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My Fair Ladies

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Introduction

One summer many years ago, I was wandering through a Manhattan flea market near Twenty-sixth Street when I spied two startling female mannequin heads. One had a face that looked like Marlene Dietrich, and the other was a woman's head with blue eyes peering provocatively out of a paper bag (plate I). Her identity was half hidden, and in her bag she seemed like a social commodity, packaged and ready to go. I loved how those artificial women seemed both eerie and magical, and the way they blurred the line between the artificial and the real.

As a photographer, I started taking images of mannequins and masks, not stopping to think about why I found them so intriguing. Later, I realized that I had grown up in a world where women were expected, at times, to be artificial, to put on a mask. I had come of age in the late 1950s and early 1960s, the same period when television's *Mad Men* were writing advertising copy and when young women—at least in my hometown, Chicago suburb Evanston, Illinois—were still expected not only to learn the skills of cooking and sewing but also to fashion themselves as glamorous creatures wearing bright red lipstick and contouring their bodies with girdles and uplift bras.

It was a time in America when advertisers were telling young women to turn themselves into “Living Dolls.” Maidenform earlier had great success with its “I Dreamed” campaign, offering women the allure of the artificial, the exotic, and the disguise: “I Dreamed I Was a Living Doll in My Maidenform Bra; I Dreamed I Went to a Masquerade in My Maidenform Bra.” Here was the ad's promise: if women would artificially mold and shape their own doll-like images, then glamour would surely be within their grasp. A 1955 Swisstex Girdle ad (“Be a Living Doll”) pictured a young woman in blond pigtails who was wearing a girdle and holding the strings of her own artificial double: a miniature female

Be a living doll

Every living doll wears a Swisstex girdle . . . it's the easiest way to attain that " Whistle Stopper " * figure you've always dreamed about! A Swisstex girdle moulds your every curve gently but firmly . . . gives you the maximum of control, the ultimate in comfort. Be sure and look for the tag with our 'living doll' Heidi . . . it's your assurance of new glamour. Available in girdle too.

*Whistle Stopper sizes:
SMALL • MEDIUM • LARGE
WHITE
PINK
BLACK

*Whistle Stopper price:
\$5.95

Swisstex

© SWISSTEX CO. 1955

AT FINE STORES EVERYWHERE!
FOR STORE NEAREST YOU, WRITE:

U.S.A.

1.1 Advertisement for Swisstex Girdle, 1955. By reshaping her body, this young woman marionetteer can manipulate her own image.

marionette also featuring pigtails, an uplift bra, and a girdle (fig. I.1). The look was for men, yet it offered women agency, too: they could put on the mask of glamour, look like a marionette, but also be pulling the strings.

Meanwhile, my eighth-grade cooking teacher, aptly named Miss Baker, valiantly tried to teach the girls in my class how to make soufflés and popovers for appreciative men, and my sewing teacher Miss Curtain was intent on having us master the sewing machine to produce those popular full skirts. But for me, several years later, another world was beckoning, full of glamour and allure. Right out of Harvard graduate school, I was offered two jobs in Chicago: a copywriter for Quaker Oats and a “creative trainee” at *Playboy* on Michigan Avenue. To me, no contest: I nixed the prospect of grits and oatmeal—it was *Playboy* for sure.

America was already erupting into the upheavals of the Vietnam War, the civil rights movement, and the women’s movement, but, at *Playboy*, the offices were filled with manufactured glamour and artifice was all around. Women weren’t allowed to be hired as magazine writers, but as a young female copywriter in the advertising department, my job was to portray the allure of the magazine with its air-brushed female centerfolds and Playboy clubs filled with sexy bunnies and lobster bisque (I remember my boyfriend, an earnest political scientist, snorting at the absurdity of it all).

I was also expected to buy false eyelashes from the salesmen who regularly trolled the office aisles and to flirt with television executives at Hugh Hefner’s parties (but at the first overtures from one of those men, I remember fleeing to the safety of my parents’ home where I lived). *Playboy* was a magazine that fed men fantasies about compliant sexy women, but it also offered its women workers like me the promise of transforming themselves—at least on the surface—into one of those exotic artificial creatures.

It was all fun but not serious enough for an academic at heart like me and after a year I left that glamorous plastic world of *Playboy* for a return to the seriousness of graduate school. I remember reading two books that had a big impact on me, and many years later they became the genesis for this book. One was George Bernard Shaw’s *Pygmalion* where the imperious Henry Higgins, using technology, transforms the sassy “guttersnipe” flower-seller Eliza into the surface trappings of an elegant Victorian “lady.” The second was Ira Levin’s novel *The Stepford Wives* (1972), a cautionary tale of men, made uneasy by the women’s movement, who opt to replace their wives with artificial doubles—robotic females that fulfilled the men’s notion of the perfect woman: a fusion of happy domesticity and sexy playmate. My fascination with mannequins, my experiences at *Playboy*, my encounters with Shaw’s *Pygmalion* and *The Stepford Wives*, not to mention my memories of the vintage American television series *The Twilight Zone* where mannequins come to life and, years later, my seeing Gérôme’s glossy nineteenth-century academic painting *Pygmalion and Galatea* at New York’s Metropolitan Museum of Art—all contributed to the genesis of this book.



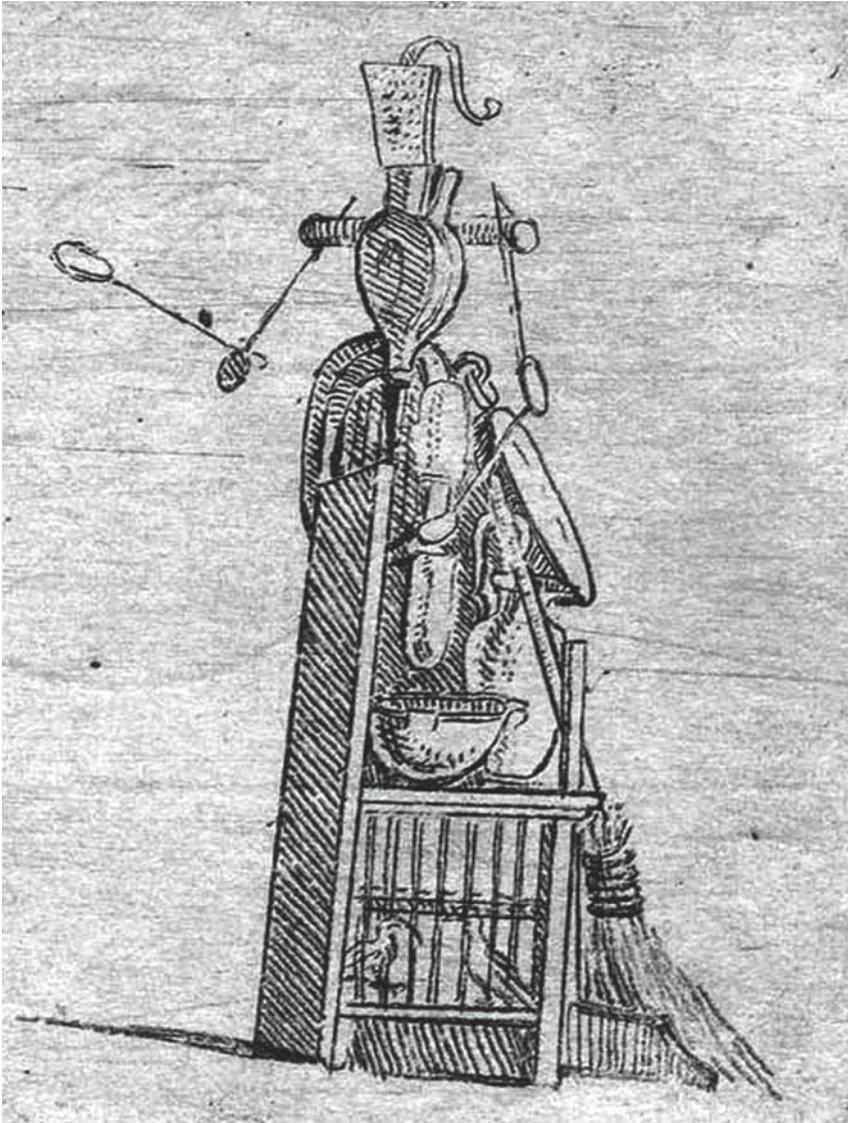
1.2 Vintage postcard. "Come along John! I can show you something better." For John, no doubt, the mannequin is better than the reality. Collection of the author.

In my first book, *Breaking Frame: Technology and the Visual Arts in the Nineteenth Century*, I had written about industrially made imitations in the arts that some had argued were superior to the real thing, and in my book *Women and the Machine* I also wrote about artificial women fashioned through electricity and nineteenth-century women who looked like stiff-walking dolls because their bodies were shaped by wired crinolines and bustles. Now I was ready to bring the two together in a broader study of how technology had been used by both women and men—in film, fiction, art, robotics—to fashion simulated women that looked like the real thing, artificial women that, like Galatea in the myth of Pygmalion, seemed to miraculously come alive.

One of the book's central themes is the story of men's enduring fantasies and dreams about producing the perfect woman, a custom-made female who is what I would call the Substitute Woman, an artificial female superior to the real thing. Twitting this idea, in a comic postcard from 1905, a small man smiles as he ogles a shop-window female mannequin wearing a red corset while his huge, matronly stern wife tells him, "Come along John! I can show you something better!" But we surmise that for John the mannequin will win hands down (fig. 1.2).

It is also a story that changes as new technologies became available and cultural perceptions of women change over time. The women that men manufacture are often articulated creatures, assemblages of disparate parts. These assemblages, which had their earliest manifestations in ancient, articulated Greek, Roman, and Egyptian female votive figures and dolls, embody socially constructed conceptions of gender and women themselves—like Italian artist Giovanni Battista Braccelli's 1624 etching of a woman in her conventional social role of domesticity whose body is composed of domestic tools (fig. 1.3).

Pygmalion began it all. In Ovid's version of the tale, a sculptor disenchanted with women creates an image of a beautiful woman and longs to marry a woman just like her, and Venus grants his wish by bringing the sculpture, which later generations called Galatea, to life. Modern-day Pygmalions have used science and technology to help accomplish the same thing. Henry Higgins in Shaw's *Pygmalion* used not only his linguist's expertise but also a gramophone, and, in the pivotal scene in James Whale's 1935 film *Bride of Frankenstein*, Dr. Pretorius unwraps their new female creation, he and Henry Frankenstein watch as her eyes open, and Henry says, "She's Alive!" Henry's melodramatic pride and excitement, which today seem campy and funny, are palpable. Here is a man who has put together a female made of dead body parts and brought to life through jolts of electricity garnered from lightning. The new female is intended as a mate for the Frankenstein's creature, the answer to his dreams, but when the new Bride takes one look at the horrendous-looking Monster, she lets out a piercing croaking scream and later runs away. The creature's fantasies, turned to nightmare when his dreams are dashed, become a central part of the modern-day mythos of men creating artificial women.



1.3 Etching of a woman composed of household tools by Giovanni Battista Braccelli in *Bizzarie di Varie Figure*, 1624. Braccelli, a Florentine artist and engraver, created a suite of fanciful figures including this assemblage of a machine-woman made of washboard, spoon, and other domestic wares.

There are other central shaping stories, too. I could call one the “Nathanael Effect” from E.T.A. Hoffmann’s nineteenth-century story “The Sandman” where the young Nathanael becomes entranced by Olympia, the beautiful “daughter” of physics professor Spalanzani, only to discover, to his horror, that she is just a doll. It was the type of confusion about the uncanny, probed by

Ernst Jentsch and Sigmund Freud, where it is indeterminate whether a being is inanimate or real. And Japanese roboticist Masahiro Mori later described in 1970 this type of unsettling experience as “the uncanny valley”—that psychic place when someone discovers that what looks animate is not really alive. In Hoffmann’s tale, Nathanael’s dreams and fantasies are destroyed as Olympia herself is grotesquely disassembled and shattered into discrete parts.

Men in tales like “The Sandman” are horrified when they discover the female is only a doll, but there were also wonderful comic inversions. In Léo Delibes’s ballet *Coppélia* (1870) and Ernst Lubitsch’s 1919 film *Die Puppe* (*The Doll*), women appropriate the look of a doll not to be manipulated but to assert their own vigorous sense of agency and control. When these women end the artifice or their masquerade is discovered, the men in these comedies are not horrified but happily delighted that their beloved is, after all, real.

Men’s Pygmalion-like fantasies about fabricating the perfect women who come alive would change over the centuries, but in some ways they also remained remarkably consistent even as cultural contexts and technologies underwent dramatic change. In the film spoofing adolescent male fantasies *Weird Science*, in *Lars and the Real Girl*, and in *Simone* (*Simone*), the Galateas created on dating websites or through digital manipulations remain the answer to men’s dreams—Substitute Women who, for a while at least, seem safer and more appealing than real women with their own identities, wishes, and wants.

Representations of artificial women would often embody gender stereotypes, but also be shaped by shifting social paradigms. The emergence of the New Woman in America and Europe at the end of the nineteenth century, the burgeoning women’s movement in the 1960s, the space race in America, all helped shaped representations of artificial women, including space age television robots like Verda in *Lost in Space* and Rhoda in *My Living Doll*—robots that were beautiful but also had minds of their own.

Embodiments of artificial women were also shaped by changing developments in science and technology, including the remarkable Swiss, German, and Chinese female automatons produced using sophisticated clockwork mechanisms in the eighteenth and early nineteenth centuries and Parisian automatons made more available through the industrialization of production in the later nineteenth century. Twentieth-century developments in plastics and electronics also shaped how women were embodied and portrayed—including the humanoid silicone and electronic Japanese female robots, starting in the 1990s, that looked so real they could easily fool the eye. One roboticist even used electronics to create a perfect female dance partner (dancing with dolls is another recurring fantasy in fiction and films).

There is a second major story that looms large in this book: how women artists, writers, photographers, filmmakers, and musicians have themselves inhabited the mythic role of Pygmalion, fashioning their own images of artificial females that imaginatively illuminate female stereotypes and the shifting nature of women’s

social identities; consider women like Dada artist Hannah Höch during the 1920s and 1930s whose fractured photographs of dolls and photcollages interrogated the way women have been perceived and upended their doll-like social roles and American photographer Cindy Sherman whose photographs of female mannequins and images of herself as society doyennes heavily masked by makeup wittily probe the role of artifice in social constructions of female identity. American sportswoman and model Aimee Mullins wearing her carbon fiber prosthetic legs and fashions by Alexander McQueen has become her own graceful, artful creation, an elegant contemporary cybernetic female.

These women artists and models have at times taken on the roles of both Pygmalion and Frankenstein, and created their own assemblages to produce lifelike artificial women—echoing an age-old practice where women salvaged pieces of fabric to create new patchwork wholes. My grandmother Tillie, who had come to America from Lithuania around 1915, pieced together old scraps from worn dresses and turned them into rag rugs—artful scrolls of rolled cloth sewn together to create something new. Mary Shelley in *Frankenstein* had Victor cobble together a creature and his potential Mate from dead body parts, and James Whale in his film *Bride of Frankenstein* did the same, with actress Elsa Lanchester playing both Mary Shelley the novelist and the Bride—a clever conflation of the artificer and the creation. Years later, American artist Shelley Jackson revisited *Frankenstein* by creating a digital female assemblage of parts in her CD-ROM *Patchwork Girl*, where a digital female with an assertive self is fabricated by participants who piece together her story.

Women filmmakers have also revisited the world of the uncanny. In writer and actress Zoe Kazan's 2012 film *Ruby Sparks*, Ruby, like Rachael in *Blade Runner*, makes the painful discovery that, although she looks real, she is just a fictive creature, an artificial fabrication in a digital world. But by the end of the film, this Galatea, who longs for independence, is allowed to abandon her creator and gain the freedom she craves. As created by Kazan, Ruby—who can cook and be sexually available and was the answer to the reclusive Calvin's dreams—turns out to thwart the role of Perfect Woman. Kazan's Ruby, like some of the more memorable artificial women in art, television series, films, and video games since the 1960s, is a virtual female who insists on giving shape to her own identity, a woman with a mind of her own.

In the pages ahead, this book will trace these two parallel stories—both men's Pygmalion-like quest to use the tools of technology to create beautiful artificial females that often mirror men's notions of perfection and women's ability to take on the role of creator to craft their own feisty females and modern-day molls and dolls. Simulated females illuminate the slippery nature of the uncanny and capture how women's cultural identities have undergone remarkable fluidity and change.



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Julie Wosk

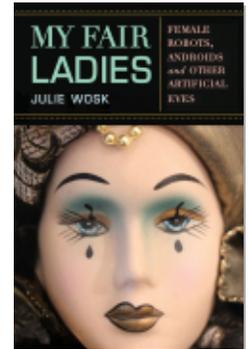
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2

Mechanical Galateas

Female Automatons and Dolls

E. E. Kellett's story "The Lady Automaton" (1901) is a fantasy tale about men who use science and technology to create an artificial female that seems alive. The beautiful automaton Amelia fits the men's notion of the perfect Edwardian-era lady: an elegant woman who behaves properly, says nothing inflammatory or irritating (actually says nothing at all), and mercifully—to the men at least—shows no signs of having a mind of her own. Amelia was a fictional character, but in 1900, just a year before Kellett's story, the Parisian automaton manufacturer Phalibois had introduced its factory-made "Gavrochinette," a mechanical lady far different from Amelia and one that upended social proprieties with her air of insouciance and her saucy stance.

Wearing a dress and sporting a beret jauntily on her head, Gavrochinette stood confidently with her hands on her hips and her legs apart; on her base a small brass plaque, in French, read, "Put a fifty-centime piece in the slot, and Gavrochinette will whistle you a tune." Winking and rounding her lips, the spring-driven clockwork creature not only whistled (the sound actually made by a flute) but also sang six different melodies, including one signifying her own modernity as a woman using a new transportation machine: the tune of "Bicycle Built for Two" (fig. 2.1).

Gavrochinette was also the name of a real-life French entertainer in Paris who performed at cabarets like the Moulin Rouge and was pictured in photographs and sheet music wearing men's clothes, with a hat perched on the back of her head. Flaunting convention, in one photo she wears a man's jacket with knickers



2.1 “Gavrochinette,” manufactured by Phalibois in Paris, ca. 1900. This insouciant coin-operated automaton whistled a tune and sang six different melodies. Nouveau Musée National de Monaco. Illustration in André Soriano, *The Mechanical Dolls of Monte Carlo*, trans. John Ottaway, texts by Antoine Battaini and Annette Bordeau (Editions Andre Sauret, Monte-Carlo and the National Museum of Monaco, American ed. New York: Rizzoli, 1985), 40.

and pink satin bejeweled shoes and has a camera hanging from a strap over her shoulder (an emblem of her modernity) and a monocle in her eye (fig. 2.2).

Amelia and the Phalibois Gavrochinette represented two very different types of European women at the dawn of a new century—the fashionably dressed,



2.2 Gavrochinette, who wore men's clothes and a man's hat jauntily on her head, was a real-life popular entertainer in Parisian caberets like the Moulin Rouge. Carrying a camera signified her modernity. Collection of the author.

well-behaved woman of the men's social set and a version of the "New Woman" with her air of nonconformity and independence. The mechanical females that seemed to magically come alive were actually part of a long technological history of articulated dolls and mechanical automatons or self-moving, mechanical humanoid figures—figures that were shaped by cultural conceptions of femininity and women's social roles.

In ancient Greece and Rome, small female figures made of clay, ivory, and even bone had articulated hands and legs fastened using pins or wire so they that they could look animated when shaken or moved. In Greece, the figures were often too fragile to be toys; instead they were used as votives or offerings to the gods placed in household shrines, temples, burial sites, and graves where they could also be protective devices or prized possessions of the deceased. Young girls offered the doll figures to Apollo, Artemis, and Aphrodite before their marriages to ensure that they would attain a healthy, functioning female body that produced and nourished children, the ideal of ancient Greek femininity.¹

The idea of automatons—self-moving female and male figures—had been around since ancient times.² The ancient Egyptians produced animated, hot air-driven statues used for religious and political purposes, and in Greece some of the oldest female figures were described in Homer's epic poem *The Iliad* where Hephaestus, the blacksmith of the gods (later called Vulcan by the Romans) is helped by two maidservants as he goes about making a shield for Achilles. In Homer's ancient Greece, women (apart from the great goddesses like Aphrodite and Athena) were largely consigned to loom and family, but Homer's description of these metallic ladies as accomplished, smart, and strong has a surprisingly modern ring: they are

all cast in was gold but a match for living breathing girls.
Intelligence fills their hearts, voice, and strength their frames,
From the deathless gods they've learned their works of hand.³

Writing about pneumatic and hydraulic devices, Philo (also known as Philon) of Byzantium (280–220 B.C.E.) described a mechanical woman who could pour wine into a cup. But mechanical servants were not necessarily female, and, almost a thousand years later, the medieval Mesopotamian engineer and mathematician al-Jazari (1136–1206 C.E.) in his treatise *The Book of Knowledge of Ingenious Mechanical Devices* envisioned proto-robotic wine servers as female or male. One of these was a girl who periodically emerged from a cupboard holding a glass of wine.⁴ In this ingenious device, when wine was poured into a chamber it passed into a glass, and then the mechanical female figure rolled down a chute and served the wine in a cup to the king. She even held a small napkin for the king to wipe his mouth.⁵ Another al-Jazari illustration pictured a woman engaged in another service role as she filled a basin with water for washing.

In Jean-Jacques Rousseau's eighteenth-century lyric drama *Pygmalion*, Galatea comes alive without any divine intervention, but during that same century skilled artisans and clockmakers used mechanics to make their automatons look like they had come alive. In eighteenth-century France and Switzerland—reflecting the widespread fascination with clockwork mechanisms and the impact of the French *philosophes* who envisioned the human body as a well-functioning machine—there was a flowering of mechanical automatons, made famous by the mechanical duck created by innovative French inventor Jacques de Vaucanson. Clockmakers produced extraordinarily complex and impressive versions of both male and female automatons made for members of the aristocracy and royalty. Seen by a wider audience in traveling public exhibitions, these automatons catered to the tastes and expectations of their owners and audiences and presented female figures at their elegant best.⁶

In an era when accomplished European women entertained groups with their musical skills, in 1784 Peter Kintzing, a watchmaker, and David Roentgen, a cabinet maker for Queen Marie-Antoinette, created an ingenious female automaton dressed in embroidered silk for the queen, which played a miniature dulcimer in the shape of a harpsichord by hitting forty-six strings with two little flat metal hammers, producing eight different melodies including “Armide” by Gluck.

One of the most impressive and elaborate of the eighteenth-century female automatons was a Lady Musician crafted in La Chaux-de-Fonds, an important center of the Swiss clock industry, by the master Swiss clockmakers Pierre Jaquet-Droz and his son Henri-Louis Jaquet-Droz, aided by the skilled technician Jean-Frédéric Leschot in 1773 (plate III). The two men also produced a boy draftsman who “drew” programmed sketches of the king and queen and a boy writer, and these automatons, which entranced and amazed viewers, were exhibited in the capitals and courts of Europe.⁷

The Lady Musician, though, was an extraordinary female automaton even in this inventive era. She played an instrument that looked like a clavecin but was actually an organ with bellows that pumped air into the pipes, and the musical compositions were probably by the son, Henri-Louis. Remarkably, the Lady Musician's fingers really played the keys (unlike other automatons in which the fingers simply follow the keys and the instrument does the playing itself).⁸ To eighteenth-century audiences, this remarkable lady looked amazing lifelike because her mechanism was hidden from view, and even today, when her key is wound, her performance is eerie and astonishing. Aided by bellows, her chest rose and fell, imitating breathing, and levers made her body move and animated her head, which turned from side to side while she played. She cast her eyes down and looked up, and, at the end of a melody, she took a little bow.⁹ (A second lady automaton created by the three men was admirably, and maybe provocatively, described as “a vestal virgin with a heart of steel” in a British advertising poster.)¹⁰

The Lady Musician was fascinatingly lifelike but sat firmly on her stool. Craftsmen, though, also continued to develop automatons that looked like they

walked. The clockwork movement was produced using hidden wheels rather than legs, as with Gianello della Torre's earlier lute-playing female. (Adapting Western clockwork mechanisms, craftsmen in eighteenth-century Japan during the Edo period also produced moving kakuri or mechanical dolls—tea servers, including female servers looked like they were walking as moved their legs and glided forward.)¹¹

One mechanical walking doll captured not only the public's attention in Europe but also the attention of eighteenth-century artists: it was called *Mademoiselle Catherina* or “*La Charmante Catin*” (The Charming Doll) in France and England. In an etching based on a drawing by Edmé Bouchardon (1737), a young woman sits kneeling on the ground as she intently watches the walking or at least forward-moving doll, and in another version by eighteenth-century French artist Charles-Nicholas Cochin the younger and engraved by Louise-Madeleine Cochin, a crowded group of people gather in a salon lit by candles on the floor as they are transfixed by the fashionably dressed walking doll, and a young woman has her arms stretched out in amazement.¹² A third print reached a much wider audience in England and America: an etching titled “*Mademoiselle Catherina*,” created in 1750 and published by Robert Sayer, was reprinted in British magazines and could even be seen much later by American readers when it was published in *Scribner's Magazine* in 1889. Here, two ladies, a gentleman, and a serving maid watch as a ragged young man entertains them on a terrace by demonstrating the walking doll while another man plays the hurdy-gurdy (fig. 2.3).¹³



2.3 *Mademoiselle Catherina*. From an original painting in Vauxhall Garden. Etching/ engraving by Robert Sayer, ca. 1750. Courtesy of the Louis Walpole Library, Yale University, New Haven, CT.

Though eighteenth-century craftsmen and artists depicted the mechanical automaton or doll as a marvel, European satirists saw nothing amusing about fashionable real-life women in eighteenth-century Europe who seemed to have turned themselves into mechanical-looking dolls and a version of artificial life. Jean Starbinski and Julie Park have argued that, during the second half of the eighteenth century in Europe, there was a fascination with dolls, puppets, and automatons, and during this period elegantly dressed women “fashioned themselves as dolls” and became the target of men’s jaundiced eyes.¹⁴ While eighteenth-century wealthy women may have been modeling themselves on dolls, however, what perhaps played a more central role in their doll-like look and stiff movements was the very nature of their exaggerated fashions, which virtually required them to walk like automatons. To support the wide, heavy, multilayered skirts of their dresses, these fashion-minded women wore highly structured undergarments—often small boxes, one on each side—made of whalebone or wood, a version of the undergarments that had earlier been called farthingales or vertingales in Renaissance Europe and panniers in the eighteenth century.¹⁵

Evoking the artificial world of Venice in the eighteenth century, Italian director Federico Fellini in his 1976 film, *Fellini’s Casanova*, created evocative scenes of the notorious lover Casanova dancing with Rosalba, a beautiful life-sized mechanical moving doll wearing an elaborate farthingale, a stiff female creature that he lovingly lays on his bed (fig. 2.4). In the film, the doll poignantly becomes a fitting partner for a man who carried around his own bird automaton and engaged in his own obsessive, mechanistic erotic escapades. He is a man living in the world of eighteenth-century Venice, a city filled with artifice and masks and whirling



2.4 Casanova dancing with the beautiful doll Rosalba in Federico Fellini’s 1976 film *Fellini’s Casanova*.

PHOTOFEST

couples dancing at masquerade balls. Years later, as an old man in Württemberg, he still clings to his memory of dancing with the captivating doll.¹⁶

The fascination with creating realistic-looking mechanical female automatons gained momentum in the nineteenth century. Mademoiselle Catherina continued to have an appeal. An actual wooden moving doll (ca. 1824) was housed in a wooden cabinet and labeled “Mademoiselle Catherina.” Orna-mented with hand-painted hair, the doll had metal lower arms, a fusee mechanism inside the skirt, and a three-wheel base, which allowed it to glide forward and move in a circular movement.

In a story published in the American magazine *The Atlantic Monthly* in 1861, however, the narrator finds an actual girl rather than the Catherina doll had a greater appeal. In “The Man Who Never Was Young,” the male narrator tells how he had been ordered by a physician to take recreation so he took a journey to Alps in the region of southeastern France, western Switzerland, and north-west Italy where he came across a group of strolling Savoyards “with a species of puppet or marionette called by these people ‘Mademoiselle Catherina.’” One of the Savoyards, a man aided by his wife, set Catherina in motion as he accom-pa-nied her dance with a song of his own while a young girl of fourteen or fifteen asked for money. The narrator found the flesh-and-blood female more fascinat-ing, for, as he wrote, he was “enchanted by this real girl.”¹⁷

Mechanized female simulacra, though, continued to have great allure in the nineteenth century, particularly as the manufacture of mechanical automatons became industrialized. During the last decades of the century the ways in which mechanical automatons and dolls were designed and manufactured changed dramatically so that they were not only more widely available but also seemed more lifelike. There were automatons manufactured in Paris in the 1860s, but, starting around the 1880s, Parisian manufacturers, including Vichy, Rouillet & Decamps, Phalibois, and Lambert, stepped up their production and, with improved techniques, produced a greater variety and number of lifelike female and male automatons and also introduced mechanical walking dolls—all artful products of the industrial age.

With their intricate hidden clockwork mechanisms, moving bodies, and bisque heads with glass and sometimes fluttering eyes, the automatons and dolls evoked a sense of wonder and magic as they seemed to come alive. Eighteenth-century European automatons were highly intricate, hand-crafted, one-of-a-kind creations produced by skilled clockmakers for a small number of wealthy owners, but, as the manufacture of automatons became industrialized in the nineteenth century, the automatons were more easily and efficiently produced by skilled French artisans in workshops. These artisans used machines for cutting several parts at once and for turning drilling, and moulding—mechanization that saved time and reduced costs. Instead of producing beautifully made and finely finished interior mechanisms, manufacturers changed their focus and worked on making the automatons move more naturalistically.¹⁸

The female figures reflected not only remarkable technological advances of the times but also dramatic shifts in the way that female automatons were portrayed during a time of transition when cultural perceptions of women were changing in nineteenth-century Europe and America. With improved production methods, manufacturers were able to produce a much wider array of female models that ranged between the conventional and the outré.¹⁹ The majority of the automatons represented women in their familiar guise as mothers, seamstresses, and fashionable members of the haute-bourgeoisie, but some were more provocative, presenting undulating exotic females for amusement and entertainment. A small number also gave hints of women's efforts at gaining equal rights and improving their status in society.

Many of the new Parisian automatons, because they were delicate, costly, and breakable, were designed as elaborate showpieces for wealthy and middle-class adults who could afford them; they were sometimes used as ornaments in sitting-rooms and offered amusing demonstrations for guests (though smaller mechanical versions were available as toys for children).²⁰ The new factory-mades were not only marketed and used for display by the wealthy middle class in France and England, but French-made automatons were also available in America by the 1880s.²¹

With this market in mind, the automatons most often presented women in familiar, domestic roles: cradling babies, working at spinning wheels, knitting, ironing, washing clothes and there was even a young girl holding her own simulacra, a baby doll.²² Here, too, were female automatons dressed in fashionable Parisian finery and women at their toilette, like a pretty 1890 Roulet & Decamps automaton seen primping in front of her boudoir mirror, powder-puff in hand. Satirizing French social manners, a Vichy female automaton of the period powders her nose, "unaware," wrote an observer, "of a large monkey dressed as a fop, who is ogling her."²³

The female automatons were usually younger women, but manufacturers also occasionally produced representations of older women, including a remarkable elderly lady, perhaps created by a French or British artisan, whose bent figure walked forward with a cane. Sometimes known as "Mother Shipton," and its French name *féé Carabosse*, the glittering metallic automaton was a jewel of a mechanism, and its glowing figure was made of chased and engraved gilt copper repousée (fig. 2.5). Although this automaton's unusual representation of an aged woman seemed like a sympathetic social portrait, it may have embodied an ancient fearsome female paradigm: the woman as witch. The English name "Mother Shipton" referred to Ursula Southel (ca. 1488–1561), a reportedly ugly prophetess born in a cave, and the French name *la féé Carabosse* suggested the evil female character in Charles Perrault's and the Brothers Grimm fairy tale of Sleeping Beauty.²⁴ Nineteenth-century mechanical women in various forms were also shaped by other female stereotypes including nagging wives and vain creatures. A clock from the Black Forest in Germany featured a stout woman



2.5 Nineteenth-century female automaton that walked forward with a cane. She was sometimes known as “Mother Shipton,” the English name of a prophetess born in a cave; in France, she was known as *la fée Carabosse*.

Photo courtesy of the Watch Museum of Le Locle, Château des Monts, Le Locle, Switzerland.

who opened and shut her mouth and waved a broomstick or switch as she scolded her husband, a cobbler, who sits hammering a leather sole.

Amid these conventional or stereotyped images of women, some of the new mechanical nineteenth-century automatons represented women seen through a dramatically different lens, suggesting that gender paradigms were being challenged and that dramatic social transformations were underway. The era of the new Parisian automatons coincided with feminist activity in France and the emergence of the cultural paradigm and fictional construct—the “New Woman” in England and America: independent, sometimes politically radical women who flaunted social conventions with their nontraditional ways.²⁵

In the early decades of the nineteenth century, a small but influential number of French women activists, including members of the Saint-Simonians—a French political and social movement—rallied for women gaining greater access to jobs, professions, and education.²⁶ The First International Congress for Women had been held in Paris in 1878, and at the 1896 Congrès Féministe International (International Feminist Congress) in Paris women rallied for greater access to education, including entrance to the premiere art and architecture school, the École des Beaux-Arts. Their efforts continued at the Congress for the Rights of Women held in Paris at the 1900 World’s Fair in Paris. In 1900, the French manufacturer Renou produced a very rare representation of what would be considered a radical woman—a musical automaton called “The Rights of Women,” a woman dressed as a “feminist advocate” in black robe, silk shirt, a cape, and black velvet cap. When wound with a key, she lowered her head, raised her lorgnette glasses to her eyes, and peered at a paper in her hand titled “Droits de Femme” (The Rights of Women), an automaton inspired by real-life females who were breathing life into stilted notions of women’s proper behavior and roles (fig. 2.6).²⁷

The Mechanical Woman and New Machines

British novelist Sarah Grand in her 1894 essay “The New Aspect of the Woman Question” wrote that “women were awakening from their long apathy” and “the day of our acquiescence is over,” but she also reassured women that “true womanliness is not in danger” and that “the sacred duties of wife and mother will be all the more admirably performed when women have a reasonable hope of becoming wives and mothers of *men*.”²⁸ In their representations of female figures, Parisian automaton makers and mechanical toy manufactures in both Europe and America seemed to similarly embrace both worlds—the comfortably familiar as well as the new.

These manufacturers gave a glimpse of a wider world opening up to nineteenth-century women with the invention of new machines. Using sewing machines, women recast notions about their limited technical abilities. Sewing machines had been introduced for factory use in America in 1851, but,



2.6 *The Rights of Women*, automaton by Renou, ca. 1900. This French *suffragiste* was a dramatic counterpoint to other female automatons in more traditional roles. Courtesy of Theriault's.

after the first family sewing machines were introduced by America's Singer Company and others in the 1850s, women showed their ability to master these machines. Soon Parisian automatons as well as small toys made in Europe and America depicted young women at work using these machines.

These representations of women at work straddled two worlds. The toys were, in part, intended to socialize young girls into their expected roles. The "Mechanical Sewing Machine Girl" advertised in an 1882 catalogue for the Erhlich Company in New York featured a little girl seated at a cabinet sewing machine; when wound with a key, she leaned forward, put the work in position, pressed the treadle and the sewing machine began to sew. She even brought the work up to examine it. For women, using a sewing machine was in many ways an extension of their conventional role as seamstress, and such work was hardly liberating—witness the many European and American women who were working in factory sweatshops and doing contracted piecework at home.

But women's ability to learn to use this technical apparatus was also seen as a sign that they had the capacity to enter a new realm: women sewing-machine users were lauded and later, during World War I, cited as indicators that women had the ability to learn other technical skills, such as using factory machines



2.7 Nineteenth-century stereograph. Wearing her knickerbockers, the lady bicyclist in this satirical image tells her husband, "Take care of the children. I'm ready for a ride."

during wartime.²⁹ Still, just as years later, in World War I and II, when advertisers reassured women they could maintain their femininity while working on machines, nineteenth-century sewing machine manufacturers felt the need to reassure women they could still be fashionable and use a machine. To appeal to consumers—and indirectly suggest this wasn't really hard work—the 1882 “Mechanical Sewing Machine Girl” advertisement noted that she was “elegantly dressed in the latest fashion.”³⁰

In Paris, new female automatons in the 1890s more directly challenged conventionality by depicting women mastering another new mechanical invention, the bicycle. Velocipedes of the 1860s and newly designed women's drop-frame safety bicycles introduced in the 1890s offered women an exciting new sense of freedom and mobility. Women bicycle riders demonstrated their expertise and countered the stereotypes of the female baffled by all things mechanical. Bicycling also promoted a move to more practical “Rational Dress”—divided skirts or pantaloony-type “knickerbockers”—which made their bicycling more comfortable.³¹

Satirists in both Europe and America, however, were quick to lampoon these cycling women, with their images of Amazonian women and their bicycles reflecting anxieties about women becoming too powerful or independent. Cartoons and photographs pictured women dressed in their knickerbockers and ready to ride off on their bicycles, leaving their husbands behind to tend to the children and domestic work—like the stereograph card of a woman in her plaid knickerbockers telling her husband, “Take Care of the Children, I'm Ready for a Ride” (fig. 2.7).

Parisian automaton-makers created mechanical female bicyclists that both celebrated as well as gently satirized women in these new roles. A Rouillet & Decamps automaton, “Bicyclist Coquette” featured a young woman wearing a satin cycling outfit (her trouserlike “knickerbockers”) whose feet turned the pedals of a two-wheeled safety bicycle as music played. Another automaton by Vichy presented a young bicyclist near a road sign indicating she was en route from Paris to Neuchâtel (fig. 2.8). One female automaton riding a tricycle wears a lorgnette (in visual images, wearing eyeglasses could be a signifier that a woman was daring, as seen in an Austrian photograph of the period where a showgirl wearing eyeglasses poses with her velocipede).³² Automatons like these became animated emblems of the modern woman mastering new machines, a woman demonstrating her independence and skill.

Exotic Women

The lady bicyclists, sewing machine users, and woman's rights representatives were all emblems of changing times, though women using sewing machines both affirmed and challenged women's familiar social roles. Another category of female automatons was simultaneously conventional and provocative. It



2.8 Automaton of a female *bicycliste* by Vichy. The road signs suggest she has come from Paris and is en route to Neuchâtel, the Swiss city where the eighteenth-century clockmakers Jaquet-Droz father and son made their famed automatons. Courtesy of the Kyoto Arashiyama Orgel Museum.

represented women who at the time were considered exotic: scantily clad and sometimes erotic female entertainers like snake charmers and dancers who delighted and amused their audiences. Women had been depicted as exotic harem figures in European paintings since the Renaissance, but with increased travel during the nineteenth century and travel through the Mediterranean area made easier through the availability of railroads and steamships, there was also an increased interest in “Orientalism” or the cultures of the Middle East and North African French colonies, including Morocco and Algeria. Paintings by artists, including Delacroix, Ingres, Gérôme, Whistler, Renoir, reflected this trend.³³

Automatons representing exotic women were also inspired by the great nineteenth-century European and American universal and colonial expositions, where mass audiences visiting colonial pavilions like those at the Paris Expositions of 1900 and, even earlier, the Paris Exposition of 1889 were introduced to “exotic” cultures depicted in exposition paintings, dioramas, and panoramas.³⁴

Capturing the allure of these Orientalist motifs, nineteenth-century French automaton makers began producing exotic dancers and female snake charmers exquisitely dressed in faux jewels and brocaded clothes. Vichy in Paris produced its “Harpiste Mauresque” (Moorish harpist), and there were also dramatic, mechanical versions of Cleopatra about to commit suicide (complete with mechanical asp), and “oriental dancers” or female snake charmers like the Rouillet & Decamps “Zulma the Snake Charmer” in 1890 (a reference perhaps, to Nala Damajanti, a “Hindu Snake Charmer” who performed at the Folies Bergère). The Rouillet & Decamps snake charmer, a woman whose body was ornamented with pearls and other faux jewelry, blew into a horn to charm the snake as her sinuous body undulated suggestively (she also represented a rare instance of an automaton that alternately appeared clothed and in the nude) (fig. 2.9).³⁵

In Shaw’s *Pygmalion*, Eliza the young Cockney flower vendor was trained by Henry Higgins to perform with automaton-like precision so she could pass for an elegant Victorian lady, but the automaton “The Flower Vendor” by Vichy (1885) was an animated mechanical marvel that captured the allure of the exotic: this dark-complexioned woman wore brocaded robes and a turban on her head, and, when wound up, her three felt “surprises” or “flowers” on the tray opened to reveal a papier-mâché monkey’s head with blinking eyes, a mechanical mouse running around, and a tiny dancing doll with a white bisque head (plate IV).

During the nineteenth century, the opening up of Japan to the West also brought a great fascination with Asian and Japanese cultures throughout Europe, called by the French *Japonisme* and reflected in the work of Impressionist and Post-Impressionist painters, including Edouard Monet and Vincent Van Gogh. Japan itself had had a long history of producing automatons, puppets, and mechanical dolls, some of which were used in theaters, homes, and religious festivals.³⁶ In a nineteenth-century woodcut print by the Japanese artist Utagawa Toyokuni (1857), a woman who is possibly the shopkeeper Oume of Sugimotoya, sits on the floor holding up a puppet of a woman in ornate dress. In Japan of the eighteenth-century Edo period, there had been a wealth of mechanical dolls and automatons, called *Karakuri Ningyo*, used as festival figures.

In nineteenth-century France and its cultural climate enthralled with the exotic, Orientalism, and *Japonisme*, French automaton makers produced their own versions of Asian women in traditional roles, including Chinese tea servers as seen through Western eyes. A “Chenoise Verseuse,” manufactured by Leopold Lambert (fig. 2.10), wore an opulent velvet silk kimono; she had a bisque head made by Jumeau and a mohair wig. When wound, she turned her head from side to side, nodded briefly, lifted a teapot, tipped it toward a glass, and moved the tray to the other hand.

These automatons of Asian women are particularly intriguing because they foreground their own status as simulations and reflect the idea of female masquerade—the wearing of camouflaging cultural masks by women. A female Japanese mask



2.9 The female Snake Charmer automaton by Rouillet & Decamps (1890), which undulated and blew a horn to charm a snake, was a rare instance of an automaton that was exhibited clothed and in the nude.

Photo courtesy of the Kyoto Arashiyama Orgel Museum.



2.10 Chinese female tea server automaton by Léopold Lambert, ca. 1900. Murtoogh D. Guinness Collection of Automatic Musical Instruments & Automata, Morris Museum, Morristown, NJ.

seller automaton (1890), manufactured by Vichy, is a richly layered tribute to Asian culture with its stylized rituals and also embodies a cultural paradox: this simulated woman herself is also a purveyor of simulation and disguise as she holds in her hand a festival mask and other masks dangle from her tray. Wearing a black wig on her papier-mâché head and dressed in a richly embroidered silk kimono, she swirls her red parasol and slowly raises the mask toward her face.

While French automaton manufacturers were presenting automatons of exotic females, they also offered up a few versions that hinted at a radical redirection. “La magicienne” by Rouillet & Decamps (ca. 1880) presented a female not only as an object of amusement and men’s desire but also as a woman with agency and power. In nineteenth- and twentieth-century magical acts (and continuing even today), female performers often served as magicians’ pretty assistants who lent their bodies to being sawed in half or levitating into the air—like the Parisian automaton of a male magician who has levitated a volunteer from the “audience,” a woman dressed in a satin crepe gown, who blinks her eyes and fans herself right before the magician, wand in hand, miraculously raises her body from her velvet-covered bench.

These women simply served as appendages to magic acts, passive females who could be manipulated and controlled. Rather than just being a passive female assistant, however, the automaton “La magicienne” took on a new role: standing in front of her table, this lady magician had agency as she waved her wand in front of three props, which were then called “surprises”—a monkey, a baby sending kisses, and a clown turning its head and sticking out his tongue. (More than one hundred years later, however, women magicians in actuality still remained an anomaly, with only a small percentage of female magicians in the entertainment world.)³⁷

Walking and Talking Dolls

During the nineteenth century, manufacturers in America and Europe also saw a different opportunity to fulfill the Pygmalion fantasy of bringing a fabricated woman to life as they stepped up their efforts to create mechanical dolls that walked and even talked.³⁸ The potency of dolls—as simulacra of women, as repositories of cultural attitudes about women themselves, as emblems of men’s fantasies about women—was embodied in these new mechanical dolls designed for children.

In the sixteenth century, Italian craftsman Gianello della Torre of Cremona had created a female doll for Charles V that was meant to look like she was walking. Fashionably dressed in linen and silk brocade, with the help of her iron clockwork mechanism she played the cittern or lute and seemed to walking in small steps as she was propelled forward by two wheels while turning her head and plucking at the instrument.³⁹ During the nineteenth century, the Madame Catharina doll also glided forth, but later in the century both American and

European doll manufacturers began using more sophisticated technology to produce mobile dolls and some that even talked.⁴⁰

These walking and talking dolls and the technology and the concept of a doll itself often suggested different meanings to men and women. For young girls, the articulated nature of dolls helped make them look alive, for they could be shaped and moved in response to young girls' imaginative fantasies and dreams. For young girls and women, the dolls were not only playthings but also models for those who wanted to emulate or inhabit the persona of a doll—those beautiful, fashionable artificial creatures that often embodied cultural ideals of femininity. To the men who invented and manufactured the dolls, their technical intricacies—the articulated, mechanical parts—often seemed to interest them the most. For nineteenth-century male inventors, the idea of creating mechanical dolls that could mimic walking and talking human beings was an enticing prospect in mechanical terms, and the mechanics of the dolls interested male observers, too.

In 1862, Enoch Rice Morrison became the first American to receive a patent for his walking doll named *Autoperipatetikos* (meaning “self-propelled” or to walk about) (fig. 2.11). The dolls had bisque heads manufactured in Germany, moveable hands and legs, and wore fashionable clothes and hooped skirts that hid their mechanisms. Because the dolls with their porcelain heads were prone to toppling, cloth heads, manufactured in the United States, were later substituted so the dolls would be less apt to get damaged.⁴¹



2.11 Autoperipateikos walking doll, 1870, invented in 1862 by Enoch Rice Morrison. Manufactured in the United States, the doll was lampooned by Oliver Wendell Holmes Sr. Photo courtesy of the Strong Museum®, Rochester, New York, 2014.

One of Morrison's Autoperipatetikos dolls garnered unlikely attention from a man who, in commenting about the doll, revealed much about his own attitudes toward anatomy, technology, and women themselves. In his essay "The Physiology of Walking," Oliver Wendell Holmes Sr., the noted American physician and professor of anatomy and physiology (and father of the Associate Supreme Court Justice Oliver Wendell Holmes Jr.), wrote about a mechanical female walking doll, a "young lady" found in shop windows and children's nurseries—a doll whose name Autoperipatetikos to him was "Homeric-sounding epithet." He wrote skeptically that the doll "professes to be this hitherto impossible walking automaton."⁴²

Holmes may have conjured up Homer's heroic epic, but his essay is filled with mockery, and his description of the doll was shaped not only by his skepticism but also his male gaze: he wrote about the doll's "golden-booted legs," which reminded him of Thomas Hood's fictional character Miss Kilmansegg, and he added that "the size of her feet assures us that she is not in any way related to Cinderella." Not only was she unbeautiful, but her mechanism was awkward: after being wound up and placed on a level surface, "she proceeds to toddle off, taking very short steps, like a child" and walks very stiffly and straight, all of which was accompanied "with a mighty inward whirring and buzzing of the enginery which constitutes her muscular system."⁴³

Miss Kilmansegg was a mean-spirited reference to British poet and fiction-writer Thomas Hood's cautionary, satiric book-length tale *Miss Kilmansegg and Her Precious Leg: A Golden Legend*. In Hood's rhymed sardonic tale, Miss Kilmansegg is the vain daughter of a banker who loses her leg and replaces it with a gold prosthesis. A haughty woman who covers herself in gold jewels, she had no part "in vulgar cares." At night, "the independent Miss Kilmansegg/ Took off her independent leg" and "laid it on the pillow beside her." She marries a scoundrel count who loses his money and murders her so he can melt down her leg—after killing her with it.⁴⁴ Holmes may be mildly misogynistic, but as a physician his cranky complaints seem to stem from the Autoperipatetikos doll's mechanical anatomy. To the physician Holmes, the doll and other automatons were just poor imitations of the actual human walking mechanism. Analyzing human walking, he portrayed it in mechanical terms: "the peculiarity of bipedal walking is, that the centre of gravity is shifted from one leg to the other, and the one not employed can shorten itself so as to swing forward, passing by that which supports the body." "This," he said, "is just what no automaton can do."⁴⁵

Very much a gentleman of late nineteenth-century America, Holmes may make snide comments about the doll's beauty and deride the social pretensions of the hapless Miss Kilmansegg, but he is also cautious about stripping away the pretence of this female doll. Although he chivalrously wishes "to spare her as a member of the defenceless sex," he adds that "it pains us to say, that, ingenious as her counterfeit walking is, she is an imposter." What Holmes the man of science finds objectionable is—ironically—that this simulacra, which others might find

a mechanical wonder, is a false representation of a doll that walks on two legs. After taking a jibe at the doll's elaborate undergarment, which required it to walk stiffly, Holmes insisted that "duty compels us to reveal a fact concerning her which will shock the feelings of those who have watched the stately rigidity of decorum with which she moves in the presence of admiring multitudes." After describing the doll's mechanical anatomy, he tells the reader the shocking "fact" that he has discovered. He conducted an "autopsy" on the doll and found the "secret springs of her action": the doll, he learns, is not two-legged but "a quadruped!"⁴⁶ Ultimately, with grave seriousness (or at least mock seriousness), he describes these "secret springs": the doll had a clockwork mechanism hidden beneath its fashionable hooped skirt, a mechanism that consisted of two sets of legs—an upper set of brass legs was connected to a clockwork mechanism, and the doll "walked" using a second pair of boot-like lower legs that were fitted into the upper set, extending from the soles of the feet. This second set of legs protruded and retracted to give the doll movement.⁴⁷

Like the Autoperipatetikos doll, the century's talking and walking dolls—including dolls by French manufacturers like François Gaultier and Jules Steiner's clockwork Bébé Parlant Automatique mechanical doll (Automatic Baby Talking Doll), which could say "Mama" and "Papa" and kicked and cried—were considered not only playthings but also mechanical marvels. For Holmes, however, the Autoperipatetikos doll was much more a mechanism than a marvel as he painstakingly deconstructed and debunked the illusion that the doll was walking on its two legs. To men like Holmes and also the men who designed and manufactured these automated dolls, they were not cultural wonders but very much machines and, more important, segmented machines assembled from articulated parts. Pointing to the gendered nature of doll production, Miriam Formanek-Brunell has argued that nineteenth-century male inventors were more preoccupied with improving the technology of dolls rather than the dolls' appearance and social function. These men, she noted, in essence viewed the dolls as assemblages of parts. The men "made dolls that resembled the sturdy machines they admired" and produced "hard, mechanized dolls" while women, who had the sewing skills, produced the dolls' dresses.⁴⁸

Looking at doll patents from 1850 to 1930, she found that inventors often "specialized in parts of dolls that had machine-like functions," such as Matthew Anderson's android-like jointed or moveable doll fingers, and that "male inventors frequently patented *parts* of dolls rather than *whole* ones." Noting that "most male inventors patented parts of doll bodies as if constructing parts of a machine," she also argued that women's bodies were "fractionalized in the hands of male inventors" and speculated that perhaps "men felt more comfortable with parts of women's bodies rather than the whole person."⁴⁹ (In the twentieth century, the element of objectification and segmentation—that is, seeing women's bodies as doll-like, to be manipulated and played with—would continue to be a central feature in men's cultural representations of woman-as-doll.)

While men were working on creating lifelike walking dolls, women in Europe and America paradoxically were complicit in making themselves look like stiffly walking dolls. During the nineteenth century, to support the heavy fabric of their voluminous skirts, women, as in the Renaissance and eighteenth century, again transformed themselves into doll-like figures by wearing structured undergarments called crinolines made of horsehair, whalebone, and later, starting in the 1860s, “cage crinolines” made of spring-steel, garments that swung when they walked (and sometimes awkwardly swung up), which made it difficult for them to walk with any grace—a phenomenon greeted with glee by nineteenth-century satirists.⁵⁰

The concept of a female doll not only conveyed a sense of prettiness and stiffness but also culturally created notions of women as delicate and fragile creatures—an idea that was rejected by an American woman physician at the beginning of the twentieth century. Denouncing the whole idea of woman as doll, Dr. Mary R. Melendy in her conservative handbook for healthy living, *Perfect Womanhood* (1906), told women sternly, “Do not get the idea that men admire a weakly, puny, delicate, small-waisted, languid, doll-like creature, a libel on true womanhood.”⁵¹

The walking dolls and French automatons of the eighteenth and nineteenth centuries had embodied the contradictions and complexities embedded in middle-class and haute-bourgeois cultural conceptions of femininity. The Parisian automatons, representing fashionable women in their ornate finery and crinolines, reaffirmed the European and American ideals of women as delicate creatures consumed with couture, and the automatons of female seamstresses and women at sewing machines reaffirmed cultural ideas of women content with their roles in the domestic sphere. But other automatons like Gavrochinette and the mechanical female bicyclists held out the possibilities of the New Woman or at least a more independent woman as model. Here were starkly contrasting views of women at the dawn of a new century: mannish New Women and sexually suggestive female snake charmers who were exotic and erotic as well.

By the early twentieth century, the manufacture of Parisian automatons had greatly declined due to fewer skilled craftsmen, and protective legislation restricting imports of French toys during the First World War.⁵² Though women themselves often continued to emulate dolls and to be represented by men as dolls in cultural imagery (in twentieth-century American slang, women were called dolls), there were also signs that important changes were underway. With the impact of Victorian dress reform and campaigns to have women adopt rational clothing, increasing numbers of European and American women had abandoned stiff crinolines and corsets as they rode their new safety bicycles, and a small number of women in cities like New York had even started, by the 1890s, becoming motorists as well.

As another sign of change, a few female characters in films would appropriate the look of dolls, not to fulfill cultural ideals of beauty and fashion but

instead—like Ossi in Ernst Lubitsch's 1919 silent film *The Doll* (*Die Puppe*)—to paradoxically gain agency and power. Like the remarkable female *magicienne* automaton, through the magic of the cinema these women would be portrayed as subverting expectations. They transformed themselves into stiff-moving dolls to gain some freedom and catch men off-guard—men, like Pygmalion, resistant to women but easily seduced by a simulation that comes alive. As we see in chapter 3, these women—extending the precedent of nineteenth-century mechanical automatons and dolls—charmingly and craftily inhabited the world of the uncanny, where it was not easy to tell if they were artificial or real.