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The Sex of the Machine: Mechanomorphic Art, New Women, and Francis Picabia's Neurasthenic Cure

INTRODUCTION

> *Almost immediately upon coming to America it flashed on me that the genius of the modern world is in machinery and that through machinery art ought to find a most vivid expression. . . . The machine has become more than a mere adjunct of life. It is really a part of human life . . .* perhaps the very soul. . . . *I have enlisted the machinery of the modern world, and introduced it into my studio.*
>
> —FRANCIS PICABIA, 1915[1]

Picabia's vision of machines as "the very soul" of human life characterizes both the eighteenth-century search for a perfect automaton as well as the late-twentieth-century tropism toward the utopian cyborg (and, per Donna Haraway's essay in this volume, the digitized wellspring of Life Itself). In this essay, however, I want to look at something considerably baser than the soul: I want to question the presumptive *sex* of the machine, the construction of "knowing" machines that are imagined to function down to the level of corporeal reproduction.

The central problem I want to examine is not the experience of living bodies as they intersect with, generate, or labor through the machine; at issue here is instead the sexing of machines in the twentieth-century cultural imaginary. It is a premise of this paper that relations of power, labor, and capital are played out in the realms of machines, men, and women on an internal and "capillary" level.[2] As in all such

capillary dynamics, the capillary level of the machinic imaginary is powerfully inflected by the differential relations of sex and gender, and it is something of a truism that technology has largely been constructed in Western society as male, which is to say, technology "expresses and consolidates relations among men."[3] At the same time, specific machines are experienced or fantasized as women, and the seductively female Android has increasingly replaced the lumbering Golems and Frankenstinian male monsters of yore. Such basic coordinates map the terrain in which I want to operate. My hope is to open the cultural imaginary of the machine to close analysis by examining a special case: early-twentieth-century artistic constructions of the female or ambiguously gendered machine.

Within this early-twentieth-century art world, I will be focusing primarily on a reading of some early works by modernist Francis Picabia (1879–1953) that reveal an instability in the role of technology in culture. Rather than a fixed relation, these show a shifting, heterogeneous, hybrid system of interconnections and productive metaphors. Much of this art emerged during Picabia's treatments for acute neurasthenia, presenting a key axis of my inquiry. Were the instabilities in the sex of Picabia's machines a *symptom* of his neurasthenia? Or were they representative of the new imaginary necessitated by the neurasthenic cure, *products*, as it were, of his temporarily medicalized identity? That Picabia's sexed machines might be hermaphroditic, homoerotic, or functionally female—sometimes at different moments, sometimes all at once—problematizes even the strategic essentialisms that would position the machine as the property of the powerful, and "nature" as the only ground on which the Other might stand. They offer possibilities lost in the later codifications of modernism, possibilities that may prove useful if explored anew today.

BINARIES: A BEGINNING

Since the turn of the century brought us Heinrich Wölfflin and modern art history, those attempting to see history in art, or art in history, reflexively use two slides; in written texts, two adjacent images serve the same purpose (Figure 1). The convenient visual binary is intended to summarize an extended historical argument, to convert the complex matrix of humans' visual culture into a linear progression that can be seen "as plain as the nose on your face." I invoke the nose advisedly, given much of the imagery we will see here—but for now let's talk about plainness.

We could play connoisseur with these photographs. One is folded, torn, heavily shadowed; the other's tonality is less developed, its identifying title and "signature" seemingly not the artist's own. But clearly there is only one image shared between these pictures; they are obviously multiples of a sort (despite collector/dealers' descriptions of them as "unique"). These are not merely faithful photographic replicas of an original masterpiece (the ideology undergirding Wölfflin's pioneering pedagogy), nor

even the de-auratized "art in the age of mechanical reproduction," as Walter Benjamin's formulation has been translated.[4] Specifically, what we have here are images without an *Ur-Objekt* whose aura they can implicate: two vintage "art" photographs, each the product of the same single negative, exposed and printed by Man Ray (born Emmanuel Radnitsky), the American modernist who teamed up with Parisians Marcel Duchamp and Francis Picabia to ignite the brief and incendiary moment that was New York Dada.

Like Wölfflin, I want to suggest an historical argument here. The first of these prints was made around 1917–18, the second in 1920. Although produced from the same negative, they are presented as two very different works of art. That difference resides explicitly in their social and textual construction, through *différance* and the verbal mechanism of their titles. The work produced on the heels of the Great War (Figure 1, left) was titled *L'Homme*, in Man Ray's beginning French. Its manifest content is a depiction of an eggbeater, but given the title it reads metaphorically as a mechanized, pendulous phallus that throws its hard-edged metallic shadow on the wall. Seen by subsequent interpreters as speaking to Man Ray's own penchant for beating his ovular wife (whom he had left as he began an intense relationship with the Parisian artist Marcel Duchamp), it has also been viewed as an emblem of onanism.[5] But what is Man Ray's second picture? This second print (Figure 1, right) was dated 1920, probably sent to fellow Dadaist Tristan Tzara for publication in Europe. This time, the title is *La Femme*, a different "work of art."[6] This doubling, this mapping of different genders and/or sexes onto seemingly identical machines, is what frames my problematic. The historical question regards the possibility of an instability in the sex of the early-twentieth-century machine—an instability later eradicated by fascism (among other masculinist technocracies), and one we might profitably reimagine now.

Why sex, and not gender? As I'll argue here, what seems to be operating in these mechanized bodies are not only the social roles of gender, but the biological roles of sex (even if we now question the fixity of both categories). At issue for the artists in question was, in the final analysis, *reproduction*—how the male machine might reproduce commodities, or how the female machine might reproduce the male (or the male's labor). But although I speak of sex, gender obviously enters into these constructions of technology, and the messages conveyed about technology's sex are meant in turn to reify new configurations of gender in the social frame.[7]

Let us return, then, to Man's *Femme*. Its new sex allows the eggbeater to reassert an association with the female machines of domestic life, but that association is clouded both by the echoes of *L'Homme*, which still cling to it, and by the psychosexual scenarios opened up by its new female identity. When the eggbeater was *L'Homme*, it fit fairly well into a standard trope of technology as active and masculine. As *La Femme*, however, this image of a readymade threatens to cut the other way: as the blades turn in our imagination, this female machine casts a darker shadow, open steel strips

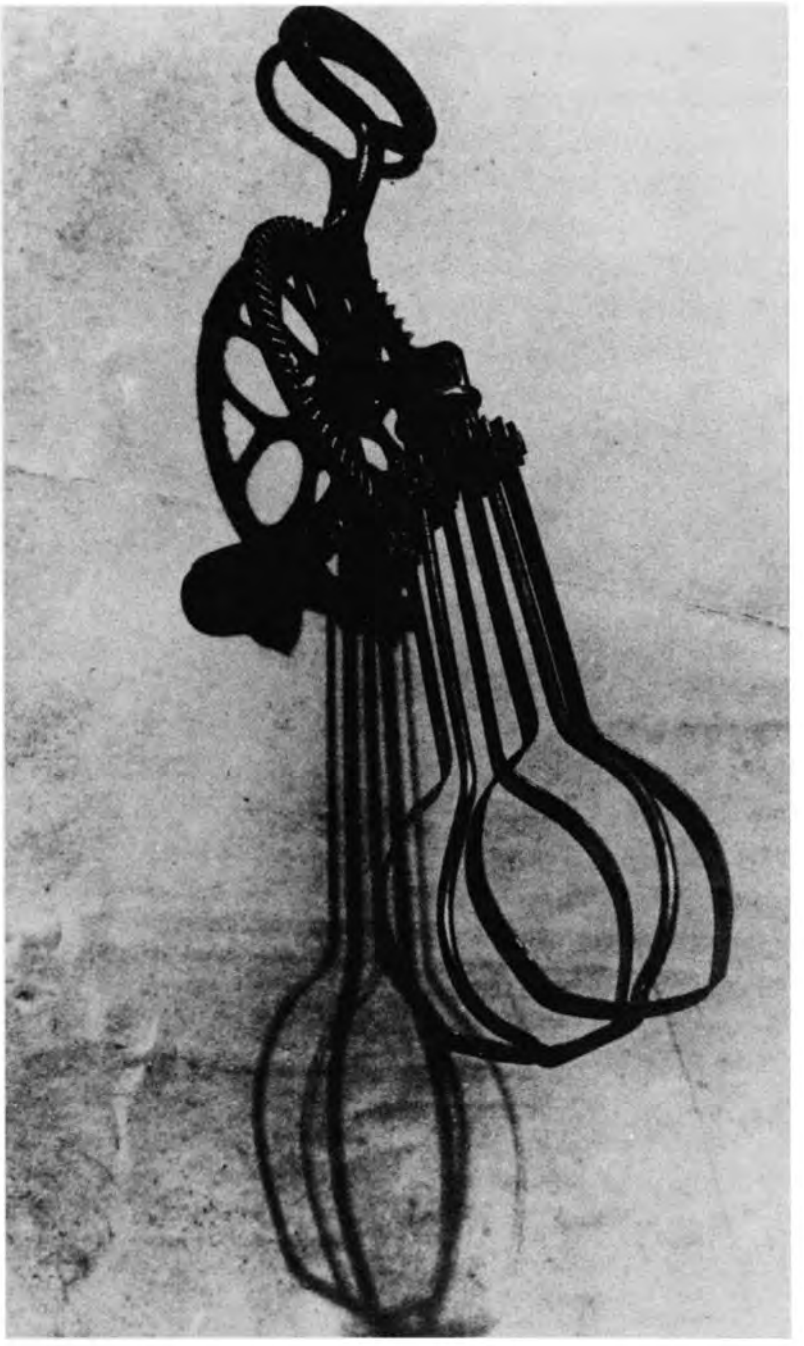
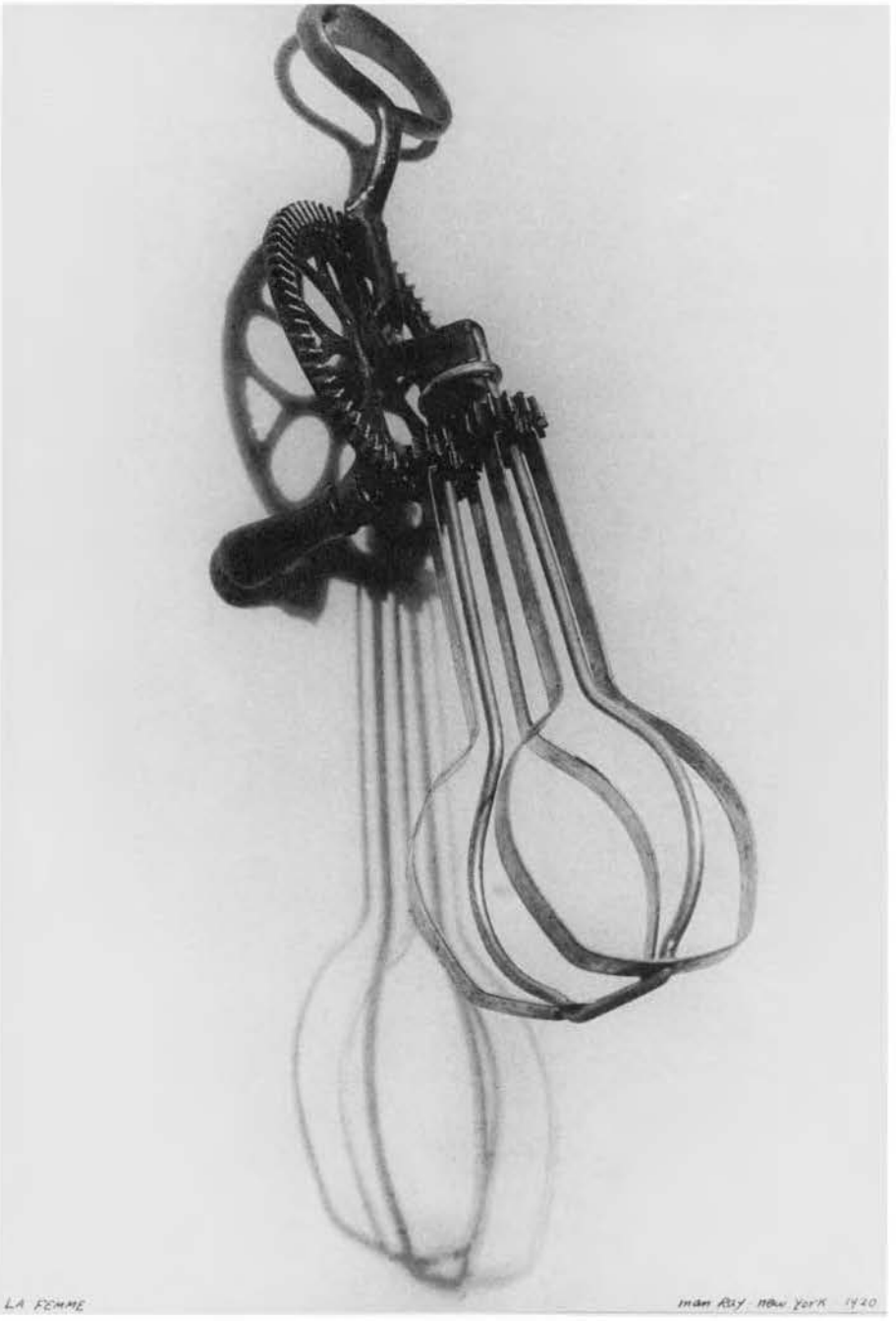


Figure 1. Left: *Man Ray*, L'Homme, *1918. Photographic print, 50.7 cm. x 38.5 cm. "Exemplaire unique." Vera and Arturo Schwartz Collection, Milan.* Right: *Man Ray*, La Femme, *1920. Photographic print. Musée national d'art moderne, Centre Georges Pompidou, Paris.*


LA FEMME
man Ray. New York 1920.

closing into a solid form that becomes an emblem for the mechanized, castrating, phallic woman.

The problem is more complicated than even this collapsing of phallic identity and female difference into *différance* suggests.[8] This essay is but a beginning, an attempt to define a question that involves issues of individual artists' psychosexual identities, but extends much more broadly to characterize a dominant culture's historically situated modes of thinking the technological. Although much of my discussion will be of female or ambiguously gendered machines, it should be emphasized that these are the special cases, the exceptions—the purview of a deliberately off-center avant-garde. The female machine who manifests herself in Man Ray's *Femme* stands in contrast to the overwhelmingly masculinist discourse of hardened, technologized male bodies that come to permeate early-twentieth-century modernism. The focus of scholars such as Klaus Theweleit and, more recently, Jeffrey Schnapp and Hal Foster, this hardened male body expresses itself in literature, art, film, theater, and war.[9] What I hope to suggest here is the presence of *other* formations that have subsequently become obscured by the near total victory of a masculinized "metallization" of the human form.[10]

How do we locate the specificity of a different or resistant practice in representing technology? Does the slippage between Man Ray's *L'Homme* and his *Femme* speak to a historical development, or merely a random variation? For the origin and meaning of the contrast between the male and female (or ambiguous) mechanomorph, do we look to the level of individual psychoanalytic configurations, manipulated as they might be by state apparatus (as in Klaus Theweleit's exhaustive chronicle of the German *Freikorps*) or, as I want to suggest for Picabia, by the medical systematics imposed by the neurasthenic cure? Do we look to the internal discourse of art history to explain the fetishistic precedents for such works? Or finally, without exhausting the near infinity of explanatory frameworks for any object, will it profit us to look to larger structures of social signification, themselves imbricated in the political and emotion-laden complexes we call "ideology"? These three levels of explanation, which we might label the individual, art-historical, and sociocultural, constitute divisive camps within the discipline of art history today (paralleled by the conflicts between monographic history of science, and science studies). Ultimately, I want to argue that each of these strands is woven into the web of fears and desires that manifest themselves culturally in the twentieth-century work of art. I also want to assert that the work of art, in turn, has agency—Picabia's alternative may be seen as merely expressive of the gender relations established during and after the Great War, but it can also be seen as actively interrogating those relations, and contributing to a new cultural imagery for the machine. The play of these multiple readings only confirms my preliminary observation that there can be no fixity to the sex of the machine, only momentary—but potentially strategic—configurations in a system predicated on motility and flux.

NEW YORK DADA AND THE *FEMME NOUVELLE*

The international avant-garde movement later called "Dada" took its most mechanistic form in New York. Generations of migrants found that New York demanded a new, technologically mediated art—from Man-Ray-of-Philadelphia to the Parisians Duchamp and Picabia (driven Westward by the war). In the course of completing his "New York Interpreted" series of futuristic tableaux, for example, the Italian-born immigrant Joseph Stella exclaimed "New York is my wife!" The quintessential modern city became a demanding mechanical spouse whose brash sexuality was seen to be expressed in the lights of Broadway, the straining spires of skyscrapers, and the soaring suspension cables of the Brooklyn Bridge.[11]

The Great War was of course a determining contributor to the emergence of Dada and to its appearance in New York. Duchamp managed to get declared unfit for duty because of a heart condition, but Picabia drifted into military service, avoiding combat only through unauthorized mobility (he went "AWOL" in New York while on a military supply mission) and then through a crippling mental disease then diagnosed as "neurasthenia." As his wife later commented: "he profited by a temporary discharge which, from medical board to medical board, carried him to the end of the war." [12] Because the Great War was a conflict of unprecedented industrial scope where the only victor seemed to be mechanized warfare itself, traditional affiliations between men and machines were troubled, to say nothing of relations between fully mobilized men and suddenly professional women. The power of the machine (and, arguably, of women) had become unassailable by the early 1920s, but artists predisposed to question authority were ambivalent about that power. That ambivalence expressed itself in a problematization of the sex of the machine, most insistently in the New York Dada productions we are examining here.

As historians have shown, views of the modernist "new woman" mutated after the Great War, congealing in a range of negative reactions against supposedly mannish, efficient females in dark and unconfining clothes, wearing heavy makeup, perhaps, but possessing brazen desires to vote, to smoke, and to control their own sexuality and reproductive lives.[13] The dominant tendency to belittle the political and legal struggles of suffragism by linking its adherents to a sensationally liberated sexuality is amply evident in Man Ray's portrait of his most important patron, Katherine Sophie Dreier. The assemblage sculpture was titled *Catherine Barometer,* completed in 1920. Dreier's appurtenances are brought together by Man Ray as follows: from a base of steel wool, a washboard rises, its front labeled with the work's title—and the subject's name—together with a placard advising the user to "shake well before using." Out of this vibratory base comes a thin rod encircled by wire; the measurement of its presumably ascending energies is calibrated by a color chart mounted on wood. In addition to returning Dreier to a lower-class-female's domestic sphere (coded by steel wool and

washboards), the portrait of the suffragist and art organizer as a "barometer" suggests that her passions changed with the weather. Beyond that, the wool links itself to Dreier's own wiry hair, cushioning the vibratory mechanism of the washboard in a thinly veiled equivalence between the woman and her most private sexual parts. The apparatus brings to mind Terry Castle's 1987 speculations on "The Female Thermometer," as well as Picabia's 1924 drawings of the *Thermomètre Rimbaud*.[14] In one of these images (published in the artist's own Dadaist journal, *391*), a thermometer protrudes from between the legs of an androgynous nude embraced by a fishtailed male lover; the other shows a naked man sucking or blowing a thermometer-as-flute for the pleasure of an androgynous muse. As Castle argues, the origins of such medical devices were linked to the search for a mechanical model of human nature. The thermometer or "weather-glass" (human barometer) was initially offered as a novelty for measuring female passions, and only later became generalized through psychology to "a universalist model of emotional flux."[15] As if echoing anecdotes about the inventor of the device, who supposedly set the standard for 100 degrees by taking the temperature of his aroused female lover, Picabia's vision of the poet Rimbaud's thermometer fixates on its oral and anal modes. As in Man Ray's barometer, the machine devised to measure the female passions becomes conflated with the passionate female. The iconographic program becomes dedicated to reducing the woman to a female sex part (or, in Picabia's more intriguing version, dissolving her in nonproductive *jouissance*).

But there are phallic elements to the *Catherine Barometer* of Man Ray, as well as in Picabia's *Thermomètre Rimbaud*. The wand of Catherine's ostensible "barometer" extends its slender erection all the way up the color scale. And if the "female thermometer" conflates the object meant to penetrate the female orifice with the female herself, then the woman *becomes* the phallus. These objects thus function as visual oxymorons, like the oxymoron we have already met in Man Ray's contemporaneous *Femme*: the phallic woman. Clearly these works participate in individual psychological frameworks: Man Ray's conflicted relationship to one of his major patrons, and Picabia's evidently elegiac relationship to phallic manhood. And, like all artworks worth their salt, they also participate in art-historical discourses (Duchamp's readymades, in the case of Man Ray, and Aubrey Beardsley's erotic drawings, in the case of Picabia). But, as my argument suggests, these objects can also be viewed within a larger context—the male hysteria circulating around the "*femme nouvelle*," and, in the case of Picabia, the gender negotiations epitomized by neurasthenia.

As Mary Louise Roberts, Debora Silverman, and other scholars have shown, the emergence of the "new woman" was accompanied almost immediately by derisory shadow categories that dogged her liberatory march of progress. *Femmes nouvelles* in the 1890s were stigmatized from the outset as "*hommesses*," linked to technology and described by contemporary males as having an "active, public, mobile, and agitated

character . . . associated with the tension and new electrical energy of the city streets and the 'brand new sparks' of the century of technological inventions and 'eternal motions.' "[16] Many deplored the growing association of women and the new technologies, moaning over the dangerous "inversion" fostered by the bicycle (which the *femme nouvelle* seemed to be invariably mounting). One critic put it simply in 1895, in a proscriptive conclusion that would not sit badly with Man Ray some thirty years later: **"A woman exists only through her ovaries."**[17] The fin-de-siècle turn against the "*hommesse*" was a subset of the larger obsession with the *femme fatale*, but the more general model of the evil seductress underwent subtle changes in her conversion to the New Woman. Largely through her conjunction with technology, the fatal *femme* became hardened and masculinized, the manipulative temptress in the shadows converted to a public, phallic woman.

In the post-World War I context more proximate to Man Ray, Duchamp, and Picabia, the new woman was rejected again by male critics, this time not as "*hommesse*" but as "*la garçonne*"—infantilization now added to the masculinization already inflicted on her by those wary of her kind. Gender anxieties may have functioned to mask other conflicts, as Joan Scott has convincingly theorized, but such anxieties proved to have their own trajectory as far as the fate of actual and fictive women was concerned.[18] As Roberts shows, in the novels of veterans writing after the Great War, the *femme nouvelle* bore the brunt of post-conflict rage.[19] Writing in 1927, Pierre Drieu La Rochelle articulated the veteran's feelings of universal loss: "This civilization no longer has clothes, no longer has churches, no longer has palaces, no longer has theaters, no longer has paintings, no longer has books, no longer has sexes."[20] Others would tie such losses explicitly to the invasion, and inversion, of *la garçonne*.

That these ideas had some resonance for noncombatants such as Duchamp, Man Ray, and Picabia is suggested by elements of their work during and immediately after the war. Nancy Ring has noted Duchamp's cryptic reference to his avoidance of armed service in his notes for his major assemblage *The Large Glass*, where he identifies the "bachelor apparatus" as "the cemetery of uniforms and liveries," celibate manhood conflated with the death of military forms. These notions of postmilitary bachelor machines are tied directly (in the manner of an oscillatory mode of being) to the gender reversal performed by Duchamp's seductive alter ego, Rrose Selavy.[21] Picabia, sidelined by desertion and acute neurasthenia, revealed his own ambivalence about femininity during wartime. In his poem titled "Soldats," written in 1917, he concluded his analysis of credulous soldiery with the stanza "*folie / avide / Des attitudes désespérées / le mur / malade / du sexe Féminin.*"[22]

Pinning the war on a "sick wall of feminine sex" may have helped solidify the general anger directed at *la garçonne*, but although the discourse was French, the *garçonne* herself was seen to be entirely the product of American influence. "The innocent young thing of yesterday," wrote one French journalist in 1925,

> has given way to the *garçonne* of today. . . . Add to this sports, movies, dancing, cars, the unhealthy need to be always on the move—this entire Americanization of old Europe, and you will have the secret to the complete upheaval of people and things.[23]

World War I, with its automated regiments dedicated to a single military function, was the first Taylorized war, just as the "Tiller Girls" were the first Taylorized dance troupe.[24] The women on whose bodies the new postwar society was being mapped were seen as similarly "Americanized," *garçonnes* produced in an aggressive, uncontrollable social realm rather than a fantasized patriarchal domestic order from before. Images Picabia produced in 1915 and 1917 (Figures 2 and 3) portray the *garçonne* explicitly as a mechanized *Américaine*, their pert mechanical verticality coding for the emerging Jazz Age "flapper." A commercial illustration of an industrially produced lightbulb, the 1917 *Américaine* (Figure 3) is a transparent vessel, a container whose shape evokes the womb, the breast, the rounded body. The vessel is constricted at its base, however, sealed off and rendered phallic by the metallic cap and threaded base necessary for the bulb to become male (to screw its socket). And the bulb's transparency reveals the duplicity of the Americanized *femme nouvelle*. Within—or is it on the surface?—the bulb's reflective glass are visible the words "Flirt/Divorce," and the same upended as if in a funhouse mirror on the other side. The American lightbulb of Edison and Broadway, labeled a flirt and a hardened woman with too much experience (seduction and then divorce being the presumed temporal trajectory), displays precisely that conjunction of engineering and activism that had so troubled French critics writing three decades earlier.

The extent of this French discourse on mechanical American flirts is made clear by such powerful precedents as Auguste Villiers de l'Isle-Adam's popular 1885 novel *L'Eve futur*, first serialized in the French periodical *La Vie moderne*.[25] More than simply an eerie parallel, Villiers's novel indicates the extensive appeal of these visions of Americanized, androgynous, mechanomorphic women. Villiers tells of the American inventor Edison (maker of the lightbulb in Picabia's *Américaine*), who produces an Android named Hadaly (Persian for "Ideal") to replace the empty flirt who has claimed a young lord's heart. Hadaly/Ideal is an instantiation of two compelling Western philosophies: the Aristotelian binary in which woman is impressionable matter, man impressive force (for the power of this configuration, see Katharine Park's essay in this volume), and the Cartesian mechanical model of the universe that saw its apogee in Julien Offray de la Mettrie's 1748 treatise *L'Homme Machine*. Hadaly will be "imbued with . . . two wills, united in her; she is a *single* duality" when animated by living humans. A "human machine," she is a new "electro-human creature," as Edison describes her, "who with the aid of ARTIFICIAL GENERATION (already very much in vogue during recent years) seems destined within a century to fulfill the secret purpose

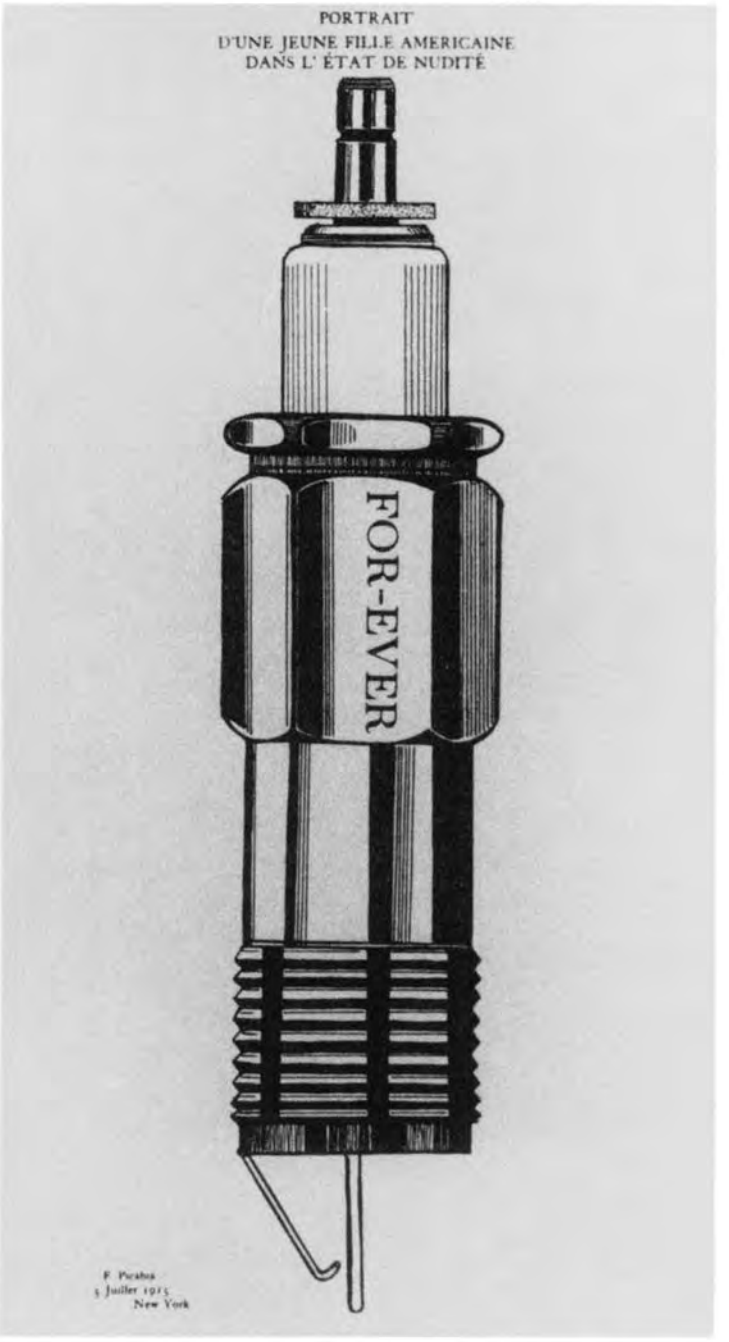


Figure 2. *Francis Picabia*, Portrait d'une jeune fille américaine dans l'etat de nudité, *(Portrait of a young American girl in a state of nudity), July 5, 1915, New York. Line Drawing reproduced in the artist-run journal* 291.

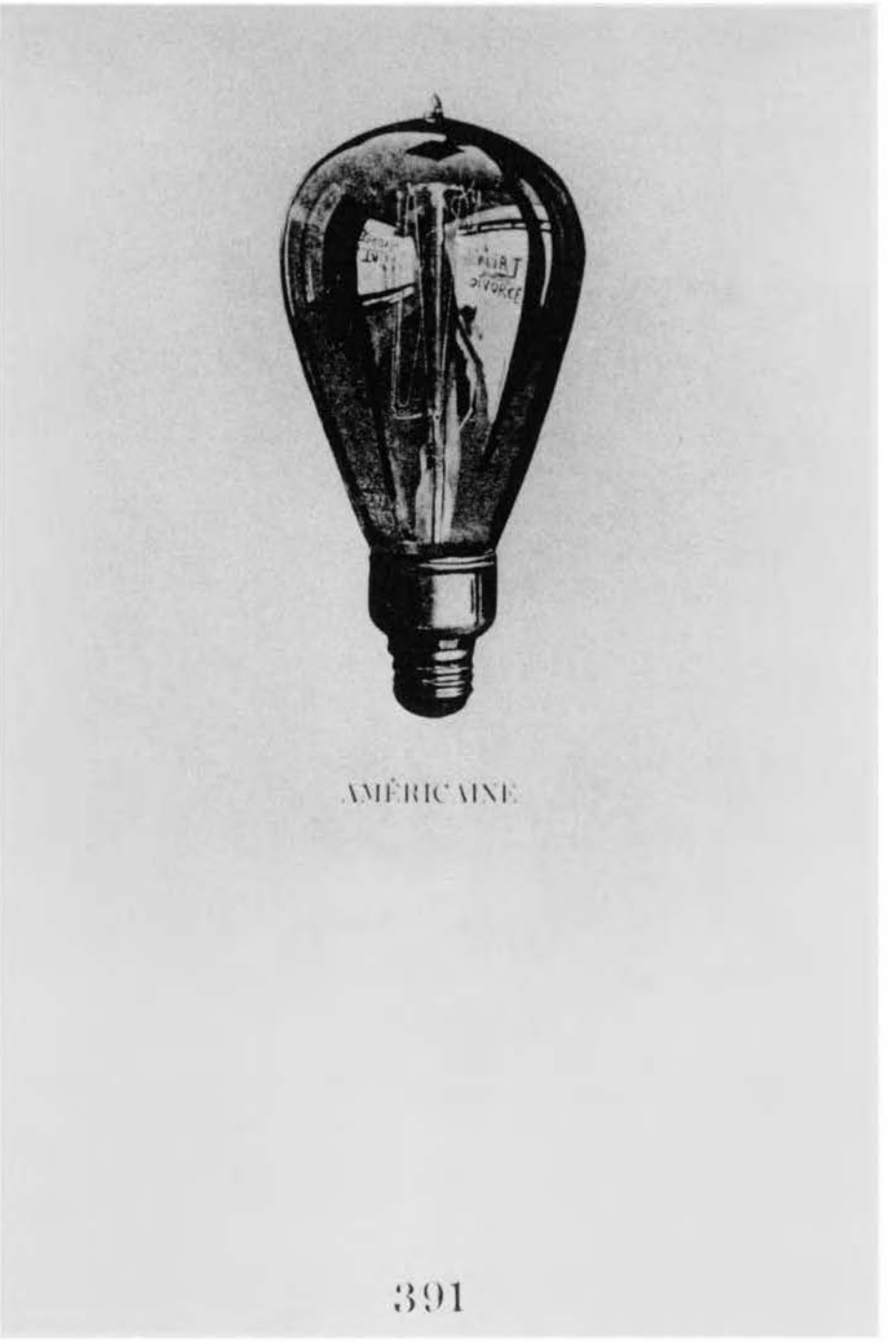


Figure 3. Francis Picabia, Américaine, *1917, as reproduced on the cover of Picabia's journal* 391, *14½" x 10¼". Original was a photograph of Edison's lightbulb retouched in ink.*

of our species."[26] Tied immediately to *sex* (in the sense of the biologico-mechanical processes of "generation"), this machinic imaginary is a female, but also an androgynous and *dual* creature. Above all, for Villiers and Picabia alike, these ideal electro-human *femmes* could only be born in America—if not an actual America then the phantasmagorical one in which Picabia found himself after first crossing the Atlantic in 1913.

THE NEURASTHENE AND THE *FILLE NÉE SANS MÈRE*

Our young artist had been born thirty-four years earlier in Paris (1879), the son of a Spanish father and a French mother, and named "François" Marie Martinez Picabia. His father was the descendent of a Cuban planter who had become a Spanish railroad builder; his mother was the daughter of a wealthy businessman who was also a photographer-ally of Daguerre. When Picabia was seven, his mother died, and thereafter he was raised by servants of the household, with the authoritative presence (or intermittent absence) of his father, bachelor uncle, and photographer-grandfather. By 1911 he was making competent post-Impressionist paintings that clearly exhibit the fin-de-siècle fascination with the *femme fatale*, a figure that would elide smoothly into the *hommesse/garçonne*, as we have seen. The dramatic shift into a more advanced nonobjective style began for Picabia with his exposure to Cubism and to Marcel Duchamp, who gave Picabia the first of his eroticized machine-paintings, *The Bride*, shortly after completing it in 1912. (Like Villiers's Edison, Duchamp secured the bonds of male friendship through the exchange of an ambiguously feminine "electro-human" Ideal/*Bride*). Although deeply affected by Duchamp's gesture (and by the formal vocabulary of alchemical retorts and mysterious plumbing that Duchamp's *Bride* displayed), Picabia's move toward a fully mechanomorphic abstraction appeared only after his first trip to New York a year later.[27] Self-styled ambassador for European modernism at the 1913 Armory Show, he had come intending to stay for two weeks, but lingered for six months, producing publications, works on paper, an exhibition, and a score of press interviews from his suite at the Hotel Brevoort.

During his American sojourn, Picabia developed a form vocabulary initially linked to Duchamp's. In symbolic abstract portraits of specific African-American musicians and one Russian-born "exotic dancer," he produced some evocative visual phrases: phallic nozzles emit slender probes, which slip between cushiony forms to move toward shapes that are bulbous and uterine (lightbulb-like in shape), orifices and ova proliferating in a delirious display of reproductive excess. This chemico-mechanico-biological *mélange* appears again in the drawing Picabia titled *Fille née sans mère [FNSM]* (Figure 4), translated as *Daughter Born without a Mother*. It is by all accounts the first of Picabia's many incarnations of this provocative theme, and forms the template for all of his subsequent sexed machines.

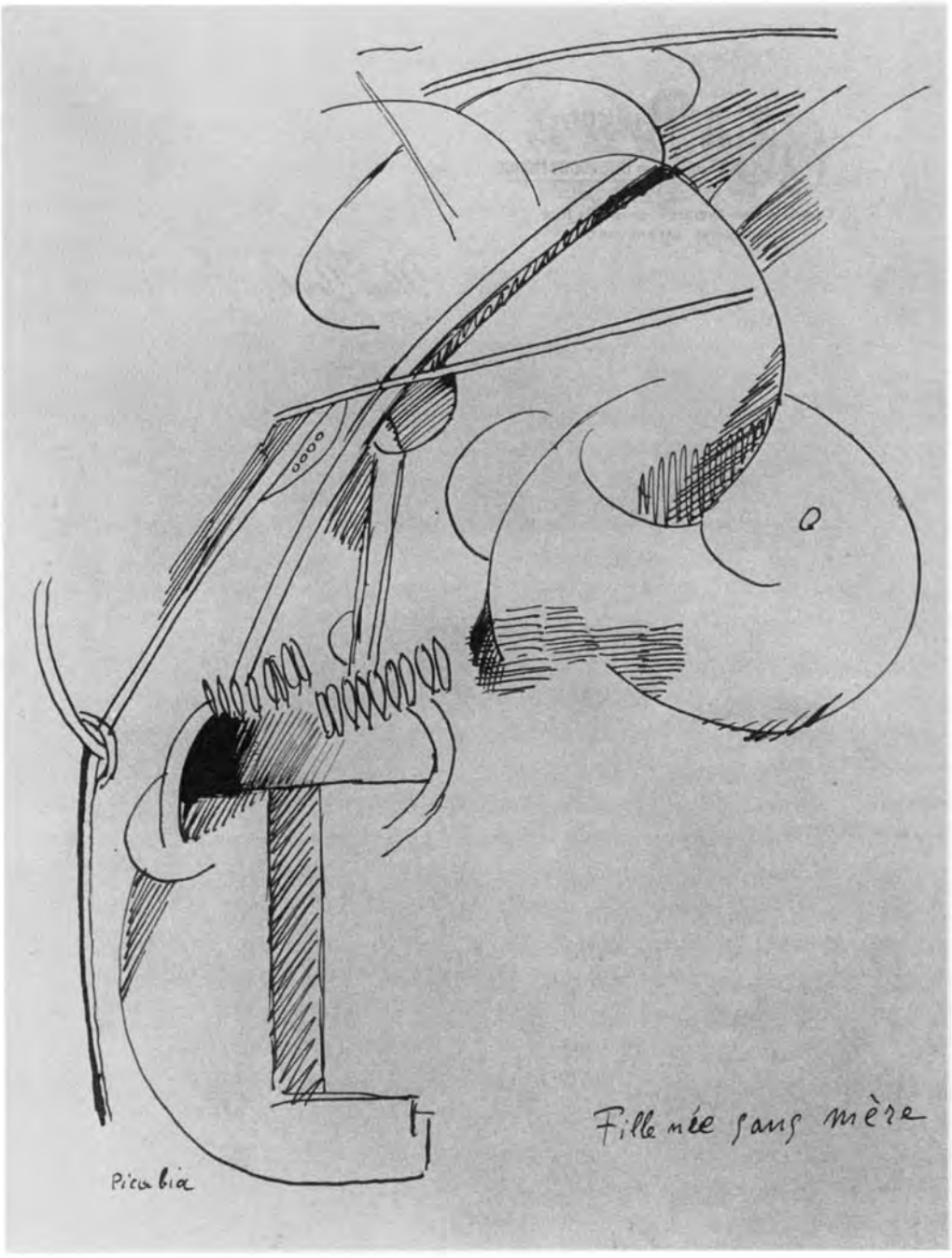


Figure 4. *Francis Picabia*, Fille née sans mère, *(Daughter born without a mother), 1913 or 1915; pen-and-ink drawing on verso of hotel letterhead, 10⅜" x 8½", reproduced in the artist-run journal* 291 *in 1915. Original in the Metropolitan Museum of Art, Alfred Steiglitz Collection.*

Drawn on the back of a sheet of letterhead from his suite at the Brevoort, the small sheet may date from Picabia's first exhilarating trip to the United States in 1913—or it may have been completed during his second trip two years later, when it was published in the avant-garde journal *291*.[28] In this enigmatic sketch, various rods and piston forms seem to move up into a realm of slightly pendulous orbs that read as breasts, buttocks, or eyes. What is significant about this, the earliest of the *FNSM* series, is that it pursues the previous mechanomorphic form vocabulary, but does so with a seemingly transparent linearity, limning an apparent *interior* to the body or bodies that it explores. Read against the gleaming metallic skins and hardened carapaces depicted by other modernist artists, Picabia's perspective is instead that of the doctor/inventor (or the lover)—one who would parse the body's hidden secrets with an instrumental, Roentgen-like gaze.[29]

On the personal and psychoanalytic level, the "*fille*" here could of course be shadowed by its masculine inversion, "*fils*," describing Picabia's own motherless state. In this interpretation, the soft forms of the upper part of the drawing appear less penetrated by machinery than propped up by it, the kind of relationship made classic in Theweleit's analysis of the technologically hardened scaffolding (endo- or exo-skeleton) that serves to protect the shapeless ego of the not-yet-fully-born. Alternatively, the bulbous fleshy forms that seem to be escaping from the drawing's upper right may be the mother herself, the *fils*'s own body a stunted device of frozen gears and flimsy pistons that attempts to capture, reenter, or penetrate the maternal form.

For the art-historical context that constitutes my second level of proposed analysis for the "knowing" and sexed machine, we should look in the first instance to the remarkable avant-garde journal *291*, where *FNSM* was published in June of 1915. But in the machine portraits Picabia prepared for publication with the *Fille*, a very different aesthetic presented itself, as we have seen already in a brief glance at one of his *garçonnes*, the *jeune fille Américaine* (Figure 2). In this and other "portraits," Picabia replicated the cool draftsmanship of the engineer (found also in the technological *garçonne* of 1917 in Figure 3). In this elegantly simple image of a *young American girl in a state of nudity* (copied from the pages of *The Motor*, a popular science magazine), the female machine has been reduced to her essentials, a fresh and irrepressible spark plug whose naive promise, "For-Ever," is belied by her status as an expendable, interchangeable, and replaceable part.[30] Like the Android of *L'Eve Futur*, the *jeune fille* is entirely reproducible, yet herself reproduces only labor (and not Life Itself)—and does that "with the aid of ARTIFICIAL GENERATION," controlled, presumably, by the master of her technology. Despite such limitations, the "electro-human" spark plug is no less ideal. As Edison explained to his incredulous friend, beneficiary of just such a young *fille*, "You see, *she is an angel!* . . . if indeed it's true, as the theologians teach us, *that angels are simply fire and light!* Wasn't it Baron Swedenborg who went so far as to add that they are 'hermaphrodite and sterile?' "[31]

Here we get to the heart of the matter, or rather, the sex of the machine. Surely the spark plug girl is a phallic woman (which is to say a metaphoric hermaphrodite). Yet she is rendered quite explicitly unthreatening by her very "nudity" and controllability—by our recognition that she stands naked of the larger apparatus that controls her sparking, and by our knowledge that she is identical to the tens of thousands like her in combustion engines throughout the United States. Although spark plugs could be found in any combustion engine, perhaps their strongest association was (and is) with the automobile, itself personified increasingly among the French as "*L'Américaine*," in an age when "Fordism" was perceived as one of the United States's most powerful exports to Europe (and the inspiration behind the Taylorized dancing of the interchangeable "Tiller Girls"). The sparky American *fille* is "like an angel" in her stripped-down functionalism and clean lines; Picabia's vision of the plug's erotic potential is suggested by his statement that he chose the spark plug for his girl because she was a "kindler of flame."[32] Like the flirtatious lightbulb that would appear two years later, this *jeune fille* presents the amalgamation of technology, America, and the new woman that saturated Picabia's imaginary at the time. The connection of all these discourses to the reign of neurasthenia is the nexus to which I now turn.

The spark plug and lightbulb flirts both present ambiguous, but putatively "three-dimensional" forms, not the interior probings that characterized the first of the *FNSM* images (Figure 4). There are several other mechanical portraits that bear the *FNSM* title; most of these present the smooth, patinated surfaces of the standard modernist "metallicized" body.[33] But in Picabia's final infatuation with his *Fille*, a book of fifty-one poems and eighteen drawings published in Lausanne, he pursued the original *FNSM*'s interiority. This book's transparent, mysterious, sexed machines float on pages adjacent to Picabia's pithy, disjunctive, Dadaist poems. Found in a few art libraries and largely forgotten by most scholars of early modernism, Picabia's book is beginning to claim a new audience since it was reprinted in Paris in 1992. Both poems and drawings are studded with barely connected textual bits, entries in a bizarre atlas of nouns, puns, and body parts. The impact of the slim volume is sustained and cumulative. Its rhythms are the meditative ones of boredom and dreams, produced in the first three months of a neurasthenic cure.

Having arrived in New York the very day that the United States entered the war, Picabia was forced to leave the city once again after a recurrence of his debilitating mental illness. Prohibited by his doctors from painting, he went first to Spain and then to Switzerland, pursuing the travel regimen that was posited as one of neurasthenia's primary therapies—but doing so in neutral countries that would not further exacerbate his nervous collapse. Apparently drawing and writing poetry could be accomplished within the narrow compass of the therapeutic regime, which required rest, isolation from prior activities and companions, and healthful diversions. Picabia's book was published in April of 1918 with the title *Poèmes et Dessins de la Fille Née Sans*

Mère. It was dedicated, appropriately enough, to the author's three neurological doctors—a Dr. Collins in New York, a Dr. Dupre in Paris, and a Dr. Brunnschweiller in Lausanne.[34] Significantly for a project conceived within a therapeutic frame, *Poèmes et Dessins* contains the most extended and hermetic of Picabia's analyses of the sexed machine.

Neurasthenia, the "disease of civilization," had been popularized by an American neurologist, Dr. George Beard, in a series of clinical and popular texts that culminated in his 1881 credo, *American Nervousness*. Emerging as if from nowhere to afflict tens of thousands of urban workers, its etiology lay (as Beard described it) in the perilous increase of "steam power, the periodical press, the telegraph, the sciences, and the mental activity of women"—a curious list of stresses affecting both men and women, all seen to be exacerbated by the booming American metropolises in which neurasthenia exclusively occurred.[35] The neurasthene was plagued by the kind of exhaustion, obsessive behavior, and sleep disruption that might today be called "depression," or "neurosis"; when typed into an electronic library server such as Harvard's Hollis program, it is rendered equivalent to the contemporary ailment "chronic fatigue syndrome." As historians of medicine always remind us, however, correlating disease categories across the ages is a faulty and unproductive enterprise, and certainly the turn-of-the-century neurasthenic patient's suffering took a form that was highly appropriate to its time, attributed to an overwhelming "nervous bankruptcy"—the depletion of overtaxed storehouses containing the body's naturally generated nerve force.[36] Like a battery or "Edison's electric light," Beard proposed:

> The force in this nervous system can . . . be increased or diminished by good or evil influences, . . . and when new functions are interposed in the circuit, as modern civilization is constantly requiring us to do . . . the amount of force is insufficient to keep all the lamps actively burning—this is the philosophy of modern nervousness. [37]

Beard's formulation dominated the neurological literature until Freud's ascendancy, and his mechanistic model of nervous exhaustion drew on a number of previous thinkers. As historians of medicine Francis Gosling and Charles Rosenberg suggest, "Herbert Spencer [and] Thomas Edison" were generalized patron saints. In addition, "Du Bois-Reymond supplied proof of the electrical nature of the nervous impulse, Helmholtz and Mayer their work in thermodynamics, Marshall Hall and others the concept of the reflex."[38]

These mechanical models for Picabia's disease are suggestive; indeed, "suggestion" was seen as the most powerful aspect of the neurasthenic cure. Picabia's doctor in New York (where, as Beard would have predicted, neurasthenia first struck the young Parisian) was doubtless Joseph Collins, an experienced clinician at City Hospital, and

professor of nervous and mental diseases in the New York Postgraduate Medical School. His published analysis of several hundred of his clinical cases fit Picabia very well: 55 percent male, average age mid-thirties, 79 percent of an indoor occupation. Of etiology, Collins wrote, "The effect of overwork and masturbation (under which are included for convenience' sake other irregular forms of sexual indulgence) is generally recognized as being very important. Our statistics corroborate this view."[39] Together with other international specialists on neurasthenia (who ranged from physicians such as Adrien Proust and Gilbert Ballet in France, to the sociologist Emile Durkheim), Collins clearly believed that although neurasthenia might originate with a disposition, it only appeared as a disease in the presence of acute social stress exacerbated by immoral pursuits.[40] Isolation, a change of scene, and "psychical or moral therapy" were held by Collins to be most effective:

> the physician may do much by emphasizing how necessary it is to inculcate habits of obedience and self-repression, eradication of egotism and selfishness, restraint of temper and capriciousness, and the development of moral courage and of physical and mental self-confidence.[41]

Needless to say, the patient was to avoid alcohol or drugs, especially if they were part of the "irregular forms . . . of indulgence" held to be responsible for the onset of the nervous disease. (Picabia certainly would have been admonished to stop abusing drugs and alcohol, which were frequent companions.)[42] While Collins held it to be somewhat less important than in Beard's day, electrotherapy was still occasionally useful—largely through that "power of suggestion" already implicated in the neurasthenic cure: "[Electricity's] unknown nature, its wondrous manifestations, its attributed health-restoring capacities, all tend to impress the patient with its potency for benefit. . . . The form that appeals most powerfully to the patient's emotion and the form that is given from the most complicated and elaborate apparatus . . . is the one that will act most beneficially."[43] To current-day readers the apparatus of coils, conducting plates, and electric brushes (and the places to which they were applied) convey a scene of torture rather than "the best means to restore the nerve-tonus," but they were doubtless effective in implanting the electrical metaphor as a constitutive aspect of the neurasthenic subject.[44]

Did Picabia receive electrotherapy before departing to engage the mechanomorphic *fille* one last time? Given Collins's own judgment of its waning efficacy, it is unlikely he received it in New York. But the involvement of the clinic patient in a system of belief relying on electro-mechanical models of the human interior, I would argue, is more than sufficient to be implicated in the renderings of the *FNSM*. Within the metaphor of "nervous bankruptcy" was twined the long association of neurasthenia with a kind of moral and electrical profligacy—for what depleted the male's

"storehouses" and "reserves" more dramatically than unproductive *jouissance*? Although Collins had begun to disdain the efficacy of electrotherapy, in Paris as late as 1910 doctors held that the best cure for "*asthenie genitale*" was still "*électrisation*."[45] The homology between sexual and electrical impulses was compelling for these men of medicine; pursuing such metaphors to their logical conclusion, they reasoned that the conduit for biological generation should "naturally" parallel those mechanical conduits for "Artificial Generation" fantasized by Villiers, and, further, that the neurasthenic cure should involve the curbing of "Copulative Excesses" together with the electrical "replenishment" of the body's reserves. As one New York physician wrote in a 1912 handbook on *Neurasthenia Sexualis*:

> The mechanism of sex-activity may thus be compared with the charge of a Leyden-jar. The generative organs must first be charged, like the jar, with a certain material turgescence and with nervous energy in order to evoke the impulse of de-tumescence. Just as the charge of the Leyden-jar with electricity is of a longer duration, compared with the instantaneous discharge at its contact with the earth, so is the charge of the organism with nervous sex-tension usually of longer duration in comparison with the short duration of the discharge. . . . Sexual activity, therefore, consists in the charging and discharging of the vital fluids and nervous tension.[46]

Needless to say, this was a male model of sudden discharge: "repeated orgasm . . . must lead to nervous disorders."[47] The doctor's concern over "Copulative Excesses" seemed tailored (Taylored?) to the male physique:

> Excesses in copulation are not so harmful as excesses in masturbation. . . . Masturbation is . . . more injurious because it is generally effected through the influence of an exalted imagination. Thus excesses in masturbation harm the generative organs not directly only, but also indirectly by first harming the individual's entire nervous system. . . . [N]o other erotic stimuli cause *such a consumption of nerve power* as this gratification of the impulse of contraction by tactile manoeuvres.[48]

Whether or not the philandering Picabia (who moved both wife and mistress to Zurich before beginning a new affair in Barcelona) was lectured by his doctors on the subject of "excessive venery," we can be sure they assumed that something of the sort had been going on. As one doctor wrote: "The patients who seek medical advice for their neurasthenic troubles are those who have . . . freely and immoderately indulged in the unnatural modes of sensualism, whence their troubles originate. The real continent individuals who avoid any kind of erotic practices remain sound and healthy and

do not require medical help."[49] Women, of course, received a different diagnosis based on the overarching etiology of the "disease of civilization;" their excesses lay in what Beard had identified as "the mental activity of women." (Clearly, the mental activity of women can also be seen as a problem *for men*, as historians of suffragism have chronicled.) Neurological specialists in particular spoke out against the New Woman, who inappropriately diverted so much nervous force to her brain that the "central telegraphic office" of her genital organs was starved, generating that nervous bankruptcy about which we have learned so much.[50] The therapies for "American nervousness" were thus intensely gender-specific, with females urged to stop thinking, and men, to stop doing. Women were to become more womanly, men, more feminine (in their enforced modesty and withdrawal from the world). Clearly, the motherless *fille*, that creature of Picabia's neurasthenic convalescence, was his partner in neurasthenia. As a figure for the New Woman, her phallic worldliness matched his "excessive venery." Both modes of behavior were keyed to the modern world, yet disrupted the old order of things, plunging both oversensitive male artists and overambitious New Women into neurasthenic collapse. *Fille* and *fils* alike were in the thick of it, as Picabia's obsessive project reveals.

This partner, the "*fille née sans mère*": What was her role in the book that bears her name? The art historian William Rubin briefly mentions the book's title in his massive volume on Dada and Surrealism, where he translates it as *Poems and Drawings by the Daughter Born without a Mother*. The more usual translation would be *Poems and Drawings of the Daughter Born without a Mother*, but Rubin's choice reinforces my earlier observation about the possibility of Picabia's identification with the *Fille* through her inversion/analogy with the *Fils*. Since there are no drawings or poems within the book that are given any part of the title *Fille Née Sans Mère*, none seem to depict (or be "of") the *fille*; it seems clear that Picabia wished, in this volume, to elide his identity as an author with hers, presenting *her* as his authorial voice in delineating these neurasthenic visions of an eroticized electro-machinic phylum.[51]

This assumption of female identity in authorship has ample precedent, of course (proximately in the compelling example of Duchamp's Rrose Selavy). It would be thematized later, as well, within Surrealism—presumably partly in response to Picabia's example (see, for example, Max Ernst's *Rêve d'une petite fille qui voulut entrer au Carmel* from 1930, where the "dream"—visible only to the dreamer—is "remembered" by the artist, who thereby assumes the *petite fille*'s point of view). Apparently Picabia moved closer to identification with the *fille* over the course of producing the book, for it was originally to be titled *Décapuchonné*, with the *FNSM* functioning as a subtitle. Without the feminine ending, the French word *décapuchonné* describes something that has happened to a male; with the originally intended subtitle, the "decapuchonned" male must be seen to make poems and drawings *to* the FNSM.

The book's original title *décapuchonné*, taken at face value, means "unhooded," or,

more colloquially, "defrocked"—the Capuchin monk's cowl removed as a sign of his beginning a secular life (to begin, one supposes, a more raffish existence with the motherless daughter of his dreams). Such a juxtaposition would not be without precedent in Picabia's work, and was common in the violently anticlerical mood of early modernism (witness Ernst's eroticized Carmelite novitiate).[52] The most extensive dictionaries give "defrocked" as a rare definition, however; more common are the range of associations that cluster around "taking off a hood," from the falconist's preparation of his raptor for flight to the writer's removal of a pen's protective top. One dictionary reference uses "*décapuchonner*" in a specifically mechanistic way, comparing the action of *décapuchonnent* to the circular mechanical movement needed to fuel rockets; others evoke a more personal gesture open to manipulations of desire.[53] For Picabia, the range of such associations for the book's original title were all appropriate. The sense of the *FNSM* volume as both "uncapped" (as in liberated) and "defrocked" (as in booted out of religion) presented his ultimate answer to the conservative Catholic natalist movement then on the rise in France. It also, of course, opened on to a world of potentially mechanistic actions, seemingly possessed by a male but played out by the eponymous daughter, the *fille née sans mère*.

In this necessarily brief essay, only a few of the images from the book can concern us, and a few of the poems. The bulk of the line engravings return to the open, linear, elliptical style of Picabia's first drawing for the *FNSM*: a spare iconography reminiscent of hand-drawn genealogical charts, sketchy anatomical diagrams, or even Freud's contemporaneous schematic illustrations of the human psyche.[54] In addition to illustrating parts of machines (and, indeed, Picabia drew extensively from reproductions he found in the popular engineering journal *La Science et la vie*),[55] the drawings are machine-like in another sense: they exhibit the dry line and sober tone of what are called, in English, "mechanical drawings," that is, commercial line drawings made with compass, rule, and mechanical drawing pen. At the same time, Picabia's line is both less and more than mechanical. Less, because unlike the disciplined pen of true mechanical drawing (see Figures 2 and 3 for examples), Picabia's line here refuses to complete itself: it stutters and repeats across the page, it fails to reveal crucial details of the "mechanisms" involved, and it requires elaborate textual inscriptions to explain itself. More, because the same line wanders into the interiors of these machines—limning not merely the cross-section of their motors, but the unexpected soul, id, and furry reproductive parts that Picabia/the *fille* discovers deep within.

A drawing titled *Mammifère*, for example, charts the parts of a mammiferous body, juxtaposing precise medical terminology ("*l'utérus*") with small furry animals that might be associated with hair-covered erogenous zones of the human female ("*chauve-souris*," bat, and "*ouistiti*," marmoset). Another drawing titled *Haricot*, by contrast, is a male device, depicting a sketchy apparatus definitively identified with the label "*Du Mâle*," of the male, or more colloquially, of his cock. Obligingly enough, a ladder

climbs up from the base of this phallic structure, avoiding both "Madagascar" and a poisonous cloud ("*nuage poison*") on its ascent up the page. Most intriguingly, this *haricot*/beanstalk, while rooted in "*Du Mâle*," is also marked by the phrase "*destinées*," thus seemingly fated to return to a plural feminine destination that might be translated as "the intendeds" (as in multiple marriage partners), or "the destined women." The poem on the facing page evokes a therapeutic scene: "she washes herself and binds the hand / smiling always. / She rules the science of chaining / the degrees of water. / . . . I am the monarch warbler variety / [with the] modesty of spermatozoid passivity. / Inaesthetic sailor wan / near the lake without sun."[56]

Haricot's incorporation of female elements into male mechanisms appears again, reaching thematic proportions in other drawings and poems of the book. The drawing *Égoïste* relates to a "convalescing narcissist" (*Narcis convalescent*—doubtless the neurasthene himself), attended by a thin probe labeled "doctor" (*médecin*) on one side, and phrases evoking female landscapes (*femmes paysages*) and *Américaines* on the other.[57] Recall the enthusiasm of Picabia's doctor, Joseph Collins, for inculcating "habits of obedience and self-repression, eradication of egotism and selfishness" in his patients—an American prescription that may have chafed the self-reflective habits of a male Parisian raised in the Cousinian culture of the *moi* (for which see Jan Goldstein in this volume). In his mournful poem "Vivre" (two pages before the drawing *Egoïste*), Picabia/*fille* reflects on the boredom of the neurasthene's regime:

Conquering egoism amuses a fool
A lover waits for good times
Affairs of appearances
Me I've never seen
Those who bring them off
The unknown have no theories
Of dissipation
Along the shipwrecked river[58]

Similarly, in the poem that confronts the drawing in question, the author laments: "The truth of the soul / Is the great cowardice of academic pride / My eyes in your eyes / I am content / In my forgotten solitude"[59] In the same poem, Picabia and the *fille* admit "*J'aime que l'on plie les yeux / Des ennuis*" (I like what bends the eyes / From boredoms), and the multiply sexed and gendered interior views of *Égoïste* and other drawings suggest just how the eyes might have been bent from the task at hand.

Still other drawings feature other stand-ins for the convalescing narcissist. The "young Sable" ("*jeune zibeline*") whose capacious, multifaceted body is mapped in the drawing *Polygamie* incorporates both patriarchal, penetrating "Mormons" (iconographically linked to the "médecin" of *Égoïste*) and a "spring vagina" ("*vagin printanier*"). Both

penetrants and opening are connected to the ambiguous body of the sable (the hair of which, it should be noted, is a chief constituent of the paintbrushes forbidden to the neurasthene). The *vagin printanier* is verbally associated with another work from the same year, *Brilliant Muscles/Vagin Brillant*, where the *vagin* is labeled *"mécanique de la region sacrée."*[60] The machine on which the drawing *Polygamie* is based, appropriately enough, is a fan for a gas meter named "Duplex."[61] The *vagin*'s *jouissance*, it seems, is not the quintessentially nonproductive (and hence subversive) labor of a Sadean, but the productively rhythmic, repetitive, metrically measurable and mechanical energies of the androgyne participating in this "Polygamy."

Just as he had discovered machines at "the very soul" of human life, then, Picabia also discovered machinic sex: *vagins*, *regions sacrées*, and penetrating patriarchs at the heart of his mechanical drawings. The drawings *de la fille* function complexly and intertextually, meanings and associations building up through accretion, enigmatic forms echoing in other drawings with clearer clues, words reappearing in different configurations suggesting multiple interpretations. The title for the drawing *Male*, for example, is spelled without the circumflex that appears "correctly" inside the body of *Haricot*.[62] Without the diacritic, it shifts from being a simple cognate for "male," and may instead drift toward a fictively feminized adverb for "bad" (*mal*). The wiry coil that threads through the drawing curls over and over on itself, forming a chain of "elleelleelle"s in a cursive French hand.[63] This Malelle (can s/he be other than Picabia/the *fille*?) appears in the shape of a wobbly hourglass, the word *"hermaphrodism"* emerging from the center of the enigmatic device directly opposite the label *"le chat."* The two words, cat and hermaphrodism, converge at the most constrictive passage of the apparatus, accompanied by the spiraling coil (of electrical wire?) that runs from nowhere to nothing. In these drawings, ladders, constrictions, coils, and conduits become figures for a mechanical cathexis. The pulsing of blood and sperm are linked inextricably to the rush of electrons through a mechanical coil, itself a figure for the neurasthene's nervous energy flowing back into the battery of the ego's emotional reserves.

These themes of hermaphrodism, electricity, and pulsing love machines come into focus in one of the book's most elaborate images, *Hermaphrodism* (Figure 5), which I would argue is also its most revealing and important page. Here some of the cryptic forms of drawings printed earlier in the book become more clear: the wiry coil is explicitly electrical, appearing twice, with one end tipped by a plug and the other labeled *"sperme."* Both feed into (or emanate from) a sexual apparatus (*"appareil sexuel"*), which bears the shape of many of Picabia's female machines—the disk or hole—again penetrated or activated by a slender rod. In this image, the rod protruding from the sexual apparatus is positioned as actively phallic (not merely metaphorically so). It reaches down to probe an *"oviducte"* studded with egg-like rivets, seeming to deposit its vital electrical/spermatazoid forces in a collecting zone of *mâle haché*. What is being

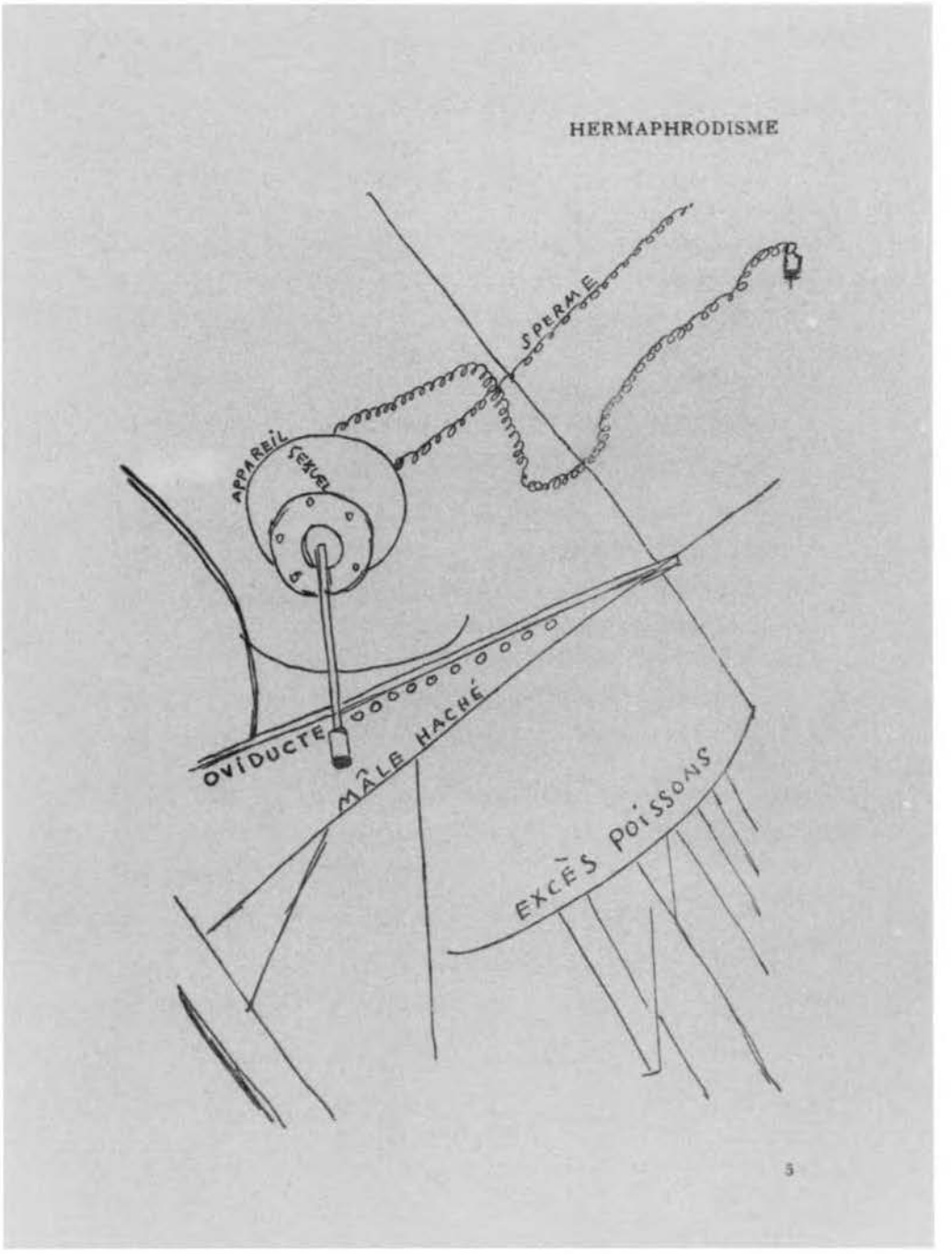


Figure 5. *Francis Picabia*, Hermaphrodisme, *line engraving from Picabia*, Poèmes et dessins de la fille née sans mère, *published fall 1918 in Lausanne, Switzerland (p. 63).*

collected here—the essence of "mixed-up male" or "chopped male"? This minced or mixed substance drains away down lines in the drawing, just so much "excess fish"—animated, fluid creatures whose French name might play on the word "poison," but whose piscine character resonates with the whip-tailed animacules of energizing sperm.

On the page facing *Hermaphrodism*, Picabia/the *fille*'s poem concludes: "It's the nervous system / for the personal imagination / of the pleasures of testing / impossibility."[64] And indeed, the neurasthene's personal imagination *was* a nervous system (in all senses of the phrase), suffused with slipping glimpses of impossible pleasures and new regimes of channeled electrical and sexual impulses. The fully supplied equipment of the *FNSM* may have been painful to experience for the masculine half of the dyad (the "*mâle haché*"). But the humbled "convalescing narcissist" seems to have taken something from his *fille*; his oscillating and ambivalent identification with the phallic New Woman seems to have produced a new vision of the possibilities and pleasures of "testing impossibility."

In these highly sexed mechanisms, of which *Hermaphrodism* is exemplary, we find the culminating conundrum of Picabia's art at the point of his constitution as a neurasthenic subject. Neither essentially male nor "naturally" female, the hermaphroditic machine presents the personal psychological equivalent of the merger between the motherless *fille* and the orphaned *fils*, the too-active male and the too-mental female. Although it might be supposed that the neurasthenic cure might be intended to eradicate such conflation by enforcing more appropriate sexual and gender behaviors, Picabia's project shows otherwise. Negotiating the role of neurasthenic subject for his doctors, Picabia is interpellated as an author of his own "psychical and moral" therapy. The hermaphroditic machine is what he takes to be his appropriate neurasthenic self. That it exists primarily as a two-dimensional reproduction of a line drawing does not make it any less potent in structuring the psyche.

As befits such a merged and complex identity, let us propose four hands for a concluding analysis of Picabia/*fille*'s hermaphroditic machine: on the one hand, as we have seen, s/he is a phallic little thing, slender rods and hardened disks the very instantiation of the bodies or body parts that are made rigid with discipline or desire. On the other, s/he is a transparent, permeable, trembling membrane, ruler of the "science of chaining . . . water." On the proliferating third hand, s/he offers the inexhaustible mechanism of *jouissance* in a framework of self-love: equipped with sperm conduit and oviduct, s/he is a self-lubricating being, both "wan sailor" and tender nurse, "content in my forgotten solitude." On the fourth hand (and why not go on like Vishnu?) s/he is completely social, "only a machine," controllable by man, produced by him and for him, man's own "daughter born without a mother." This last hand reaches to Pygmalion's Galatea, and then, of course, to Villiers's *L'Eve futur*: the ideal "daughter" born, quite literally, "without a mother," provided as if by God for the pleasure of man and the (re)production of his labor.[65] But the hermaphrodism of Picabia's

devices provides a slightly different take on the subject—or at least offers the possibility for more readings than Villiers's frankly misogynist fiction provides.

The crux of Picabia's electrified, organic, hermaphroditic machine is its offer, paradoxically, of a way out of sex—a way to internalize and incorporate difference, together with an open acknowledgment of the slippage and deferral of meaning we call, since Derrida, *différance*. But like Surrealist Andre Breton's comment (itself a modification of one of Picabia's *aperçus*), "I wish I could change my sex as I change my shirt," Picabia's offer needs to be examined closely.[66] "Changing one's sex" implies a transformation more thorough than changing one's shirt—the former suggests a willing exchange of sexual identity, the latter merely a freshened version of the same old male uniform, the (phallus) shirt. Picabia's internal views of hermaphroditic machines may have offered a way out of sex—a way that seems exhilarating in our own gender-bending age—but perhaps it was only a way out of that kind of complicated and demanding sex that happens with real women. The fluid neurasthenic subject was, after all, temporary and unstable, an identity consciously constructed as outside the "real" world. The patient was intended to be cured, and in some of Picabia/*fille*'s constructions, we can see the mechanisms being staged for this reemergence. The new kind of reproduction we have glimpsed, without explicit difference, may have been a reproduction without the political troubles that difference seemed to bring—without, in fact, the actual women that exemplified difference in the social realm. Picabia/*fille*'s poem *Le Germe* suggests this kind of escape, in typically hermetic and elliptical form:

> *Animal-man*
> *Towards nothingness*
> *Envelops his feelings . . .*
> *Of mutual penetration*
> *Mechanism blind and dumb*
> *We will find some wings that live according to Plato*
> *In the appearances of realities.*[67]

The elusive meanings of the poem crystallize in the pairing of the phrases "Of mutual penetration / Mechanism blind and dumb." In this corner of Picabia's Imaginary, the machine replaces the actual female to become a source of *mutual* penetration: both receptive orifice and incisive probe, but above all "blind and dumb." The *fille née sans mère* promised itself (in Picabia's imaginary) to be a machine that borrowed all the androgynous sex appeal and liberated behavior of the New Woman, without her attitude. Setting aside our current desires for hermaphroditic machines, Picabia's early-twentieth-century version may only be, in the end, the ultimate Sadean commodity—a fusion of the neurasthene's electrified Imaginary with the seducer's erotic visions of incorporation and absorption of the Other. In the *FNSM*, the space of

difference is narrowed, even collapsed—but this astonishing feat may serve only to produce a polymorphous coupling device of insensate servitude that would, as the *jeune fille Américaine* always promised, keep on going "For-Ever."

CONCLUSION

Picabia's hermaphroditic solution may have addressed his own psychosexual needs, and, in that specificity, left intact the misogynist trajectory of Dada and Surrealism. But the poems and drawings of the *fille* offer present-day viewers a glimpse of the path not taken, an unheeded alternative to the art-historical logjam set up by Marcel Duchamp's frustrated bachelors and isolated brides. The disappearance of the ambiguous, hybrid, and polymorphous sexuality made available by the *FNSM* may be due to the very specificity of sexuality's function within the neurasthenic regimen. What is clear is that the dominant model of machinic sex is still Duchamp's *The Bride Stripped Bare by Her Bachelors, Even (the Large Glass)*, slowly "painted" by Duchamp during almost the entire decade of Picabia's mechanomorphic production (1915–1923). The *Large Glass* stands as a virtual icon of the 1920s' infatuation with the eroticized machine, revised and revisited after World War II by artists as various as Jasper Johns, Robert Smithson, Hannah Wilke, and Rebecca Horn.[68] In the complex vertical composition, Duchamp's bride remains forever isolated on the top, his bachelors ever celibate on the bottom. The only connection between the disrobing bride and impotent bachelors is the "love gas" that the latter spray forth. To be more accurate, what connections exist between the two sexes have the function of *alternations*. In Duchamp's notes for the piece, we hear echoes of the neurasthenic vocabulary of electrical circuitry and "copulatory excess," but Duchamp implicitly accepts the hyper-gendered model of the neurasthenic system that Picabia's project works to complicate:

> there is no discontinuity between the bach. machine and the Bride. But the connections, will be, *electrical*. and will thus express the stripping: an alternating process. Short circuit if necessary. . . . Slow life—Vicious Circle—Onanism.[69]

The promise to "short circuit" the electrical alternation between male and female is an intriguing possibility (one that may have been realized in the later accident that fractured the *Glass*), but as built, the work's separation between bride and bachelors is complete. As William Rubin summarizes its "intricate amatory iconography," "the *Large Glass* constituted . . . an assertion of the impossibility of union, hence, of sexual futility and alienation."[70] While Duchamp posits a female machine (itself a destabilizing move), she remains isolated, her "marriage" unconsummated and her desire unknown—a far cry from the mutual penetration of Picabia's more outgoing, hermaphroditic machines.[71]

As we have seen, technology inhabited Picabia's imaginary in peculiar and particular forms, and his elision into identification with the mechanical *Fille* was more thoroughgoing even than Duchamp's gender-bending presentation of himself as Rrose Selavy. But I have argued that this personal psychological level resonated with more general discourses about sexuality, "modern nervousness," and machines. In fact, although the specifically neurasthenic content of his project seemed to pass largely unremarked, Picabia's enormously evocative name for the *fille née sans mère* proved so productive that it was adopted by his friend Paul Haviland, writing in *291* about the benefits of new technologies such as the camera:

> Man made the machine in his own image. She has limbs which act; lungs which breathe; a heart which beats; a nervous system through which runs electricity. The phonograph is the image of his voice; the camera the image of his eye. The machine is his "daughter born without a mother." That is why he loves her. . . . She submits to his will, but he must direct her activities. . . . Through their mating, they complete one another. She brings forth according to his conceptions.[72]

Haviland's incestuous fantasy is very clear; his "*destinées*" are the cinemagenic females of Fritz Lang's *Metropolis* and Villiers's Eve, who unify voice and image and present a phantasmagoric cross-circuiting (but not short-circuiting) of patriarchal and filial desire. I have hinted all along that the sexed machines of the cultural Imaginary may themselves have veiled anxieties about more practical problematics such as the position of actual women in the world, or fragile subjectivities in the rapidly industrializing urban environment. Although this paper has only hinted at the larger relationships between, for example, the industrial workplace and these motherless machines (and remember that they are not fatherless), or their links to the emergence of a seemingly powerful New Woman, I would like to open a space for further discussion and, potentially, new Imaginaries. Those who have studied the early-twentieth-century fascination with the sexed machine have posited some fairly straightforward interpretations: Andreas Huyssen proposes that the growing fear of technology was displaced onto females who could then be mastered and destroyed.[73] Peter Wollen suggests that Americanism and Fordism became routes to a mechanization of real bodies that had as its goal the control of sexuality, inverted and mirrored, as Rosi Braidotti sees it, in the Sadean dynamic of repetitive mechanistic rituals that ultimately fail to contain the nonproductive energies of *jouissance*.[74] But these formulas seem perhaps too tidy for the complex dynamic of the Picabian hermaphroditic machines, or even for the parallel formation of the phallic woman. With the psychoanalytic depth invited by Picabia's drawings of, and by, the *FNSM*, we can see the potentially absolute *unfixity* of the machinic phylum—poised, as we are, at what Gilles Deleuze saw clearly as a

new episteme.[75] The machine is neither utterly outside nor wholly in the human body, neither male nor entirely female, neither bad nor completely good. The same egg-beater can be male or female, and the mechanomorphic body may turn out to be both bride and groom. Psychoanalysis, that emerging discourse whose origins were not so distant from Picabia's cultural frame (nor, perhaps, entirely unfamiliar to the neurologists to whom he dedicated his *fille*), offered an early vision of the slippage of meanings, the doublings and inversions, the misprisions and parapraxes that refuse reduction to a single "fact" or a fixed identity. Picabia elaborates and extends this view—not as a case of ambiguity, but as an oscillatory shift between what Lacan calls the Imaginary and the Symbolic. In Picabia's hermaphroditic machines, we have both the polymorphous bliss of the self-lubricating system—a pre-Oedipal, pre-linguistic state—and the law of Logos and linguistic *différance*, the insistently productive and patriarchal order of electrical coils, meanings, *mâles*, convalescing narcissists, and even *haricots*.

And if these insights about the sex of machines have pertinence for our understanding of early modernism, they are equally relevant for our charting of the post-World War II configurations seen in Warhol, Stella, Smithson, and their 1960s colleagues, as well as the more recent erotic cyborgs of Donna Haraway or Rebecca Horn, William Gibson or Ridley Scott. Reading through Picabia, we can see much more instability in these discourses of technology, more slippage in those signifiers and more destabilizing effects. Now that the female machine has been disinterred and recreated as Haraway's utopian cyborg, can we rescue her from that old Galatean function as man's daughter without a mother? Far from answering such a question, I can only hope, perhaps mischievously, to open it up for further interrogation. Will it turn out to be a can of worms, or Pandora's box? Probably, like Picabia's *Fille/Fils*, the answer is "both." And if we can make sense out of these kinds of trouble, we may understand the larger troubles that continue to fret our technological dreams.

Notes

1. Francis Picabia, quoted in "French Artists Spur on American Art," *New York Tribune*, October 24, 1915, part IV, p. 2. My thoughts on New York Dada, and the American sources for surrealism's mechanomorphic imagery, were first stimulated by my work in Milton Brown's seminar at the Institute of Fine Arts in 1982; I am grateful to Professor Brown for his comments on my unpublished paper on "New York Dada and the American 'Avant-Garde,' 1910–1925." Versions of the present essay were presented at Princeton University in the Women's Studies Program and the department of art and archaeology, at the Berlin Summer Academy of the Max Planck Institute, at the Program in Science, Technology, and Society at MIT, at the Center for Literary and Cultural Studies at Harvard, and at the Whitney Museum of American Art; I am grateful to each of those audiences for their responses. Helpful readers and sounding boards were found in Rosi Braidotti, Wanda Corn, Rachelle Dermer, Laura Engelstein, Yaakov Garb, Peter Galison, Amelia Jones, Joan Scott, Susan Suleiman, and Robert Wokler.

2. The concept is Michel Foucault's. See his discussion of "the 'micro-physics' of power," in which relations of power are not imposed from above, or from a distance, but "go right down into the depths of society." *Discipline and Punish: The Birth of the Prison*, trans. Alan Sheridan (New York: Vintage, 1979), pp. 26–27.
3. Judy Wajcman, "Technology as Masculine Culture," in *Feminism Confronts Technology* (University Park: Pennsylvania State University Press, 1991), p. 137.
4. The language of Benjamin's generative essay is one of its many complications, for it was published initially in French in the exiled German-language *Zeitschrift für Sozialforschung* V, 1 (1936). For the English translation of the essay and a brief introduction to his work, see Benjamin, *Illuminations*, trans. Harry Zohn (New York: Schocken Books, 1969).
5. See Nancy Ring, *New York Dada and the Crisis of Masculinity: Man Ray, Francis Picabia, and Marcel Duchamp in the United States, 1913–1921* (Ph.D. dissertation, Northwestern University, 1991), pp. 29, 124, 131.
6. The question of who gave the work its title is unsolved. Art historian Francis Naumann ventures this opinion:

   > The photographic image of the eggbeater was first made by Man Ray in 1917. At that time, he titled the picture *Man*. It was the companion piece to his subsequent photograph of lights and clothespins, *Woman*. However, the eggbeater photograph later reappears, retitled and redated *La Femme*, 1920 (Collection Centre National d'Art et de Culture Georges Pompidou). Since the handwriting at the bottom of the photograph does not appear to be Man Ray's, it is tempting to imagine that Tzara, having received *Man* and *Woman* for his magazine *Dadaglobe*, switched their titles when he entered them in the 1921 exhibition at the Théâtre des Champs-Elysées. No copy of *Woman* retitled *L'Homme* exists, however.

   Nauman, "Man Ray 1908–1921: From an Art in Two Dimensions to the Higher Dimension of Ideas," in Merry Foresta et al., *Perpetual Motif: The Art of Man Ray* (Washington and New York: National Museum of American Art, Smithsonian Institution, with Abbeville Press, Publishers, 1988), p. 86, n. 35.
7. While I'm sympathetic to recent discourses about the inseparability and mutability of *both* sex and gender, and to counter-discourses that demand a resituation in actual female bodies (rather than endlessly deconstructed texts), I want here to preserve the useful (if somewhat arbitrary) distinction between sex, as a biological category, and gender, as a social construction. Certainly for the critics of the "*femme nouvelle*" in the early 1920s, there was a clear distinction between gender—that cluster of disturbingly mutable activities such as fashion, profession, and demeanor—and sex, that reproductive role that would be enforced (if necessary) on those whose chromosomes rendered them capable of giving birth.
8. I need both difference and *différance* to denote both the space opened up by the divergent titles (difference), and the complex system of traces that is thereby set into play.

   > *Différance* is the systematic play of differences, of the traces of differences, of the *spacing* by means of which elements are related to each other. [T]he *a* of *différance* also recalls that spacing is temporization, the detour and postponement by means of which intuition, perception, consummation—in a word, the relationship to the present, the reference to a present reality, to a *being*—are always *deferred*. Deferred by virtue of the very principle of difference which holds that an element functions and signifies, takes on or conveys meaning, only by referring to another past or future element in an economy of traces.

   Jacques Derrida, interviewed by Julia Kristeva in 1968, anthologized in Derrida, *Positions*, trans. and annot. Alan Bass (Chicago, 1981), pp. 27–29.
9. Klaus Theweleit, *Male Fantasies*, vols. I and II (Minneapolis: University of Minnesota Press, 1987 and 1989); Jeffrey Schnapp, *Staging Fascism*, work-in-progress, and Hal Foster, *Prosthetic Gods*, work-in-progress. I am grateful to Jeff Schnapp for sharing his work with me, and for alerting me to Hal Foster's similar research into fascism's erotics. For a different view in which technology is neutral, but

ultimately shifted to the woman in order to demonize it, see Andreas Huyssen, "The Vamp and the Machine: Technology and Sexuality in Fritz Lang's *Metropolis*," *New German Critique* 24–25 (Fall–Winter 1982): 221–37.

10. For brief reviews of my take on mechanomorphic art in modernism, see the final chapter of *Machine in the Studio* (Chicago: University of Chicago Press, 1996), my contribution "Artistes et ingénieurs," in *Les Ingénieurs du Siècle*, ed. Antoine Picon (Paris: Musee national d'art moderne, Centre Georges Pompidou, 1997), and my *Painting Machines* (Boston: Boston University Art Gallery and University of Washington Press, 1997).
11. Joseph Stella, quoted in John I. H. Baur, *Joseph Stella* (New York: Shorewood Publishers, 1963), p. 13. The five-panel polyptych was described by Stella as a symphony, but again, it was a curiously *gendered* musical form: "a symphony free in her vast resonances, but firm, mathematically precise in her development . . . highly spiritual and crudely materialistic alike." Ibid., p. 35.
12. Gabrielle Buffet-Picabia, "Some Memories of Pre-Dada: Picabia and Duchamp" (1949), in *The Dada Painters and Poets: An Anthology*, second ed., ed. Robert Motherwell (Cambridge: Harvard University Press, 1989), p. 258.
13. See Estelle B. Freedman, "The New Woman: Changing Views of Women in the 1920s," *Journal of American History*, LXI, 2 (September 1974): 372–93; Carroll Smith-Rosenberg, "The New Woman as Androgyne: Social Disorder and Gender Crisis, 1870–1936," in her *Disorderly Conduct: Visions of Gender in Victorian America* (New York: Alfred A. Knopf, 1985), pp. 245–96; and, for the French case, Mary Louise Roberts, *Civilization without Sexes: Reconstructing Gender in Postwar France, 1917–1927* (Chicago: University of Chicago Press, 1994); and Debora Silverman, "Amazone, Femme Nouvelle, and the Threat to the Bourgeois Family," in *Art Nouveau in Fin de Siècle France: Politics, Psychology, and Style* (Berkeley and Los Angeles: University of California Press, 1989), pp. 63–74.
14. Terry Castle, "The Female Thermometer," *Representations* 17 (Winter 1987): 1–27. Picabia's two drawings are published in his Dadaist journal *391*, 16 (May 1924): 3–4.
15. Castle, "The Female Thermometer," p. 22.
16. Marius Ary Leblond, cited by Silverman, "Amazone," p. 69.
17. Victor José, "La Féminisme et le bon sens," in *La Plume* 154 (September 15, 1895): 391–92, cited in Silverman, "Amazone," p. 72.
18. Joan Wallach Scott, *Gender and the Politics of History* (New York: Columbia University Press, 1988). For a trenchant analysis of the fate of *"la garçonne"* in French postwar fiction, see Roberts, *Civilization without Sexes*.
19. See Roberts, *Civilization without Sexes*, pp. 8–9 and passim.
20. Pierre Drieu La Rochelle, *La Suite des idées* (Paris: Au Sens Pareil, 1927), p. 125, cited in Roberts, *Civilization without Sexes*, p. 2.
21. Nancy Ring, *New York Dada*, n. 15, p. 23.
22. Francis Picabia, "Soldats," *391* 7 (August 1917): 2. Ring translates this as "Hungry madness / desperate attitudes / the sick wall of the feminine sex." *New York Dada*, p. 22.
23. M. Numa Sadoul, writing in *Progrès Civique* (June 13, 1925): 840, cited in Roberts, *Civilization without Sexes*, p. 9.
24. As Siegfried Kracauer wrote of this English dance troupe, which intoxicated Europe in the 1920s: "The hands in the factory correspond to the legs of the Tiller Girls." ("The mass ornament," 1927, translated and published in *New German Critique* 5 [Spring 1975].) Illustrating my point about the European's linkage of things technological with things American, Kracauer was certain the Tiller Girls were American. Writing of them again in 1931 for the *Frankfurter Zeitung* ("Girls und Krise," no. 27, May 1931), he declaimed

    > the Girls were artificially manufactured in the USA and exported to Europe by the dozen. Not only were they American products; at the same time they demonstrated the greatness of American production. . . . When they formed an undulating snake, they radiantly illustrated the virtues of the conveyor belt; when they tapped their feet in fast tempo, it sounded like *business*,

business; when they kicked their legs with mathematical precision, they joyously affirmed the progress of rationalization; and when they kept repeating the same movements without ever interrupting their routine, one envisioned an uninterrupted chain of autos gliding from the factories into the world.

See Peter Wollen, "Cinema/Americanism/The Robot," *New Formations* 8 (Summer 1989): 24–25.

25. Translated by Robert Martin Adams as *Tomorrow's Eve* (Urbana: University of Illinois Press, 1982).
26. Ibid., p. 98.
27. Duchamp was clearly the most important art-historical and personal influence on Picabia's machine art, but the influence went both ways (as Duchamp's kinship exchange gesture suggests). Léger tells an interesting story about Duchamp that sets the stage for Picabia's importance to the younger painter (the two met in the winter of 1910–11):

    Before the World War I went with Marcel Duchamp and Brancusi to an airplane exhibition. Marcel . . . walked around the motors and propellers without saying a word. Suddenly he turned to Brancusi: "Painting has come to an end. Who can do anything better than this propeller? Can you?"

    Fernand Léger, around 1957, quoted in Pontus Hultén, *The Machine as Seen at the End of the Mechanical Age* (New York: The Museum of Modern Art, 1968), p. 140. Picabia's sympathy with Duchamp's perspective, and his pursuit of pure abstraction (earlier and more consistent than Duchamp's), suggests that the synergism of their views was crucially important to them both, and impossible to disentangle in a spurious search for priority.
28. The letterhead on the verso is just visible in the reproduction of the drawing in Figure 4. The Metropolitan Museum of Art, where the drawing is now located as part of the Stieglitz collection, has parsed the name through the paper as "Braevoort House," which I have interpreted as the "l'hôtel Brevoort" referred to by Gabrielle Buffet-Picabia as their lodgings during their first stay. More significantly, Picabia's wife recalls that it was here that Picabia made a suite of watercolors (and drawings?) that served as the basis for his exhibition at Stieglitz's gallery; thus, if the drawing dates from this first trip and was given to Steiglitz with the other works for the exhibition, it would be another explanation for its location in the Steiglitz collection. (On the other hand, Picabia's second wife and executor of his estate, Olga Picabia, dates the work as 1915.) Buffet-Picabia writes of the excitement of this first trip and its effect on Picabia's art:

    Cette ambiance vivifiante ne devait pas tarder à manifester ses effects, c'est-à-dire un irrésistible désir de peindre. Il revint un jour à l'hôtel Brevoort, où nous habitions, avec l'outillage nécessaire à son travail, organisa une installation de fortune et les murs se couvrirent bientôt d'une série d'aquarelles de grandes dimensions qui recréaient aussi un climat inconnu par la richesse de leurs inventions et l'éloquence plastique de leurs "abstractions."

    Gabrielle Buffet-Picabia, *Recontres avec Picabia, Apollinaire, Cravan, Duchamp, Arp, Calder* (Paris: Pierre Belfond, 1977), p. 46. Wanda Corn, scholar of these transatlantic exchanges of "Americanisme," informs me that "The Brevoort hotel is where all the French exiles stayed and/or socialized during the war" (email August 15, 1995), which certainly reinforces my inference as to the letterhead's source.
29. The "doctor-mechanic" brings to mind Benjamin's famous comparison, in the "Work of Art" essay, where the painter is like a magician, and the filmmaker like a surgeon who "penetrates deeply into the web of reality." For the importance of X rays in Picabia's ideas, and in the cultural imaginary as a whole, see Linda Dalrymple Henderson, "Francis Picabia, radiometers, and X-rays in 1913," *Art Bulletin*, 71, 1 (March 1989): 114–23. I am grateful to Dr. Henderson for many citations and insights about Picabia's work in this period.
30. William Homer, "Picabia's *Jeune fille américaine dans l'état de nudité* and her friends," *Art Bulletin* LVII (March 1975): 111.
31. Villiers de l'Isle-Adam, *Tomorrow's Eve*, p. 144.

32. William S. Rubin, *Dada and Surrealist Art* (New York: Harry N. Abrams, 1968), p. 56.
33. See, for example, *Voilà la fille née sans mère*, dated 1916–17 (illustrated in *Picabia*, Musée d'ixelles, 1983) and the 1917 *Fille née sans mère* (illustrated in Hultén, *The Machine*, p. 83). The latter image was produced in Barcelona during the first few months of Picabia's rest cure for neurasthenia.
34. *"Je dédie cet ouvrage à tous les docteurs neurologues en général et spécialement aux docteurs: Collins (New-York), Dupre (Paris), Brunnschweiller (Lausanne). F. Picabia."* Frontispiece, *Poèmes et dessins de la fille née sans mère* (Lausanne, 1918).
35. George M. Beard, *American Nervousness: Its Causes and Consequences, A Supplement to Nervous Exhaustion (Neurasthenia)* (originally published in 1881 by Putnam's, New York; reprint New York: Arno Press, 1972), p. 96. There is a now a large literature on neurasthenia and its relation to modern life. For an excellent history of how neurasthenia related to the emerging modern workplace, see Anson Rabinbach, *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (Berkeley and Los Angeles: University of California Press, 1992). On neurasthenia and manhood, see Mark Seltzer, *Bodies and Machines* (New York: Routledge, 1992). On the medical history, see Francis Gosling, *Before Freud: Neurasthenia and the American Medical Community 1870–1910* (Urbana: University of Illinois Press, 1987). For the French case, see Robert A. Nye, *Crime, Madness, and Politics in Modern France: The Medical Concept of National Decline* (Princeton: Princeton University Press, 1984).
36. Beard, *American Nervousness*, p. 9.
37. Ibid., p. 99.
38. Francis Gosling, *Before Freud*, p. 10, quoting Charles Rosenberg, "The Place of George M. Beard in Nineteenth-Century Psychiatry," *Bulletin of the History of Medicine*, 36 (1962): 249.
39. Joseph Collins, M.D., "The Etiology and Treatment of Neurasthenia. An Analysis of 333 Cases," *Medical Record* 55, 12 (March 25, 1899): 414.
40. See Robert A. Nye, *Crime, Madness, and Politics*, pp. 149–52, passim. Adrien Proust and Gilbert Ballet, *L'hygiène du neurasthénique* (Paris: Masson, 1897). Nye notes (p. 148) that the Proust and Ballet book was "the standard medical text on neurasthenia" in France, and points out that it appeared the same year as Durkheim's speculations on neurasthenia in Emile Durkheim, *Suicide: A Study in Sociology* (1897), trans. John H. Spaulding and George Simpson (Glencoe, Ill.: Free Press, 1951).
41. Collins, "Etiology," pp. 416, 415.
42. Indeed, Picabia's collapse is still described primarily as alcoholism or drug addiction. See *Dada Invades New York* (New York: Whitney Museum of American Art, 1997), p. 79. Whatever contemporary terms are brought to bear on the nature and etiology of Picabia's recurrent illness, it remains the case that his wife at the time, Gabrielle Buffet-Picabia, identified it as neurasthenia, and he was given therapy by three neurologists, to whom he felt grateful enough to dedicate his book of poems and drawings.
43. Collins, "Etiology," p. 419. For Collins's part, he believed that the apparatus using static electrical impulses was more effective than the faradic or galvanic type.
44. Bernard S. Talmey, M.D., *Neurasthenia Sexualis: A Treatise on Sexual Impotence in Men and in Women, for Physicians and Students of Medicine*, (New York: Practitioners' Publishing, 1912), p. 147. Talmey explains the procedure for one particularly gruesome treatment: "When the faradic current is used, one pole is applied to the genitals, the other within the rectum. A sponge electrode may also be placed upon the lumbar spine, while an electric brush is swept over the glans penis, scrotum, hypogastric region, buttocks, perineum and inner surfaces of the thighs" (pp. 153–54).
45. Maurice de Fleury, *Les Grands Symptômes Neurasthéniques (Pathogénie et Traitement)*, 4th ed. (Paris: Félix Alcan, 1910), p. 199.
46. Talmey, *Neurasthenia sexualis*, pp. 66–67.
47. "As a matter of fact veneral excesses are followed by malaise, nervousness, mental depression, lassitude, fatigue, satiety, heaviness in the head, disposition to sleep, dullness of intellect, indisposition to exercise, want of decision, regrets and ill-humor, and the other symptoms of general neurasthenia." Ibid., pp. 74–75.

48. Ibid., pp. 77–78, 83, emphasis added.
49. Ibid., p. 88.
50. As the noted gynecologist Charles Reed put it in his address to the doctors of the Cincinnati Hospital in 1899:

    > the genital organs of women, considered in the aggregate, are nothing more or less than a central telegraphic office, from which wires radiate to every nook and corner of the system, and over which are transmitted messages, morbific or otherwise, as the case may be; and it should be remembered right here that telegraphic messages travel both ways over the same wire; that there are both receiving and sending offices at each end of the line.

    Cited in Gosling, *Before Freud*, p. 98.
51. The "machinic phylum" is a concept from Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1987), p. 409, passim.
52. The full title of one of Picabia's early paintings, *Edtaonisl (ecclésiastique)*, had included the parenthetical "ecclesiastic"—supposedly a reflection on the artist's experience of observing a priest watching a Russian/American (or Hindu?!) "exotic dancer" named Stacia Napierkowska, to both men's arousal.
53. The writer is a certain P. Rousseau, whose *Histoire des transports* contributed the following: "*c'est le mouvement circulaire, . . . qui règne sur la quasi-totalité de nos mécanismes, . . . depuis le stylo que l'on* décapuchonne *jusqu'aux pompes d'alimentation des fusées.*" *Trésor de la langue française: Dictionnaire de la langue du XIXe et du XXe siècle* (Paris: Èditions du Centre National de la Recherche Scientifique), vol. 6, p. 802. Compare with the two references in *Le Robert*. Jean Genet: "*Mignon aime l'élégance du geste qui mêle les dés. Il goûte aussi la grâce des doigts qui roulent une cigarette, qui* décapuchonnent *un stylo*" (*Notre-Dame des fleurs*), and Annie Leclerc: "*Mais voilà: dés qu'ils (les hommes)* décapuchonnent *leur stylo, ça les prends, ça les reprends, ils n'ont plus qu'un mot à la plume, le Désir*" (*Parole de femme*). In *Le Grand Robert de la langue Française: Dictionnaire Alphabétique et Analogique de la langue Française*, 2nd ed., vol. 3 (Paris: Le Robert, 1987), p. 192.
54. Peter Galison suggested this last association to me.
55. See the definitive essay by Arnauld Pierre, "*Sources inédites pour l'oeuvre machiniste de Francis Picabia: 1918–1922*," *Bulletin de la Société de l'histoire de l'art française* (March 1991): 255–81.
56. *. . . elle se lève et bande la main*
    souriant toujours.
    Elle gouverne la science d'enchaîner
    les degrés de l'eau.
    . . .
    Je suis le monarque fauvette variété
    pudeur de passivité spermatozoïde.
    Inesthétique le matelot pâle
    près du lac sans soleil.

    Picabia, "Zoide," *Poemes et Dessins*, p. 38. Unless otherwise specified, translations are my own.
57. The partial spelling of "*Narcis*" (rather than the proper "*Narcisse*") suggests both "*naquis*," literally "I was born," and "*narcose*," narcosis—in other words, the twin poles of Picabia's awareness.
58. *L'égoïsme conquérant récrée un sot*
    Un amant attend le bonheur
    Affaires d'apparences
    Moi je n'ai jamais vu
    Ceux qui les portent
    L'inconnu n'a pas de théories
    Sur le gaspillage
    Le long du fleuve naufragé

    Picabia, "Vivre," *Poemes et Dessins*, p. 17.

59. . . . *La vérité de l'âme*
Est la grande lâcheté de l'orgueil académique
Mes yeux dans vos yeux
Je suis content
Dans ma solitude oubliée
Picabia, "Hélas!" in ibid., p. 18.
60. This image may relate closely to Picabia's additional extramarital affair with the artist Carlos Gregorio (he had already installed both wife and mistress in Zürich when he met Gregorio). The connection is made by William Camfield for *Brilliant Muscles*, reproduced in 1919 under the title *Vagin Brillant*, which "identifies the muscles involved." Other phrases in the work read: "Muscles," "*Brillants*," "*Petit male*," "*Frottement*," "*Buche à bouche*," and "*mécanique de la region sacrée* [sic]." See William Camfield, *Francis Picabia: His Art, Life, and Times* (Princeton: Princeton University Press, 1979), p. 116.
61. The original illustration is labeled "*Le Volant du compteur 'Duplex,'*" in *La Science et la Vie* 36 (December 1917–January 1918). See Arnauld Pierre, "*Sources*," p. 258.
62. The editors of the 1992 French reprint have "corrected" the original in this respect, and titled the drawing *Mâle*.
63. I am grateful to Jann Matlock for pointing this out.
64. . . . *C'est le système nerveux*
à l'imagination personnelle
des plaisirs d'éprouver
l'impossibilité.
Picabia, "Borgne," in *Poèmes et Dessins*, p. 62.
65. Auguste Villiers de L'Isle Adam, *L'Eve Future* (first edition Paris, 1886, second edition, Paris, 1922, English edition, 1982). As I have argued, Adam's book is a crucial one for understanding the complex history of the fantasized cyborg, and how she intersects with the Galatea myth. Peter Wollen provides an excellent brief analysis of this "future Eve," which Wollen compares to E. T. A. Hoffmann's Olympia:
> Caught up in the circulation of desire, the automaton becomes both philosophical toy and sexual fetish or surrogate. Thus Edison . . . is both magus (though American) and marriage-broker (even "idealized" procurer and pimp). His project is the technical realization of the ideal object of masculine desire. The real task of creation is not simply to create a human being, but to create woman *for man*.

"Cinema/Americanism/The Robot," *New Formations* 8 (Summer 1989): 16. Intriguingly, some Picabia scholars have interpreted the *FNSM* in just this way:
> "*The Girl Born without a Mother* . . . refers to the machine as a "creature" made by man for his service—much as God had created Eve, not from woman but from man and for man's use and companionship. The artist was therefore—as Picabia frequently suggested—a god-like figure. But, as God created without the aid of a mother, one eventually encounters concepts of the "unique eunuch" . . . , the "merry widow" . . . and the products of their offspring.

William Camfield, *Francis Picabia* (New York: Solomon R. Guggenheim Museum, 1970), pp. 23–24. I suggest a different reading of these objects here.
66. Breton was probably paraphrasing an epigram attributed to Picabia, that one should "change one's ideas as often as one's shirt." Breton cited in Man Ray's "Photography is not Art," *View* (April 1943): 23, continued in (October 1943): 77–78, 97.
67. *L'homme animal*
Vers le néant
Enveloppe ses sens . . .
De la pénétration mutuelle
Méchanisme aveugle et muet

Nous trouverons des ailes qui vivent selon Platon
Dans les apparences des réalités.
Francis Picabia, *Poèmes et Dessins*, p. 21.

68. The Smithson work in question is his assemblage titled *Honeymoon Machine* that presents a revision of Duchamp's *célibataires*. See my discussion of the gender dynamics in the Smithson assemblage in *Machine in the Studio* (Chicago: University of Chicago Press, 1996), pl. 8, p. 300ff. For an extended discussion of mechanomorphic art and art machines, see also Caroline A. Jones, *Painting Machines* (Boston: Boston University Art Gallery, 1997).
69. Marcel Duchamp, notes from the *Green Box*, as cited by Amelia Jones in *Postmodernism and the En-Gendering of Marcel Duchamp* (Cambridge: Cambridge University Press, 1994), p. 196. My forced constriction of the meanings of the *Large Glass* is purely instrumental; for a nuanced and sophisticated reading, I refer the reader to Amelia Jones's book.
70. William S. Rubin, *Dada, Surrealism and Their Heritage* (New York: The Museum of Modern Art, 1968), pp. 20, 21.
71. But, as with the counter readings of Picabia's machinic bodies, Duchamp's bride can also be seen as *allowed to exist in her own sphere*, allowed "the possibility of sexual fulfillment as well as her own space of desire." Amelia Jones, paraphrasing François Lyotard in *Postmodernism and the En-Gendering of Marcel Duchamp*, p. 198.
72. Paul Haviland, in *291* 7–8 (September/October 1915): 1. Pontus Hultén suggests that Duchamp "gave" Picabia the name, and the concept, of the *FNSM* (in his *Machine as Seen at the End of the Machine Age*). Without any supporting evidence, this seems yet another instance of the power of the Duchampian author-function, which Amelia Jones describes in *Postmodernism and the En-Gendering of Marcel Duchamp*. It is clear that Haviland disclaims ownership of the phrase through the quotes he places around it.
73. Andreas Huyssen, "The Vamp and the Machine: Technology and Sexuality in Fritz Lang's *Metropolis*," *New German Critique* 24–25 (Fall and Winter 81–82): 221–37.
74. Peter Wollen, "Cinema/Americanism/The Robot," pp. 7–34. Rosi Braidotti, conversation with the author, April 1995.
75. See Gilles Deleuze on Foucault and the new episteme:

> Foucault shows that man, in the classic period, isn't thought of as man, but "in the image" of God, precisely because his forces enter into combination with infinitary forces. It's in the nineteenth century, rather, that human forces confront purely finitary forces—life, production, language—in such a way that the resulting composite is a form of Man. And, just as this form wasn't there previously, there's no reason it should survive once human forces come into play with new forces. . . . What happens when human forces combine with those of silicon, and what new forms begin to appear?

Deleuze, *Negotiations, 1972–1990*, trans. Martin Joughin (New York: Columbia University Press, 1995), pp. 99–100.