrs” to Housework

In the *Technology and American Culture* course, the novel *Looking Backward* underpins the section on “technological enthusiasm,” which focuses on the nineteenth century.⁵³ The novel

captures the era's enthusiasm for the capacity of technology to bring about utopia. Students spend five class meetings discussing *Looking Backward* in small groups, in conjunction with other primary and secondary sources.

The second-best-selling book of its time (after *Uncle Tom's Cabin*), this technological utopia concerns Julian West, a Bostonian born in 1857 who "was rich and also educated, and possessed, therefore, all the elements of happiness enjoyed by the most fortunate in that age...[he] derived the means of [his] support from the labor of others, rendering no sort of service in return."⁵⁴ West was profoundly uncomfortable with his social and economic position, yet as someone who had never really done anything beyond collect interest, he was unsure what to do about it. On an evening in 1887, West fell into a deep trance, induced by a quack on whom he relied to overcome a persistent, guilt-ridden insomnia. West awakens in the year 2000.

The novel takes the form of long conversations between West and Dr. Leete, a retired physician of the future who lives at West's former address. In the fictional year 2000, West also makes the acquaintance of Dr. Leete's daughter, Edith, with whom he falls in love, and who is later revealed to be the granddaughter of his now long-passed former fiancée, also named Edith. In the course of the novel, Leete tells West about the gamut of social progress—portrayed by Leete as the logical evolution of industrialization—achieved since the "barbarous" 1880s. The world of 2000 is an ode to the utopian possibilities of technology, and Leete describes to an astounded West the centrally planned organization of the nation's labor army, the nationalization of all industries, the elimination of war between nations, the rationalization of production and consumption, and the vanquishing of want.

Here, students encounter the central role that technology plays in American utopian narratives—and the domestic sphere has not been overlooked.⁵⁵ Indeed, Leete outlines the complete reorganization of housework that has taken place since the nineteenth century. Housework has been fully incorporated into the nationalized, public, paid economy, and women no longer spend their time and energies on cleaning and cooking. Instead, families eat at neighborhood cafeterias, where a professional—and financially compensated—staff devote themselves to the preparation and serving of meals such that the rest of society may devote themselves to other areas of work.⁵⁶

Similarly, nationalized, professional house cleaners have absolved women of the Sisyphean toil of ridding the house of dust. West's response: "What a paradise for womankind the world must be now! In my day, even wealth and unlimited servants did not enfranchise their possessors from household cares, while the women of the merely well-to-do and poorer classes lived and died martyrs to them."⁵⁷

Or is the paradise so complete? Later, West returns to the topic: "I suppose that women nowadays, having been relieved of the burden of housework, have no employment but the cultivation of their charms and graces." Leete replies, "So far as we men are concerned, we should consider that they amply paid their way, to use one of your forms of expression, if they confined themselves to that...but you may be very sure that they have quite too much spirit to consent to be mere beneficiaries of society, even as a return for ornamenting it." Instead, women work, but "under no circumstances is a woman permitted to follow any employment not perfectly adapted...to her sex."⁵⁸ From these restrictions on work flow a series of others: since women are not permitted to be full members of the national labor army, and since political involvement is predicated on this membership, women are limited in the offices they may hold and the topics on which they may vote. Leete explains that since so many questions of government revolve around production and work, only someone who has been centrally involved in the economy can be fit to govern it.⁵⁹

The striking sexism and prejudice in these statements is made all the starker by the fact that Leete and West clearly think these are truly revolutionary advancements. They see true progress, and the true emancipation of women. That women have been moved from one pigeon-hole—that of the kitchen—to but another—an "*imperium in imperio*" of a political underclass seems entirely lost on Bellamy and his characters.⁶⁰ In class, students are often outraged at Bellamy's sexism, and some have suggested that even if other aspects of Bellamy's future were laudable, Bellamy completely impeaches himself with these passages. Needless to say, by today's standards, Bellamy was a person with hopelessly outdated attitudes towards the question of gender equality, unable to imagine his way out of his contemporary prejudices. And just as Leete looks upon the capitalists of the 1880s as "barbarous," so too does he appear to the present-day reader to be from an equally benighted past.

In class, I use this moment as a way to teach about the related concepts of historical perspective and historical contingency. Historical perspective, or the ability to view the past on its own terms, as our historical actors would have viewed their own lives, is an essential skill for historians and history students. It is, at the same time, incredibly difficult to teach. After all, asking a student to forget that they know how the story “ends,” so to speak, and to not apply present-day standards to historical circumstances, can be very difficult.

Predictions of the future that highlight changing meanings of ideals such as progress or equality, are a concrete way to do this. The key lies in the fact that *Bellamy and his audience clearly believed that Looking Backward represented unimaginable progress towards gender equality*. But how could this be the case if the inhabitants of the fictional year 2000 continued to pull a coach, not of economic exploitation but rather of sexism and gender hierarchy? In class, I ask the following question:

First, consider why Bellamy’s portrayal of the role of women in *Looking Backward* is troubling to us, as outsiders in the real twenty-first century, looking backwards on his work published in 1888. Then, put yourself in Bellamy’s shoes, and describe why he, and his readers, thought that his portrayal of women in his fictional year 2000 was such a revolutionary improvement.

Here, I acknowledge students’ disapproval of Bellamy’s portrayal of women, but at the same time to encourage them look from Bellamy’s perspective. Indeed, for Bellamy and his nineteenth-century readers, the condition of women in 1880s was so awful that his description of the year 2000 seemed all but unimaginably utopian. Throughout the book, Bellamy’s focus was *economic* servitude, and in line with this concentration, it was the socioeconomic aspects of domestic work that were paramount to him. His focus on professionalized dining and cleaning services were outgrowths of this economic orientation. That Bellamy overlooked the underlying issue of the deep-rooted presumed inferiority, while not to be excused, may be understandable *in their historical context*, given what he and his readers perceived as the overwhelming economic issue. Bellamy’s imagination of the future, in other words, constrained as it was by his own time *and yet simultaneously* perceived as so revolutionary, forces students in *Technology and American Culture* to directly

confront their own presentism in their interpretation of the past (see **Figure 4** for sample student responses).

For some students, an interpretation that places a heavy emphasis on historical perspective is troubling because it seems to suggest that the meaning of ideals such as progress, equality, even freedom, are relative and changing, rather than universal and timeless. Can we, in other words, honestly call Bellamy's future one in which there is equality (based on his understanding of it, which is different from our own), or do we condemn it as one that does not meet a universal definition? In open, whole-class discussion, students have represented both points of view, arguing on the one hand that equality means something that is universal and unchanging outside of history, and on the other hand that equality is an ever-changing, historically contingent idea. Contingency and the related concept of relativism—that even grand ideals are historically and culturally situated and, therefore, partial and changing—can be a difficult concept to develop in a class. By explicitly juxtaposing time periods and their understanding of particular ideals, predictions such as those in *Looking Backward*, and to a lesser but still significant extent, the articles in *Popular Mechanics*, offer a concrete basis for this complex and theoretical discussion.

Conclusion: Sexism? Look over there, a rocket ship!

Students in my honors seminar, *The Future*, write their final paper on a broad question:

Why, in predictions about the future, do some things change, while other things remain the same? In the books that we've read this semester, some massive changes occur; at the same time, other things remain quite static and familiar. In your essay, discuss what causes change to happen in some area of the human experience, and why change seems to bypass others.

Here, several of my students pointed back to Kaempffert's article in *Popular Mechanics*, where the durable persistence of gender roles and the dizzying pace of technological change are strikingly juxtaposed. Social structures, they argued, relating to the question of who can—and who cannot—exercise power, seem slowest to change. Gender hierarchy and the gendered division of labor are prime examples. On the other hand, technological change, even

Sample Student Responses

In some ways you can judge Bellamy by our current standards for women, but you also have to look at the context of which these roles were written. We can look at them and say that this is not a fair representation of women and how they can contribute to society. But we also need to be able to look at what the lives of women were like when the book was written...Compared to 1888, Bellamy's fictional women were much more empowered....

As a group we discussed how Bellamy's perspective on these improvements differed from our own perspective. At the time of publication...women were treated very differently, lesser than men, and denied many rights. Bellamy suggests that his futuristic era contains improvements for women in society, and he may have a point. However, our group looked at these improvements with some distaste. Bellamy seems to suggest a society of men and women that is separate but equal, much like the society of the early 20th century concerning whites and non-whites within the United States...As we know and understand today, those standards are not acceptable, and a separate but equal society for blacks/whites, men/women, etc. does not promote equality. Bellamy promotes the role of women in society in *Looking Backward*, but to suggest that women are treated equal to men is not a fair statement to make.

Bellamy's portrayal of the year 2000 is troubling to us because it is not as progressive as Bellamy wants to believe....It is odd to see Bellamy describing the perfect society yet offering so little attention to half of humanity. But I think we can only judge Bellamy on the standards of his time period. To judge him in this time period does not accurately represent what could have been.

There are many problems with Bellamy's depiction of women in his novel. He clearly portrays men as the stronger sex, keeping women in the same inferior position that they held in the 1800s when he wrote the novel. He reinforced gender roles by designating the easier jobs to women and giving the harder jobs to men....Although Bellamy's sexist depiction of women can be easily criticized from today's standards, we have to keep in mind that this novel was written in the 1800s...Bellamy's depiction of women was meant to be progressive, and it is safe to say that compared to the standards of his time, it is pretty out there.

Although at first glance, it may seem as though Bellamy is stating that women and men are treated equally, further analysis of the text illustrates that this is not the case. In fact, many inequalities between men and women are depicted...The women work in less grueling circumstances, for fewer hours, and are given more time off. Is this out of kindness or does this stem from notions of inferiority? I argue the latter...However, in the eyes of Bellamy in 1888, these seem to be like radical improvements for women. In contrast to the 1980s, these women, although segregated, still had a place in society with opportunities denied to their predecessors....Although there are still echoes of anti-feminism in the corporate world, women today have surpassed the expectations of Bellamy....

Figure 4: Sample student responses from the *Technology and American Culture* course.⁶¹

when dramatic, seems to be more easily imagined and brought to fruition. It is indeed a sobering thought that it may be easier to build a rocket ship, or, for that matter, to reorganize the global economy, than it is to address deep-rooted sexism.

Granted, *Popular Mechanics* is not the right place to look for radical new visions of social (re)organization. It is, after all, a publication aimed squarely at “boys and their toys,” and in this sense, I freely admit to stacking the deck for didactic purposes.⁶² But at the same time, far more radical visionaries such as Bellamy still seem to be rooted firmly in taken-for-granted social hierarchies, even as the technological surroundings experience utopian upheaval. In a similar fashion to *Popular Mechanics*, Bellamy’s focus on the radical reorganization of housework to take full advantage of the techno-industrial developments led him to overlook how difficult it is to change the underlying prejudices that were the cause of the problem in the first place. Indeed, I suggest to my students that focusing on “revolutionary” technological change can at times even *distract* from underlying social problems.

As predictions of the future, my examples are clearly flawed. Yet it is in these flaws that historical predictions are such a powerful pedagogical tool. In addition to illustrating how a person’s context and perspective shape their outlook, these predictions clearly show students how the idea of “progress” is far from uniform, monumental, or even given. Things can “progress” leaps and bounds for some, while for others, nothing changes at all. What was “progress” then is not “progress” today, and will likely not be what it is tomorrow. And perhaps most importantly, in these predictions’ flaws, students see the importance of exploring the past on its own terms.

And a final utility of teaching with historical predictions, for members of the only profession in existence that dislikes peering into the future: predictions deserve a place in our classrooms because they show students decidedly that, in terms of what they actually tell us about the future, predictions are all but worthless.

Notes

I would like to thank Lois Hendrickson and L. Arvid Nelson for generously hosting my classes in their archives. Thank you, as well, to my graduate student instructors in *Technology and American Culture*, Kristina Cernekova, Emily Higgins, Margaret Hofius, Jieun Shen, and William Vogel.

1. "Housework and Machinery," *Harper's Weekly*, August 1905, 1113.
2. Edward Bellamy, *Looking Backward, 2000-1887* (New York: Dover Publications, 1996 [1888]).
3. James B. Schick, Fred B. Misse Jr., and David A. Hackett, "'The Future as History': An Experimental Approach to Introductory History for the General Student," *The History Teacher* 7, no. 2 (February 1974): 220-227.
4. Schick, Misse, and Hackett reference C. Vann Woodward's 1969 American Historical Association presidential address.
5. Schick, Misse, and Hackett, "The Future as History," 221-222.
6. *Ibid.*, 222.
7. H. G. Wells, "Foretelling the Future," in *Pulsar*, ed. George Hay (New York: Penguin, 1978), 171.
8. Mike Davis, *Ecology of Fear: Los Angeles and the Imagination of Disaster* (New York: Metropolitan Books, 1998), 275.
9. *Ibid.*, 281.
10. *Ibid.*, 282.
11. *Ibid.*
12. Jamie L. Pietruska, "Propheteering: A Cultural History of Prediction in the Gilded Age" (Ph.D. diss., Massachusetts Institute of Technology, 2009), 34.
13. Pietruska, "Propheteering."
14. *Ibid.*, 10.
15. Joseph J. Corn, *Imagining Tomorrow: History, Technology, and the American Future* (Cambridge, MA: MIT Press, 1986).
16. *Ibid.*, 221.
17. Merritt Roe Smith and Leo Marx, *Does Technology Drive History?: The Dilemma of Technological Determinism* (Cambridge, MA: MIT Press, 1994).
18. Howard P. Segal, *Technological Utopianism in American Culture* (Chicago, IL: University of Chicago Press, 1985), 1.
19. *Ibid.*, 8.
20. Bellamy, *Looking Backward*; Philip K. Dick, *Do Androids Dream of Electric Sheep?* (New York: Del Rey, 1996).
21. Some of these themes, and the general importance of science and technology in American history, are discussed in J. L. Heilbron and Daniel J. Kevles, "Science and Technology in U.S. History Textbooks: What's There—And What Ought to Be There," *The History Teacher* 21, no. 4 (August 1988): 425-438.
22. See, for example, Caroline Davidson, *A Woman's Work Is Never Done: A History of Housework in the British Isles, 1650-1950* (London, United Kingdom: Chatto & Windus, 1982); Redmer Yska, *A Woman's Place: Good Wives, Happy Husbands and Why a Woman's Work Is Never Done* (Auckland, New Zealand:

Penguin, 2012); Ruth Schwartz Cowan, *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave* (New York: Basic Books, 1983).

23. Charles F. Thwing, "How Shall I Educate My Daughter?" *Harper's Weekly*, May 14, 1904, 762.

24. Henry Chase Hill, *Universal Book of Knowledge and Wonders: The Marvels of Modern Industry and Invention, the Interesting Stories of Common Things, the Mysterious Processes of Nature Simply Explained* (New York: International Institute, 1917), 200-201.

25. Harry W. von Loesecke, "Kitchen Revolution," *Technology Review*, February 1957, 203.

26. *Ibid.*, 202.

27. Cowan, *More Work for Mother*.

28. Corn, *Imagining Tomorrow*, 224.

29. George H. Bucher, "The Electric Home of the Future," *Popular Mechanics*, August 1939; "Your Home of the Future," *Popular Mechanics*, October 1943; Waldemar Kaempffert, "Miracles You'll See in the next Fifty Years," *Popular Mechanics*, February 1950; Carson Kerr, "At Home, 2004 AD," *Popular Mechanics*, October 1954; "Kitchen of the Future Has Glass-Dome Oven and Automatic Food Mixer," *Popular Mechanics*, April 1956; Gregory T. Pope, "Cooking Up The Future," *Popular Mechanics*, October 1993.

30. See <books.google.com/books/serial/BtEDAAAAMBAAJ>.

31. Bucher, "The Electric Home of the Future."

32. *A Warning from the Edison Electric Light Co.* (New York: Edison Electric Light Company, 1887); Lindy Biggs, *The Rational Factory: Architecture, Technology, and Work in America's Age of Mass Production* (Baltimore, MD: Johns Hopkins University Press, 1996).

33. U.S. Census, *Historical Statistics of the United States, Colonial Times to 1970* (Washington, D.C.: U.S. Department of Commerce, Bureau of the Census, 1975), 826; Countries with higher percentage of rural electrification included Germany, France, Netherlands, Denmark, Japan, New Zealand, and Ontario, Canada; Robert T. Beall, "Rural Electrification," in *Yearbook of Agriculture* (Washington, D.C.: U.S. Department of Agriculture, 1940), 791.

34. "National and REA Ownership of Appliances, 1940," from Ronald R. Kline, *Consumers in the Country: Technology and Social Change in Rural America* (Baltimore, MD: Johns Hopkins University Press, 2000), 295.

35. Bucher, "The Electric Home of the Future," 163.

36. *Ibid.*, 165.

37. *Ibid.*, 162.

38. *Ibid.*, 163.

39. *Ibid.*, 161.

40. *Ibid.*, 163.

41. Kaempffert, "Miracles You'll See in the next Fifty Years."

42. *Ibid.*, 113.

43. *Ibid.*, 112-113.

44. *Ibid.*, 113, 114.

45. Ibid., 116.
46. On the highway and car, see Lewis Mumford, *The Highway and the City* (Westport, CT: Greenwood Press, 1981); on nuclear enthusiasm and anxiety in the 1940s and 1950s, see Paul S. Boyer, *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age* (New York: Pantheon, 1985).
47. On Levittown and suburbs, see Adam Ward Rome, *The Bulldozer in the Countryside: Suburban Sprawl and the Rise of American Environmentalism*, (New York: Cambridge University Press, 2001); on consumption, see Lizabeth Cohen, *A Consumer's Republic: The Politics of Mass Consumption in Postwar America*, first ed. (New York: Knopf, 2003).
48. For a contemporary critique of the automobile, highway, and suburban landscape, see Mumford, *The Highway and the City*.
49. Kaempffert, "Miracles You'll See in the next Fifty Years," 115-116.
50. Ibid., 117.
51. Ibid., 118.
52. Ibid., 116.
53. Bellamy, *Looking Backward*.
54. On the success of the novel, see Pietruska, "Propheteering," 177; Bellamy, *Looking Backward*, 3.
55. On the novel as a technological utopia, see Segal, *Technological Utopianism in American Culture*.
56. Bellamy, *Looking Backward*, chapter 13.
57. Ibid., 58.
58. Ibid., 124-125.
59. Ibid., chapter 25.
60. Ibid., 125.
61. Many thanks to the students who granted permission for excerpts of their responses to appear here. I have edited the responses for length and clarity.
62. Roger Horowitz, *Boys and Their Toys? Masculinity, Technology, and Class in America* (New York: Routledge, 2001).

Appendix A

Abridged Syllabus for *Technology and American Culture*

Introduction

Listen long enough to the speeches of any politician in the United States, in almost any period in U.S. history, and a common theme emerges: America is a land of innovation; technology is part of the American DNA; technological progress—and along with it, American progress—is all but foreordained. And while it is best never to blindly take politicians at their word, what is undeniably true is that the ideology of America as a country and nation built on technology, and of American culture as being tightly linked to technologies such as the Internet and the automobile, are etched deeply into the American psyche.

But is the relationship between technology and American culture so straightforward? And if not, what are the relationships, and how have they changed over time? In this course, we will focus on three tropes concerning the relationships between technology and American culture that correspond roughly, but not exactly, to three periods in American history. In the first, we will look at the tensions between the ideas of colonial and early America as a land of technology, on the one hand, and a natural wonder, on the other. We will then discuss technological enthusiasm and the ideology of technological progress in America during the 19th century. Finally, we will investigate a countervailing concern and increasingly prevalent anxieties about the negative impacts of technologies on our culture and selves that emerged in the course of the 20th century. Throughout, we will focus on the narratives, or stories, that people tell about technology to help make sense of its cultural life.

Core Readings

Bellamy, Edward. *Looking Backward: 2000-1887*. Boston, MA: Ticknor and Company, 1888. (Public domain full PDF: <hdl.handle.net/2027/osu.32435017664061>)

Buchanan, Nicholas. *Mechanized Mills and Machines that Think: Technology and Culture in American History*. San Diego, CA: Cognella, 2016.

Dick, Philip K. *Do Androids Dream of Electric Sheep?* New York: Del Rey, 1996 [1968].

Marx, Leo. *The Machine in the Garden: Technology and the Pastoral Ideal in America*. New York: Oxford, 2000 [1964] (optional).

Other readings and films are listed within the syllabus.

Lecture Topics

Unit 1: Questions to Think With

1. Interpreting Everyday Technologies: What Can Salad Dressing Tell Us About Technology and American Culture?
2. What Is Technology?
Reading: Langdon Winner, "Do Artifacts Have Politics?" *Daedalus* 109, no. 1 (Winter 1980): 121-136.
3. What Kinds of Stories Do People Tell About Technology in America?
Short films: Dwight D. Eisenhower, "Farewell Address," 1961; John F. Kennedy, "We Choose to Go to the Moon," 1962.
Reading: Harry M. Collins and Trevor Pinch, "A Clean Kill? The Role of the Patriot in the Gulf War," in *The Golem at Large: What You Should Know about Technology* (New York: Cambridge University Press, 1998), 7-29.

Unit 2: Ambivalence (main reading: Buchanan; Marx)

4. Colonial Encounters.
5. Commodifying the Land.
6. The Agrarian Mythology, Yesterday and Today.
Short film: Dodge Trucks, "Advertisement: So God Made a Farmer," Superbowl 2014 (www.youtube.com/watch?v=H7yZdOI_e_c).
7. Canals for the Republic.
8. Manufacturing a Nation.
9. Railroads and "American Progress."
10. Annihilating Time and Space.

Unit 3: Enthusiasm (main readings: Buchanan; Bellamy)

11. What is Industrialization and was there an Industrial Revolution?
12. Stories of Industrialization and Interconnectedness (the Office, the Mail, and the Telegraph).
13. Making Mass Markets and Mass Culture: The Industrialization of Consumption.
14. Electrification as a Social Technology.
15. Electrification in the Home, the City, and the Factory.
16. Modernizing the Countryside.
17. Primary Source Activity: "The Kitchen of Tomorrow."
18. The Second Creation and the Improvement of Nature.
Short film (at home): Pare Lorentz, "The River," 1938.

Unit 4: Anxieties (main reading: Buchanan; Dick)

19. Factory Foods and Mystery Meats.
Short film (at home): Pare Lorentz, "The Plow the Broke the Plains," 1936.
20. The Devil Wagon, a.k.a., the Automobile.
21. Suburbs: Nowhere in Particular.

22. Life and Death in the Age of the Atom.
23. Networked Identity.
24. Archival Trip to the Charles Babbage Institute: “Gender and Information Technology.”
25. Throw it Away.
Film (in class): Cosima Dannoritzer and Steve Michelson, *The Lightbulb Conspiracy*, 2010.
26. Replaced by Robots: Automation, Work, and Leisure.
27. Technology and our Future.

Appendix B

Abridged Syllabus for *The Future*

Introduction

What will the future bring? Will the years, decades, or even centuries to come bring prosperity or despair? A technological utopia or an apocalypse? Unbounded freedom or enslavement? For numerous writers, filmmakers, and thinkers, questions about the future of humanity have inspired works of speculation that touch on every imaginable aspect of the human condition. In this course, we will explore the future—in novels and films—as a way to understand the past, especially the cultures, concerns, and preoccupations of the places and times where these futures were imagined. In particular, we will examine how these sources can illuminate changing enthusiasms and trepidations about the cultural meanings of science and technology; the specter of science and technology out of control; the concerns about religion in an age of cold rationality; the ways that technology can be used to oppress or emancipate; and the relationships among science, technology, and the military. Starships, intelligent machines, and aliens will also be discussed.

Core Books

Wells, H. G. *The Island of Doctor Moreau: A Possibility*. New York: Stone & Kimball, 1896. (Public domain full PDF: <archive.org/details/islandofdoctormo00welluoft>)

Huxley, Aldus. *Brave New World*. New York: Harper Perennial Modern Classics, 2006 [1932].

Dick, Philip K. *Do Androids Dream of Electric Sheep?* New York: Del Rey, 1996 [1968].

Sagan, Carl. *Contact*. New York: Pocket Books, 1997 [1985].

Other readings and films are listed within the syllabus.

Units, Readings, and Activities

Unit 1: What Can the Future Tell Us About History?

- Primary reading: Mike Davis, “The Literary Destruction of Los Angeles,” in *Ecology of Fear: Los Angeles and the Imagination of Disaster* (New York: Metropolitan Books, 1998), 273-355.
- Supplemental readings: Howard P. Segal, “The Technological Utopians,” in *Imagining Tomorrow: History, Technology, and the American Future*, ed. Joseph J. Corn (Cambridge, MA: MIT Press, 1986), 199-136.

- Primary Source Activity: U.S. Defense Department 1971 memo, “Is Technology Good or Evil? Will Science Bring Promise or Peril?” (in class).

Unit 2: Humans, Other Animals, and the Ruthless Science

- Primary reading: Wells, *The Island of Doctor Moreau*.
- Supplemental readings: H. G. Wells, “Foretelling the Future,” in *Pulsar*, ed. George Hay (New York: Penguin, 1978).
- Primary Source Activity: Visit to the Wangensteen Library for the History of Medicine and Biology: “Vivisection and the Accountability of Science.”

Unit 3: Biology and Control

- Primary reading: Huxley, *Brave New World*.
- Films: Andrew Niccol, *Gattaca*, 1997; George Lucas, *THX-1138*, 1971.
- Primary Source Activities: Hiram Maxim, “The Next War,” in *Popular Mechanics* (1936) (in class); Visit to the Wangensteen Library for the History of Medicine and Biology: “Eugenics, Coercion, and the Authority of Science.”

Unit 4: There is Less Separating You and Machines than You Think

- Primary reading: Dick, *Do Androids Dream of Electric Sheep?*
- Supplemental readings: David Stevens, *The Role of the Microcomputer in the Demise of Western Civilization* (Berkeley, CA: Lawrence Berkeley National Laboratory, 1979); A. M. Turing, “Computing Machinery and Intelligence,” *Mind*, New Series, 59, no. 236 (October 1950): 433-460. Film: John H. Else, *The Day After Trinity*, 1981.
- Primary Source Activities: “Is Your Classmate an Android? or, Design a Turing Test” (in class); Visit to the Charles Babbage Institute for the History of Information Technology: “The Cold War and Technology Out of Control.”

Unit 5: Big Science, Faith, and Gender in the Cold War

- Primary reading: Sagan, *Contact*.
- Film: Spike Jones, *Her*, 2013.
- Primary Source Activity: Visit to the Charles Babbage Institute for the History of Information Technology: “Faith in Technology.”

Appendix C

Assignment handout for *The Kitchen of Tomorrow: Does Technology Always Bring Progress for All?*

Introduction

Predictions about the future surround us, from weather forecasts to election calling. Some are dire, such as predictions about the effect of sea level rise on coastal communities. Some are whimsical, such as predictions about fashions and trends in the coming season.

One of the most common types of prediction are those that tell narratives of progress through technological advancement and purport to reveal the social and cultural impact of “revolutionary” technologies.

In this exercise, you will work in groups and then with the whole class to cast a critical eye on claims about the impact of “revolutionary” technologies, and, in particular, revolutionary kitchen and household technology. What sort of change do “revolutionary” technologies promise, and then really bring? Does social change necessarily follow technological change? Can a “revolution” for one person mean stasis for another?

Directions

First, read the article assigned to your group. Next, discuss some (not all) of the following questions within your group. We will then open the floor to a class-wide discussion, in which we will first present the articles and begin to draw connections between them.

As you are reading the articles, ask yourself some of the following questions:

1. Who is the author? Why is the author writing this particular article?
2. Who is the audience? What do you think the audience reception might have been?
3. What sorts of things does the author think (explicitly or implicitly) will change?
4. What sorts of things does the author think (explicitly or implicitly) will stay the same?
5. What contemporary concerns or problems do their predictions address?
6. What concerns that we have in the present are notably absent from these articles?
7. What problems might these technologies “solve?” “Create?”
8. Which of the author’s predictions came true? Did they have the effects predicted? What predictions went unfulfilled and what predictions resulted in alternative solutions?