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### The Fabric of Modern Times

# Jeffrey T. Schnapp

### 1. Modern Matters

This essay is concerned with how certain materials—associated not with the decadent materiality of ruins, languorous bodies, and exotic landscapes but instead with the clean, agitated, intensified materiality befitting a new age of electricity and steel—became identified with modern forms of embodiment. It approaches this global tale from the standpoint of a local, differentiated story: that of the symbolic investments made by a generation of Italian designers, architects, artists, writers, industrialists, and engineers in artificial textiles. Like tempered glass, reinforced concrete, aluminum, stainless steel, and plastics, artificial textiles belong to a privileged family of modern materials. "Privileged" because theirs is a happy, often utopistic, even miraculous materiality, not unlike a secularized version of the Christian theology of glorified bodies according to which the chains that bind matter and human bodies to the corrosive effects of time are shed through the activation of a higher potentiality that was thought to lie dormant within the material world (but was nonetheless imagined as an integral component of it): that inner agitation and

An abridged early draft of this essay appeared under the title "Canto della materia I: Il rayon e i tessuti autarchici," *Annuario di Estetica 1995*, ed. Stefano Zecchi (Bologna, 1996), pp. 211-42. I would like to express my gratitude to Luce Marinetti-Barbi and the Getty Research Institute for granting their permission to publish an English translation of an unpublished early draft of F. T. Marinetti's "Simultaneous Poem of Woven Light" (see appendix). Unless otherwise indicated, all translations are my own.

drive towards "greater ardor, greater movement, a greater subdivision of itself" sung in Filippo Tommaso Marinetti's "Technical Manifesto of Futurist Literature" (1912). My essay's aim is to apply some pressure to the timeworn formulas that identify modernity with secularization and modern architectures and design practices with a functionalism or rationalism stripped of myth or metaphysical aspirations. In probing these mythologies and aspirations, I set out to track the traffic between technical and nontechnical discourses contemporary to futurism: in the present case study, between a technicist poetics with hypermimetic ambitions and a set of industrial practices saturated with and motivated by symbolic and social meanings. The spirit, I try to suggest, could not easily be buried in an era of diminished or absent belief in the supernatural. Rather, poets, designers, architects, industrialists, and engineers regularly collaborated to relocate the spiritual within new technologies and the materials with which they were affiliated, all of which were felt to offer artificial paradises constructed from the very building blocks of nature, man-made forms of levity and levitation that compensated for deeper losses: of community, tradition, and a stable sense of social identity and place.

My claim, then, is that instead of receding into a passive role—as raw stuff to be worked, whose inherent value resides in their receptivity to human modification—modern materials emerge as autonomous forces within an overarching modernist prosopopoeia. Beyond even their symbolic import, they become protagonists and heroes endowed with powers of agency and moral value, capable of sharing in the particular and universal attributes of human subjects and/or of serving as prosthetic extensions of humanity. This point was well understood by Maxime Du Camp, whose 1855 Songs of Matter (Chants de la matière) first chronicled the rise of this distinctively modern cult of materials. The artist of the industrial era, Du Camp suggests, must resist the past's siren song, which summons him to weave garlands around history's greatest monuments and to sing "the immortals and their distant works." Instead, his task entails an act of

<sup>1.</sup> The full passage reads: "Man tends to soil matter with his youthful joy or old pain, matter which possesses an admirably sustained drive towards greater ardor, greater movement, a greater subdivision of itself. Matter is neither sad nor happy. Its essence is courage, willpower, absolute force" (F. T. Marinetti, "Manifesto tecnico della letteratura futurista," *Teoria e invenzione futurista*, ed. Luciano De Maria [Milan, 1983], pp. 51–52).

<sup>2.</sup> Maxime Du Camp, "A Charles Lambert," Chants de la matière, in Les Chants modernes (1855; Paris, 1860), p. 170; hereafter abbreviated "ACL."

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visual/verbal engineering: to translate into imperfect objects and words "the songs of matter, explicating [modern] matter's towering deeds" ("ACL," p. 169). Du Camp concludes:

This is the song that I offer you here: . . . the poem of ceaseless labor and human progress, of hope that leads mankind by the hand, of peaceful efforts that will bring glory to our age by eliminating hunger, war, and slavery; a poem made up of forces that God blesses without end forces wherein lies the promise of our future freedom!

["ACL," p. 171]

So modernity's song of matter is not the song of history. Nor does it consist in that disengaged and ornamental form of creation that Du Camp's contemporaries and successors referred to with disdain as "mere art" or "mere literature." Rather, the artwork is at once a work in progress and a vehicle for work and progress. It provides the visual/verbal counterpart to industry's alchemical transformations of the real and thereby participates directly in the forces and devices required to build an irenic industrial future: capital, steam, the worker, the loom, the scythe, the locomotive.

In the following reflections we rejoin Du Camp's poem of incessant labor and human progress some eighty years later, at a time when, at least in Italy, his dreams of universal peace had metamorphosed into a militant politics and poetics designed to identify the concept of national sovereignty with strategic metals, materials, and fuels. Mussolini's invasion of Ethiopia in October 1935 provoked stiff economic sanctions on the part of the League of Nations by the year's end, sanctions that substantially reshaped not only the Italian economy but also the cultural and technical debates of fascism's second decade. Thanks to these events, songs celebrating modern materials quickly devolved into songs of autarchy, epics celebrating the nation's struggle for economic self-sufficiency that Mussolini's Italy shared with Hitler's Germany and Stalin's Russia and also, with notable variations, with numerous liberal democratic and social democratic states. The bards of this autarchic poetry were many, but I will limit myself to a single case study here: that of Marinetti, the founder and leader of the Italian futurist movement. More specifically, I will be reconstructing the context that gave rise to the culminating work of the final phase of his literary career, The Non-Human Poem of Technicisms (Il poema non umano dei tecnicismi) (1940), a work wrapped around a core of poems dedicated to proving the proposition that rayon is the fabric of modern times (fig. 1).

Rayon is what is known as a modified natural (or *artificial*) fabric since, unlike true synthetic textiles such as nylon, it is made from plant-derived cellulose that is first transformed into a liquid compound and



FIG. 1.—"A nocturnal vision of power and beauty." Main factory building of SNIA Viscosa's rayon production facilities in Torviscosa, 1939. From 10 anni di attività della SNIA Viscosa (1939).

then reconverted back into fiber and spun.<sup>3</sup> Straddling the threshold between the natural and the man-made, it was one of several such fabrics seized upon by Italian industry; the fascist state; and contemporary designers, writers, and artists as a site for elaborating a complex physics and metaphysics of sovereignty that celebrated, on the one hand, a limited and limiting national/natural landscape (imbued with attributes of hero-

3. The word rayon designates the family of man-made fibers and fabrics produced from plant cellulose, usually derived from trees, though sometimes also from cotton seeds ("linters") and other plant material. Over the course of its history, rayon has assumed three principal forms: nitrocellulose rayon (abandoned early on because of its flammability); viscose rayon (the most successful variety); and cuprammonium rayon (also known by the trademark Bemberg). For purposes of this essay, the term refers to viscose rayon. Textile terminology is not always applied with rigor in nontechnical publications from the pre-World War II period, but standard usage defines synthetic fibers and fabrics as entirely produced by chemical means, whereas artificial fibers and fabrics, on the contrary, rely upon naturally occurring fibrous matter or materials that are chemically modified. Therefore, both rayon and Lanital, a casein-based autarchic fabric that will be discussed below, are considered artificial fabrics.

ism and moral superiority) and, on the other, the unlimited power of technology, culture, and the national will to transform that very lack into abundance, beauty, and strength. In some regards the mythology in question was a distinctively Italian one, unimaginable outside the framework of fascist ideology and/or, more broadly, an economy dominated by smallscale, family-based industries; craft and design traditions hypersensitive to the dialectical interplay between modernity and the cultural-historical past; and a long-standing tendency to conflate aesthetic and political manifestations of power and selfhood. In no other country could a fashion mobilization built around the cult of national fabrics have been undertaken with such apparent urgency and so few smiles. As early as 1930, the dictator rallied his troops with a call for "an Italian style in furnishings, interior decoration, and clothing [that] does not yet exist: it can exist, therefore it must come into existence now."4 The troops replied by developing a design culture that, constrained by the need for stylistic autonomy and for reliance upon both old and newly developed autarchic materials, set the stage for Italy's emergence as a world leader in postwar fashion, textiles, and design. The effect may be charted in terms of careers such as that of the brilliant Milanese designer-architect Giò Ponti, forefather and catalyst of much postwar design work. It is also registered in the annals of corporations like the Salvatore Ferragamo shoe company. Onetime shoemaker to Hollywood stars such as Theda Bara, Jean Harlow, and Rudolph Valentino, Ferragamo built his business around autarchic materials and themes from the mid-1930s onward.5 When high-quality kid leather became unavailable, he devised elegant designs, including Roman-style sandals and several shoes bearing the imprint DUX, made out of viscose-derived cellophane, leather waste, bakelite, raffia, bark, rope, hemp, and rubber derivatives (fig. 2).6 When the steel stiffeners that once supported his high-heeled creations became scarce, he experimented with wire and leather before coming up with the solution that would ensure his firm's wartime and postwar triumph: platform and wedge-heeled shoes made out of autarchic wood or cork.7

- 4. Benito Mussolini, quoted in Natalia Aspesi, *Il lusso e l'autarchia: Storia dell'eleganza italiana 1930–1944* (Milan, 1982), p. 24. In the original, the closing phrase reads "'crearla [una moda italiana] è possibile, bisogna crearla."
- 5. It would be more accurate to speak of a "rebuilding" inasmuch as adverse economic conditions had driven Ferragamo to declare bankruptcy in the late 1920s. On the history of Ferragamo's company, see Centro Di, I protagonisti della moda: Salvatore Ferragamo (1898–1960) (exhibition catalogue, Palazzo Strozzi, Florence, 4 May–30 June 1985); and Salvatore Ferragamo, Shoemaker of Dreams: The Autobiography of Salvatore Ferragamo (London, 1957).
- 6. Only two models of shoes bearing the DUX imprint are included in the Centro Di catalogue: model 47, a women's closed toe sandal design from 1936, featuring a plaited grass upper, kid binding, and wood high heel; and model 72, a women's suede ankle boot from 1938 with a black satin collar, a wood heel, and a platform sole.
- 7. Though most of Ferragamo's prewar and wartime designs were simply reworked in the postwar period, his breakthrough design—the so-called invisible shoe with its nylon-



FIG. 2.—Woman's sandal, designed and manufactured by Salvatore Ferragamo productions, 1940. Black satin and gold kidskin; gold platform heel. From Centro Di, *I protagonisti della moda: Salvatore Ferragamo (1898–1960)* (1985).

In other regards, the cult of national fabrics fostered by the fascist autarchy campaigns and codified in *The Non-Human Poem of Technicisms* is not distinctive at all. Textile production's importance to the early history of industrialization had long ago assigned to fabrics a central, symbolically charged place in the universe of commodities, so much so that the textile sector was viewed as a key indicator of a modern nation-state's ability to project its power at home and abroad. Industrial fabrics and the modern machines responsible for their production were therefore showcased right from the start. They were featured together at the 1851 Crystal Palace exhibition in London, where swatches and bolts were paired with sculptural representations of the "several processes through which the same [colonial raw] material passes, until it finally quits England again in its most highly finished and useful form." At the 1876 Philadelphia Centennial Exposition fabrics and machines stood out among the stars of the Hall of Industry in a display of enormous Ameri-

thread vamp and f-shaped, sculpted wood heel—was new. Introduced in 1947 and ideally suited to Dior's "New Look" (with its lowered shoulders and ankle-length skirts made of precious brocades and taffetas), the invisible shoe's heel design was, nonetheless, directly based on Ferragamo's prior wedge designs.

<sup>8.</sup> Samuel Phillips, Guide to the Crystal Palace and Park (London, 1855), p. 135.

can power looms "in practical operation, attracting crowds of visitors, all interested in the curious automatic movements and apparently marvelous results accomplished by these machines."9 At the 1889 and 1900 Paris Expositions, the practice was carried over to the display of Count L. M. H. Bernigaud de Chardonnet's newly discovered marvel, "artificial silk"—renamed rayon in 1924, in order to avoid intimations of artificiality and/or inferiority to natural silk—and the magical machines responsible for its manufacture.<sup>10</sup> The following century extended and expanded upon this legacy, introducing wave after wave of so-called miracle fabrics, from nylon to Dacron (polyester) to spandex, often in exhibitions allegorizing them in nationalist or internationalist terms. 11 Regularly identified with themes of democratization, emancipation, resistance, strength, and personal hygiene, these "fabrics of the future" (not unlike modern "fabrics of the past," ranging from Scottish tartans to Ghanaian kente cloth) provide a direct tie-in between efforts at collective self-fashioning and individual subject-formation. 12 Unlike other emblems of modernity and potential objects for prosthetic self-extension, such as airplanes, automobiles, household appliances, and armored cars, fabrics, which surround the epidermis as a secondary membrane, bear a uniquely intimate and direct relation to the human body. Indeed, it was as a literal second skin, as the technologically enhanced double of a primary skin seen as once enfeebled and enervated but reinvigorated thanks to the fascistization of the Italian body politic, that rayon and autarchic peers like Lanital, a

- 9. From the exhibition guidebook, quoted in Rita J. Adrosko, "Textiles," in 1876: A Centennial Exhibition, ed. Robert C. Post (Washington, D.C., 1976), p. 123.
- 10. Enciclopedia Italiana, 36 vols. (Rome, 1935), 28:882. Chardonnet, a chemist and disciple of Louis Pasteur, was less the discoverer of rayon than the first to bring it from the laboratory to industrial production. The chemistry of rayon was largely worked out before him by figures such as G. Andemars, J. W. Swann, and E. Schweizer. A comprehensive history of rayon comprising a detailed description of the production processes may be found in Enciclopedia Italiana 28:882–98. The unsigned entry devotes sixteen full pages to rayon, while the same volume rather tellingly dispatches the topic of psychology in only fourteen pages.
- 11. On the history of Dacron, see Stephen Demeo, "Dacron Polyester: The Fall from Grace of a Miracle Fabric," *Science as Culture* 5, no. 3 (1996): 352–70. It is perhaps worth observing that one postmodern continuation of this story has the cult of miracle fabrics transformed into that of recycled or "environmentally friendly" nontoxic or nonexploitative textiles of the sort favored by the Patagonia company or L. L. Bean (for instance, the new textile Tencel, grown on land otherwise unsuitable for crops). I wish to thank Ann Weinstone and Samuel Isenstadt, respectively, for calling my attention to these references.
- 12. The pursuit of romanticized revolutionary futures differs only superficially from that of romanticized lost heritages inasmuch as both presume the existence of an unstable selfhood in need of a fashioning that is literalized through clothing and fabric choices. Scottish tartans as tribal markers were themselves an invention of the late eighteenth and early nineteenth centuries. Similarly, *kente* cloth's status as a marker of Ghanaian national identity, not to mention pan-African identity, can be dated back no further than the administrations of Kwame Nkrumah, the first leader of Ghana after independence (1957–66).

casein- (which is to say, *cheese*-) based artificial textile, were dubbed the fabrics of modern times.

## 2. Matter against Rot

The overcoming of physical decay by forging new bodies and materials had always figured among futurism's heroic themes (and never without nationalist and/or imperialist connotations). From the auto crash out of which the movement, reborn in the maternal muck of an industrial ditch emerged in the "Foundation and Manifesto of Futurism" (1909);<sup>13</sup> to the 1912 "Technical Manifesto"'s dream of destroying the "literary I" and replacing it with matter's "directive impulses, its forces of compression, expansion, cohesion, and dispersion, its massing swarms of molecules and swirling electrons";14 to the 1915 "Manifesto of Electrical War" in which, "free of wood and its lesson of weakness and debilitating softness, and from fabrics and their rustic ornaments," men are able to force their flesh to "resemble the surrounding steel";15 to the 1933 radio manifesto's proposal that the waves emitted by dead spirits be revivified, amplified, and altered;16 to The Non-Human Poem of Technicisms with its transfigured and transfiguring fabrics, futurism was deeply haunted by the problematic of decline, whether in the domain of nature, the individual body, or the body politic.<sup>17</sup> Like much of the fascist cultural-political world which it had shaped and by which it was shaped in turn, Marinetti's movement rejected the prior century's visions of eternal progress. It embraced instead nonlinear myths of catastrophe and revolution couched however paradoxically—in the languages of mathematics, technology, and science. Waging its war against decline even on the molecular level, the movement turned to double-bind structures or "addiction loops" in order to engender the types of polarization, intensification, and arousal that it deemed necessary to overcome Europe's turn-of-the-century crisis: loops that pitted escalating demands for energy, speed, sacrifice, and selfexpenditure and ever more steely human subjects, struggling to sustain such demands, against an array of fatal historical, biological, and telluric laws that would potentially frustrate all efforts at resistance. In so doing,

<sup>13.</sup> Marinetti, "Fondazione e Manifesto del Futurismo," Teoria e invenzione futurista, p. 10.

<sup>14.</sup> Marinetti, "Manifesto tecnico della letteratura futurista," p. 50.

<sup>15.</sup> Marinetti, "La guerra elettrica (Visione-ipotesi futurista)," Guerra sola igiene del mondo (1915), Teoria e invenzione futurista, p. 320.

<sup>16.</sup> See Marinetti and Pino Masnata, "La radia: Manifesto futurista dell'ottobre 1933," Teoria e invenzione futurista, p. 209.

<sup>17.</sup> On this topic, see Jeffrey T. Schnapp, "Propeller Talk," *Modernism/Modernity* 1 (Sept. 1994): 153–78.

however, it always found consolation in even the most tragic outcomes. "The poet," according to the sixth principle of the founding manifesto, "must spend himself with ardor, splendor, and generosity." But although such self-expenditure leads to death, as indeed it must, nothing in a futurist universe is ever lost: either the enthusiastic fervor of the primordial elements simply *swells* or "a qualitative mathematics" can be relied upon to abolish the "quantitative" fact of death. 19

The same logic informed futurist ruminations on fashion and fabrics.<sup>20</sup> These began early in the movement's history, with the May 1914 publication of Giacomo Balla's "The Male Futurist Clothing Manifesto" ("Le Vêtement masculin futuriste"). Rewritten as an interventionist tract several months later that year by Marinetti under the new title of "The Antineutral Suit" ("Il vestito antineutrale"), the manifesto is built around the contrast between a corrupt body buried in clothing "that negates its muscular life and suffocates it in the anti-hygienic passéism of excessively heavy fabrics and tedious, effeminate, decadent halftones" and its futurist antitype: a muscle-bound, militarized body clad in "aggressive," "agile," "dynamic," "rapidly changeable," "bright" garb with "muscular" polychrome hues.<sup>21</sup> Here, as in Volt's "The Futurist Manifesto of Women's Fashion" ("Manifesto della moda femminile futurista") (1920), Marinetti's "Against Female Luxury" ("Contro il lusso femminile") (1920), and Ernesto Thayaht and Ruggero Michahelles's "Manifesto for the Transformation of Male Attire" ("Manifesto per la trasformazione dell'abbigliamento

- 18. "Bisogna che il poeta si prodighi, con ardore, sfarzo e munificenza, per aumentare l'entusiastico fervore degli elementi primordiali" (Marinetti, "Fondazione e Manifesto del Futurismo," p. 10).
- 19. "Una matematica qualitativa abolisce la morte che è quantitativa" (Marinetti, "La matematica futurista immaginativa qualitativa: Calcolo poetico delle battaglie," *Teoria e invenzione futurista*, p. 231). Compare the conclusion of the "Technical Manifesto of Futurist Literature": "Dead cells intermingle with living cells. Art is the need to destroy and to disperse oneself, a great watering can of heroism that floods the world" (Marinetti, "Manifesto tecnico della letteratura futurista," p. 54).
- 20. On Futurism's excursions into the fashion world, see Enrico Crispolti, *Il futurismo e la moda: Balla e gli altri* (Venice, 1986); and Emily Braun, "Futurist Fashion: Three Manifestoes," *Art Journal* 54 (Spring 1995): 34–41. Crispolti omits any mention of "The First Futurist Manifesto for Italian Fashion" ("Primo Manifesto futurista per la moda italiana"), jointly authored by Ernesto Thayaht and Marinetti: a fiercely nationalistic polemic in favor of "Futurist Mediterranean mystical and aerial" new fashion. (A typescript of this manifesto, apparently published in early 1932, may be found in F. T. Marinetti Papers, Getty Research Institute, Los Angeles, Resource Collections, accession no. 850702, folder 172.)
- 21. Marinetti, "Il vestito antineutrale," reproduced in Crispolti, *Il futurismo e la moda*, p. 90. Unlike the bulk of Balla's manifesto, the cited passage was left unmodified by Marinetti. The notion of sartorial musculature is emphasized throughout both versions of the manifesto, particularly in their discussions of color: "fabrics [ought to be employed] whose colors and iridescence thrill. They should be *muscular* colors, ultraviolets, ultrareds, ultraturquoises, ultragreens, ultrayellows, ultraooooranges [aranciooooni], ultravermillions" (Marinetti, "Il vestito antineutrale," p. 90).

maschile") (1932), the core concern is bodily decay and the solution an acceleration of libidinal flows (fig. 3).22

This leads the authors, on the one hand, to argue for what Volt refers to as "the dictatorship of artistic Genius" over men's and women's fashion ("MMF," p. 115)—that is, for the sort of unbridled fantasy that would "obtain for men the same sartorial freedom that women have long enioved"23 and transform woman into a "living plastic complex" (un complesso plastico vivente) through the creation of "illusionistic sarcastic sonorous noisy homicidal explosive outfits; outfits that lunge shock trans-

22. See Volt, "Manifesto della moda femminile futurista," reproduced in Crispolti, Il futurismo e la moda, p. 115, hereafter abbreviated "MMF"; Marinetti, "Contro il lusso femminile," Futurismo e Fascismo (1924), Teoria e invenzione futurista, pp. 546-49, hereafter abbreviated "CLF"; and Ernesto Thayaht and Ruggero Micahelles, "Manifesto per la trasformazione dell'abbigliamento maschile," reproduced in Crispolti, Il futurismo e la moda, p. 137.

23. "Reclamiamo per l'uomo quella libertà nel vestire già da tempo raggiunta dalla donna" (Thayaht and Michahelles, "Manifesto per la trasformazione dell'abbigliamento maschile," p. 137).



Fig. 3.—Publicity photograph of Ernesto Thayaht (Ernesto Michahelles) presenting his futurist one-piece suit, 1918. From "La tuta futurista" pamphlet. Author's collection.

mute, armed with springs, stingers, camera lenses, electric currents, spotlights, spouting perfumes, fireworks" ("MMF," p. 115).24 On the other hand, they subject the play of fantasy to the laws of a natural body whose animal vitality is sustained by polarities of gender, place, and race. Passéist fashion gives rise to fetishism, a libidinal detour with leveling and homogenizing effects. It breeds a male "who gradually loses his feeling for the power of female flesh and develops instead an indecisive and entirely artificial sensibility that is susceptible only to silks, velvets, jewels, and furs" and who is indistinguishable from a female counterpart whose "obsessive passion for fabrics and jewels . . . extinguishes the healthy impetuousness of her blood and the joys of lust" ("CLF," pp. 547-48). It enforces a tyrannical uniformity of dull Nordic dress in the case of men and of "two or three Parisian designs" in the case of women ("CLF," p. 548). So futurist fashion responds by reinstating and reinforcing epidermal differences, which is to say, physical attractions and repulsions. It demands Mediterranean bodies that can be clearly distinguished from northern bodies, hat and tie styles readily identifiable as Italian, women so individualized that each becomes an "ultra-original living poem" ("CLF," p. 548), and constantly amplified sexual divergences. Male clothing "ought to emphasize the most beautiful and characteristic lines of the male body in opposition to female lines; whenever possible, it should be more vibrantly colorful than women's clothing (as is the law of the animal kingdom)."25 Female clothing must "accentuate develop exaggerate the gulfs and promontories of the female peninsula. . . . We will glorify the flesh of woman in a frenzy of spirals and triangles" ("MMF," p. 115).

The means to this end are twofold: *forms* that sexualize, modernize, and nationalize the body; and *materials* that are unconventional and/or new—in Volt's manifesto, "paper, cardboard, glass, tinfoil, aluminum, ceramics, rubber, fish skin, burlap, oakum, hemp, gas, living plants and animals" ("MMF," p. 115); in "The Futurist Manifesto of the Italian Hat" ("Il manifesto futurista del cappello italiano") (1933) "felt, velvet, straw, cork, light metals, glass, celluloid, composites, leather *[pelle]*, sponge, fiber, neon tubing, etc., alone or combined";<sup>26</sup> in the "Futurist Manifesto on the Italian Tie" ("Manifesto futurista sulla cravatta italiana") (1933) "ultralight brilliant lasting metals" including tin, aluminum, chrome, brass, and copper.<sup>27</sup> The new subject comes into being at the meeting

<sup>24. &</sup>quot;Outfits that lunge" reads "toilettes a scatto" in the original, implying an analogy with "motori a scatto" or "internal combustion engines."

<sup>25.</sup> Thayaht and Micahelles, "Manifesto per la trasformazione dell'abbigliamento maschile," p. 137.

<sup>26.</sup> Marinetti et al., "Il manifesto futurista del cappello italiano," reproduced in Crispolti, *Il futurismo e la moda*, p. 143. I have translated "pelle" as "leather" because the alternate meaning, "fur," appears to conflict with some of Marinetti's earlier pronouncements.

<sup>27.</sup> Renato di Bosso and Ignazio Scurto, "Manifesto futurista sulla cravatta italiana," reproduced in Crispolti, *Il futurismo e la moda*, p. 147.

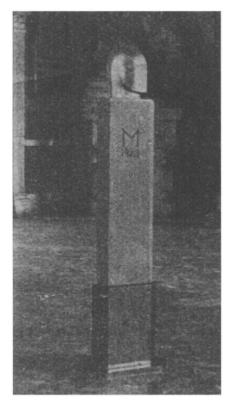


FIG. 4.—Thayaht, Synthetic Effigy of "il Duce," 1929. Cast iron and steel on stone base. From Mino Somenzi, Polemiche sul futurismo.

point of skin and garment. So banished forever are delicate and costly fabrics like silk: "the reign of silk over women's fashions must come to an end once and for all" ("MMF," p. 115). In their place, futurism embraced inexpensive surrogates, from industrial metals to man-made yet natural fabrics like Lanital and rayon.

Such was the setting in which the conquest of matter assumed a privileged place within what Marinetti referred to as "the Futurist religion-morality of speed." New materials like high-speed steel, aluminum, zinc-aluminum alloys, tempered glass, and plastics became both emblems of a crystalline modernity that had emerged from out of the dark shadows of decadence and the body double or prosthetic extension of the new multiplied man and woman. The principle was firmly in place by the time of Thayaht's cast-steel *Synthetic Effigy of "il Duce"* (1929) (fig. 4). "The idea of the Lictorial ax, of Roman arches, of the warrior's helmet, and of the gaze fixed on a distant future," Thayaht wrote to his brother Ruggero,

"all these are brought together and interpenetrate to create a whole that truly resembles il Duce. This work does not aspire to be a portrait, but rather a symbolic effigy of the dynamic power of the Man in whose hands lies Italy's fate." True resemblance is here established via the attributes of a metal (ferro acciaioso, or "steely iron") that has escaped the bad or passéist materiality of perfumes, moribund flesh, rusted machines, and abandoned ruins. Mussolinian steel offers instead a portrait of a redeemed and explosive material world. Resembling a kind of ax blade or prow—the themes of Thayaht's two other famous portraits of il Duce—cutting through the oceanic mob or the seas of history, the head is at once a unicum and a multiple. Planted on a cubic stone block, it rises up as the singular profile that gives a face and name to the brute collective fact of the fascist revolution. Its streamlined surfaces suggest bulletlike penetration and bulletproof impenetrability, striving to fuse two contradictory effects: swift motion and monumental stillness.

By 1936, Mussolinian steel had become a well-worn cliché, as, for instance, in Fortunato Depero's poem "Steel" ("Acciaio"), which proclaims that

Steel has a right-angled jaw that moves on silent and well-oiled hinges. It has a spear-like voice and its silence paralyzes. Its gaze vibrates with the Hertzian wave. It resembles only one man: il Duce.

Steel is the modern poem of the most perfect accuracy and maximum power. . . . When manufactured it is the God of certainty and dazzling serenity.<sup>29</sup>

To this metallic Mussolini corresponded an array of visions, many nonfuturist in inspiration, of the fascist state as a house of glass, an electrical-power-system grid, a highway network. But it was within the setting of the autarchy campaigns that the futurist song of matter attained its climax in Marinetti's most important experiments from the late 1930s: *The Poem of the Milk Dress (Il poema del vestito di latte)* and *The Poem of Viscose Tower (Il poema di Torre Viscosa)*, two words-in-freedom poems concerned with the manufacture of new fabrics dating from the 1937–38 period, dedicated

 $28.\ Thay$ aht, letter to Ruggero Michahelles, <math display="inline">12 May 1929, Michahelles archive, Florence.

29. Fortunato Depero, "Acciaio," *Poesia* (n.p., 1936–37), p. 21. The immediate source of inspiration appears to be Marinetti's own "Dynamic Portrait of Mussolini" in the preface to *Marinetti e il futurismo* (1929):

When he rises to speak, he extends his overpowering head, squared-off like a projectile, packed full of good gunpowder, the cubic will of the State.

Yet he lowers it when concluding, always ready to attack the question head on or, better, to gore it with the force of a bull. Futurist eloquence, well chewed by teeth of steel, plastically sculpted by an intelligent hand that shaves off the useless clay of contrary opinions. . . .

His will plows the mob like a guided missile that explodes. [Marinetti, preface to Marinetti e il Futurismo, in Teoria e invenzione futurista, p. 576]

to *il Duce* and published by the propaganda office of Italy's largest producer of man-made textiles, the Società Nazionale Industria Applicazioni Viscosa (SNIA Viscosa).

The circumstances surrounding the writing of these two texts are complex, but it is safe to say that both were commissioned by the SNIA Viscosa. Marinetti's links to the corporation dated back to early in the prior decade when its then director, the noted patron of modern architecture and the arts, Riccardo Gualino, was among the few industrialists to embrace the futurist leader's proposal for the creation of a special national bank for artists.<sup>30</sup> Gualino's subsequent disgrace—the result of a series of financial scandals that saw him on trial in both Italy and France and then sent into exile on the island of Lipari—led Mussolini to intervene directly at the end of 1929 and to replace him with Senatore Borletti, owner of the newspaper *Il secolo* and a personal friend of Marinetti's, who had served on the organizing committee of the November 1924 national celebrations honoring "Marinetti catalyst of Italianness" (Marinetti animatore d'italianità).31 With Borletti's appointment, the SNIA Viscosa resumed its ties to the movement and, in early 1937, invited Marinetti to visit its production facilities at Cesano Maderno.<sup>32</sup> The result was The Poem of the Milk Dress, a poetic and typographical tour de force retracing in minute detail the making of Lanital. Enhanced by a series of brilliant graphic overlays and transparencies by the futurist artist-designer Bruno Munari, which juxtaposed human digestive organs with industrial boil-

30. The proposal, first printed in March 1923 in the newspaper *EImpero* but later integrated into *Futurismo e fascismo*, reads as follows:

Just as credit institutions are created to help industry and commerce, so there should be institutions that provide financial support to cultural events or institutions for industrial art or that lend money to artists so as to facilitate their work (manuscripts, paintings, statues, etc.), travel for purpose of research, and advertising. [Marinetti, "I diritti artistici propugnati dai futuristi italiani: Manifesto al Governo fascista," Futurismo e Fascismo, in Teoria e invenzione futurista, p. 565]

The initiative was initially endorsed by Mussolini, though without yielding any results. On Gualino's activities as patron of architectural Rationalism, see Dennis P. Doordan, *Building Modern Italy: Italian Architecture 1914–1936* (New York, 1988), pp. 58–60.

- 31. Documents concerning the Gualino scandals (which involved financial fraud as well as currency speculation) are preserved at the Central State Archive in Rome, Segreteria Particolare del Duce, Carteggio Riservato 1922–1943, folder 102 ("Gualino"). The file contains a great many letters from enraged stockholders, as well as documentation concerning Mussolini's actions and special interest in promoting the manufacture of rayon. On Borletti, see the entry by Alceo Riosa, *Dizionario biografico degli italiani*, 46 vols. to date (Rome, 1960–), 12:794–96.
- 32. A letter from Franco Marinotti, director general of the SNIA Viscosa since the time of Borletti's takeover, confirms the visit: "Thank you for your lyric [most likely his newly published *Poema africano*], which is especially meaningful to me after the visit which you were kind enough to make to our factory in Cesano Maderno" (Franco Marinotti, letter to Marinetti, 27 Feb. 1937, Marinetti Archive, Beinecke Library, Yale University, box 13, folder 696).

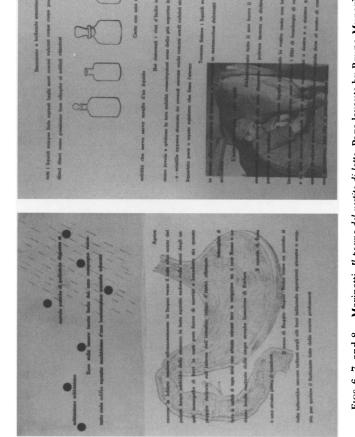
ers, the flow of milk with the flow of tanks and aerial squadrons, the text was published in a lavish edition on whose tricolor cover the red outline of a cow's head floated over a green title and factory, with a black and white bolt of Lanital curling into the center (figs. 5, 6, 7, 8).<sup>33</sup> Even before the completion of this first work, the SNIA Viscosa was already expressing its satisfaction with this collaborative venture involving art and industry. "Away in Milan [when Marinetti was present]," wrote its director general in a letter dated 3 August 1937, "only now can I see for myself the enthusiasm with which you are struggling to complete the already magnificent *The Poem of the Milk Dress.* Lanital is marching towards new horizons—[our] poems must replicate themselves."<sup>34</sup>

And replicate themselves they did. New industrial poetry followed almost immediately, whether in the commodified guise of ever new varieties of autarchic rayon, or in the literary guise of *The Poem of Viscose Tower*, a words-in-freedom text that retraces the range of emotions felt by fields of reeds as they sway under the wind and stars and confront their transformation into rayon within the utopian setting of the factory-city of Viscose Tower (Torviscosa).<sup>35</sup> This work inspired two further progeny: one devoted to the actual manufacture of viscose rayon, entitled "Simultaneous Poem of Woven Light" ("Poesia simultanea della luce tessuta") (1939), which provides a technical account of the chemistry involved; and another, the "Simultaneous Poem of Italian Fashion" ("Poesia simultanea della moda italiana") (1939), concerned with combating "the tasty cerebralism of French fashion sick with good taste measure and harmony we prefer the passionate creative dynamic military surprising instinct of Italian fashion thoroughly invented [tutta inventata] with no less invented tex-

- 33. The full title is *Il poema del vestito di latte: Parole in libertà futuriste di Marinetti, accademico d'Italia* (Milan, 1937). The back cover bears the phrase, "Omaggio della SNIA Viscosa" ("courtesy of the SNIA Viscosa"), which suggests that the document was sent out free of charge to associates and friends. In *The Non-Human Poem of Technicisms* the poem appeared under the title of "Simultaneous Poem of a Milk Dress" (*Poesia simultanea di un vestito di latte*).
- 34. "Assente a Milano, posso compiacermi solo oggi dell'entusiasmo col quale Ella si accinge a completare il già magnifico *Poema del vestito di latte*. Il Lanital marcia verso nuove realizzazioni—i poemi devono ripetersi" (Marinotti, letter to Marinetti, 3 Aug. 1937, Marinetti Archive, Beinecke Library, Yale University, box 13, folder 696). The closing reflexive *ripetersi* implies not just repetition (in the sense of rehearsal or repetitive consumption) but also especially *reproduction*. The reference to "poems" is deliberately imprecise, implying an analogy between industrial products and literary artifacts. In fact, Lanital proved only partially successful at first. Insufficiently resilient, it was prone to stretching, had an unpleasant scent, and did not hold up well under regular wear and tear. Some of these flaws were eliminated in the course of subsequent years, and it was reborn as the far more successful artificial textile Merinova in the postwar period.
- 35. The poem was originally published as *Il poema di Torre Viscosa* (Milan, 1938). In *The Non-Human Poem of Technicisms* it appeared under the alternative title of "Simultaneous Poem of Arunda Donax Reeds" (Marinetti, "Poesia simultanea dei canneti Arunda Donax," *Il Poema non umano dei tecnicismi* (1940), *Teoria e invenzione futurista*, pp. 1151–60; hereafter abbreviated "PCA").



FIG 5.—Cover, Filippo Tommaso Marinetti, *Il poema del vestito di latte* (1937). Layout and design by Bruno Munari. The Mitchell Wolfson Jr. Collection, The Wolfsonian, Miami Beach, Florida and Genova, Italy.





Figs. 6, 7, and 8.—Marinetti, Il poema del vestito di latte. Page layouts by Bruno Munari. The Mitchell Wolfson Jr. Collection, The Wolfsonian, Miami Beach, Florida and Genova, Italy.

tiles and ornaments."<sup>36</sup> Together with *The Poem of the Milk Dress* and *The Poem of Viscose Tower*, this quartet of industry-sponsored and industry-inspired texts would make up the backbone of the 1940 collection, *The Non-Human Poem of Technicisms*, dedicated to "the exemplary Italianness dynamism autonomy creativity of the SNIA VISCOSA corporation as an homage from we Futurist aeropoets dedicated to the uniqueness of Imperial Fascist Italy."<sup>37</sup>

In this compilation, the futurist leader and member of the Italian Royal Academy set out to yoke the antiliterary to the nonhuman in ways that echo the Soviet avant-garde's early flirtations with productivism: "While the earth's poets continue more or less to spin nostalgias and despairs around the verses of Leopardi Baudelaire or Mallarmé the Italian Futurist Movement has for many years prompted its poets and artists to create a 'non-human' poetry and art which is to say a poetry and art extraneous to humanity thanks to its systematic extraction of new beauties and new music from the technicisms of machine civilization." He went on to add:

The new task of poetry and art in Imperial Fascist Italy daughter of the Fast War: that of organizing the idealization of single conceptual administrative manual mechanical chemical forms of work with a profitable distribution of intuitions and creative efforts. . . . [To do so] without dressing everything up in verbal and plastic and musical rhetorics without the long rancid symbolism of plow eagle scythe anvil hammer abolished by airplanes sowing-machines electrical plants pneumatic hammers motor-plows we want to mine every work in its characteristic technics and production-mode so as to extract slivers of poetry.<sup>39</sup>

For Marinetti, the automation of production promised to free culture from the burdens of the old humanism and its cult of reflective distance

<sup>36.</sup> Marinetti, "Poesia simultanea della moda italiana," *Il Poema non umano dei tecnicismi*, in *Teoria e invenzione futurista*, pp. 1187–88.

<sup>37.</sup> Marinetti, dedication of *Il Poema non umano dei tecnicismi*, in *Teoria e invenzione futurista*, p. 1139. The compilation was first published in Milan in 1940. On the basis of manuscript evidence, the composition of "Simultaneous Poem of Woven Light" would seem to date back to around the time of Marinetti's visit to Torviscosa (September 1938). The earliest direct mention of it and of the "Simultaneous Poem of Italian Fashion" that I have been able to locate occurs in December 1939, so I give 1939 as a tentative date for both. In *Teoria e invenzione futurista*, De Maria gives no indication that the text was published prior to the appearance of *The Non-Human Poem of Technicisms*.

<sup>38.</sup> Marinetti, "Invito ai lettori spregiudicati," preface to *Il Poema non umano dei tecnicismi*, in *Teoria e invenzione futurista*, p. 1142; originally published in the April 1937 manifesto "Poetry and Corporatist Art."

<sup>39.</sup> Marinetti, "Estrazione sistematica di nuovi splendori e nuove musiche dai tecnicismi," introduction to *Il Poema non umano dei tecnicismi*, in *Teoria e invenzione futurista*, pp. 1143–44.

and interiority. It was already bringing into being a "non-human" world in which workers and their tools have become "autopoets surging forth in a sea of sparks";40 a world in which the mingling of worker bodies and machines would give rise to a "proletariat of geniuses" capable of partaking of that intensified experience of the real that is Marinettian poetry and to nonhuman doubles—"distinct mechanical and chemical personalities . . . that can increasingly be considered interesting figures or better heroes to be praised and sung."41 In order to prepare the way for the advent of this industrial autopoetry, The Non-Human Poem of Technicisms undertook to extract poetic gold out of industrial ore via a survey of the commercial port of Genoa, of colonial highway projects, and of an imaginary battle in which the swastika and the virile lictorial fasces triumph jointly. But, as already noted, the collection's core was made up of poems identifying the production of rayon and Lanital and their use in ultra-Italian fashions with Italy's conquest of spiritual and economic sovereignty.

## 3. Rayon, Lanital, and Autarchic Poetry

At first glance, the choice of textile manufacture as the site for carrying out the enterprise just described may seem eccentric, even for a poet with tastes as outlandish as Marinetti's. Yet I hope to demonstrate that, far from anomalous, this choice stands as the end product of a decade-long historical process that had imbued man-made fabrics with distinctly modernist political and poetic meanings. Just like cast iron, which for Émile Zola transforms the arcades of Paris into "fairy palaces petrified as if by the wave of a magic wand"; tempered glass, which for Paul Scheerbart provided the new environment that would "completely transform mankind"; steel, which, from Walter Gropius through Depero, was envisaged as "the modern poem of the most accurate perfection and greatest power"; or polystyrene, which for Raymond Queneau in his ode to plastics, "Le Chant du Styrène," provided the basis for an entirely new cosmogony, so by 1937 it seemed natural enough that artificial fabrics should be designated the "rural poetry" of a new Imperial Italy. 42 "A fab-

<sup>40. &</sup>quot;Un giorno i lavoratori e i loro utensili sprizzeranno fuori autopoeti a scintille" (ibid., p. 1145; my emphasis). Autopoeti is a neologism, most likely modeled after words such as "autopilot." On automation and the nonhuman, see the appendix to this essay.

<sup>41.</sup> Marinetti, "Invito ai lettori spregiudicati," p. 1142.

<sup>42.</sup> Interview with Émile Zola, "L'ouverture de l'Exposition universelle," Le Messager de l'Europe (June 1878), p. 346, quoted in Jacques Noiray, L'Univers de Zola, vol. 1 of Le Romancier et la machine: L'Image de la machine dans le roman français (Paris, 1981), p. 242; Paul Scheerbart, Glass Architecture, ed. Dennis Sharp, trans. James Palmes (New York, 1972), p. 74; Depero, "Acciaio," p. 21; and see Raymond Queneau, "Le Chant du Styrène," Chêne et chien, suivie de Petite Cosmogonie portative et de "Le Chant du Styrène" (Paris, 1969).

ric is not the proverbial textile gazed upon in store windows," writes a typical commentator on the 1937 National Textile Exhibition, "rather it is a secret power ripped out of nature and it possesses a proteiform vitality, opening up labyrinths of new modes of expression and demanding modernity of impulses and plants." Similar imaginings permeate the great mass of 1930s technical writings on the production of man-made fabrics, which envisage fabrics like rayon not as artificial but rather as an intensified, accelerated, redeemed prolongation of a (national) natural world that has been emancipated and democratized by modern science. Usual was the view of the futurist poet as well, but it is worth insisting that, in its production practices, technical writings, and advertising campaigns, industry took the lead in celebrating man-made fabrics "proteiform vitality" and "demanding modernity of impulses and plants." Art merely served as an amanuensis. It came along afterwards and reworked already codified myths.

Italy's traditional leadership in the domains of silk and wool production had ensured the relatively early entry of giants such as the SNIA Viscosa and its rival, the CISA Viscosa, into the field of viscose rayon production in 1920. The ups and downs of the post–World War I economy, particularly in the wake of the Wall Street crash of 1929, led the SNIA Viscosa through a cycle of booms and busts which underscored the vulnerabilities of the Italian textile industry.<sup>45</sup> First, there was the matter of foreign tariff barriers, which had been growing in response to severe problems of oversupply on the international market. Second, there was

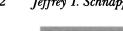
- 43. Carla Rulli, "Problemi dell'Autarchia: La mostra del tessile," *Meridiano di Roma*, 26 Dec. 1937, p. 12; hereafter abbreviated "PA."
- 44. See, for instance, works such as Silvio Coggi, Iuta e fibre autarchiche: Canapa, ginestra, sparto e fibre dell'Impero (Milan, 1939); and the writings collected by the National Federation of Consortia for the Defense of Hemp Growers (Federazione Nazionale dei Consorzi per la Difesa della Canapicoltura) on the occasion of the congress which accompanied the Forlì textile exhibition (11-20 Dec. 1936). Among the latter we find a technical report by the federation's president, Roberto Roversi, prefaced by a lengthy analogy between the agricultural policies of Julius Caesar and those of Mussolini, followed by a roll call of materials hemp, linen, broom plant, ramie, agave, and so forth—each invoked as if they were soldiers belonging to an avant-garde brigade. He concludes his exordium: "In the fascist clime everything is possible. . . . And because Italy's newly enhanced presence in the textile sector is fueled by the imperialist spirit that inflames the heart of every Italian worthy of belonging to il Duce, the national textile problem will be resolved even at the cost of unlimited sacrifice and without the slightest compromise" (Roberto Roversi, "Le fibre tessili vegetali prodotti in Italia e nelle Colonie," Relazioni mostra convegno delle fibre tessili nazionali e dell'Impero [Rome, 1937]). Interesting and less technically oriented evidence to this same effect may be found in the special issue of Curzio Malaparte's Prospettive devoted to the national textile industry (Prospettive, no. 5 [1938]).
- 45. For the official history of the SNIA Viscosa, see SNIA Viscosa, 10 anni di attività della SNIA Viscosa (Milan, 1939), characterized by its Rationalist layout and typography, and SNIA Viscosa, La SNIA Viscosa (Milan, 1958). Both are careful to elide the Gualino scandals and the direct role played by Mussolini and National Fascist Party secretary Augusto Turati in the corporation's various crises during the 1920s and early 1930s.

the question of raw materials. The manufacture of viscose-based fabrics and cellophane requires not only fossil fuels (of which Italy's supplies were inadequate) but also large quantities of high-quality cellulose derived from white and red fir trees, Nordic pines, and/or beech wood. In Europe these trees abound only on the Scandinavian peninsula, for which reason the Nordic countries enjoyed a virtual monopoly in cellulose markets during the first half of our century. A similar situation prevailed in the area of natural fabrics. Wool production was a traditional strength of the Italian economy, but it relied heavily upon imported raw materials, particularly for its upmarket products; it was neither large enough nor sufficiently cost-efficient to supply both the national and the international market. Italian cotton production was small, expensive, and largely dependent upon imports from Turkey and Egypt. As for silk production, its quality was world-renowned, but limitations in scale and high production costs relegated it to the luxury sector of the market.

Italian textile manufacturers therefore faced a quandary during the late 1920s as, on the one hand, export markets tightened up, while, on the other, fluctuations in the international fossil fuel, cellulose, and cotton markets regularly disrupted their operations. By 1930 they were forced to develop a long-term strategy to combat these and other structural weaknesses. Led by the SNIA Viscosa and with the firm support of the fascist government, they set out, first, to focus on protecting and expanding internal Italian markets, while aggressively targeting particular export markets; second, to concentrate their efforts on the development of a market for man-made fabrics (because of their lower production costs); third, to complement this campaign with a parallel effort to substitute cotton fabrics with fabrics based upon native materials such as ramie, hemp, and linen; fourth, to promote local forestation programs where appropriate; and last, to develop new sorts of fabrics and fabrication methods that took advantage of locally available flora and fuels (figs. 9 and 10).

In the case of the SNIA Viscosa, these efforts would bear three fruits. The first was the foundation of the SNIA Viscosa's Italraion division in 1931 and the launching of a decade-long campaign promoting the use of viscose rayon. Second, a research program both for the substitution of local products for Scandinavian cellulose and for the creation of autarchic fabrics was undertaken. In the wake of this research program's success, the third result was the construction of state-of-the-art production facilities, probably inspired by American precedents such as the DuPont corporation's "model city" projects for textile workers, in the immediate vicinity of the newly developed supply sources. The case that I will touch upon is that of Torviscosa, alluded to in the title of Marinetti's *The Poem of Viscose Tower*.

As regards the first, suffice it to say that by the end of 1934 no Italian citizen could have been unaware that rayon was the fabric of modern



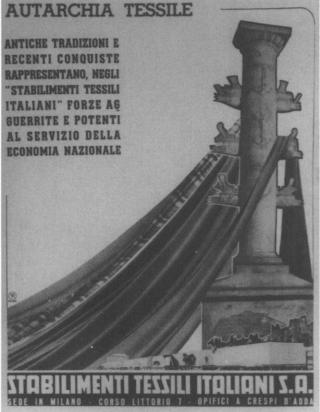


FIG. 9.—"In the Stabilimenti Tessili Italiani, ancient traditions and recent conquests represent militant forces and powers in the service of the national economy." Textile autarchy advertisement, 1938. Note the juxtaposition of classical monuments with the modernist pavilions of the National Textile Exhibition, which opened in Rome's Circus Maximus in December, 1937. From La rivista illustrata del popolo d'Italia, Jan. 1938. Author's collection.

times and that, as a characteristic advertisement read, "All Italian products strengthen our resistance. Rayon is an Italian textile." In 1933 the federation of manufacturers of man-made fabrics founded a typographi-

46. Corriere Padano, 18 Dec. 1935. As is characteristic of industry publications from the 1930s, the notion of resistance (resistenza) combines notions of physical durability with moral and even military resilience. Karen Pinkus rightly notes the embarrassment that was felt over the foreignness of the word rayon, which accounts for the fluctuations in usage between the Italianized raion (and even rajon) and the originally English or French rayon. See Karen Pinkus, Bodily Regimes: Italian Advertising under Fascism (Minneapolis, 1995), p. 223; hereafter abbreviated BR. Such oscillations continued into the wartime years, even though the French spelling predominated (probably due to export market considerations).



FIG. 10.—"The Italian rayon industry / with 31 factories / produces 120,000,000 kilos / employs 26,000 workers / making elegance, a key feature of life, available to the people." Graphic table by Damiani, 1937. From *Prospettive*, no. 5 (1937). Author's collection.

cally adventurous review entitled Rayon: Monthly Bulletin of Artificial Textiles (redubbed the Technico-Economic Review of Modern Textiles in 1935), on whose pages the seemingly infinite adaptability of their products was celebrated in tandem with their hygienic qualities.<sup>47</sup> Given its technical orientation, the review was addressed to textile industry insiders. But it was also aimed squarely at the fashion industry, recently brought under the wing of the National Fashion Corporation (Ente Nazionale della Moda), which was encouraged, through a decade-long system of subventions, to place man-made fabrics at the core of Italy's new fashion ethos, particularly in the domain of fashions for the mass market.<sup>48</sup>

Such a strategy could hope to succeed only if Italian consumers, noted for their reluctance to embrace new textiles, were willing to purchase garments made with artificial materials. So, in order to expand the internal market, Italy's rayon manufacturers launched an unprecedented publicity campaign. The campaign's first element was a sort of rayon road show: a touring truck caravan made up of four trailer trucks and three supplementary trailers, instantly transformable into a gallery exhibiting

<sup>47.</sup> Publication of this review appears to have ceased in 1942.

<sup>48.</sup> On this topic and on the overall history of the Italian fashion industry during the fascist decades, Aspesi's *Il lusso e l'autarchia* is the best starting point.

rayon's virtues and applications (fig. 11).<sup>49</sup> Atop each of the trucks were loudspeakers from which were broadcast a series of rayon songs composed especially for the trucks' tour of the Italian peninsula: an event known as "The Five Thousand Miles of Rayon" (after the legendary auto race, the Mile Miglia).<sup>50</sup> Launched on 18 May 1934 and completed to-

49. Pinkus mysteriously alludes to a "rayon train," apparently on the basis of a misreading of the Italian label auto-treno (BR, p. 221).

50. Among the many rayon songs is the following, entitled "Il poeta e Nina," whose author went by the name Reco:

"Nina, do you know how much my love for you is a source of torment? It seems to me that your heart is bound to mine by a thread so subtle that it's invisible and yet so strong that no one can ever cut it." Nina looks at me and declares: "A fine thread that is so resistant? Surely a thread of rayon made." "Your gaze, my Nina, has struck me square in the chest. What web of intrigue have you woven [Qual trama hai duque ordito] with such perfection, you twisted brunette, that I can no longer regain my lost tranquility?" Nina smiles and answers: "A web of intrigue? And a perfect one at that? Why we're dealing here with a rayon fabric." "But sweetheart, please indulge the love of him who now implores you. Yield to him who adores you. I have never seen you as beautiful as you now appear dressed in the sun's rays!" Nina sulks and says:



Fig. 11.—Rayon truck caravan on the road in late May, 1934. Press photograph. Luce Archive, Rome.

wards the end of the same year, the tour—or "triumphal march," as it was described in an extensive advertising campaign—included not just exhibits but also dances and fashion shows celebrating the elegance, durability, and savings that could be achieved by switching to man-made fabrics (fig. 12).<sup>51</sup>

The rayon road show's meanderings were covered on the so-called rayon page, which became a standard feature in the major daily newspapers during much of 1934 (fig. 13). There, news items covering the attendance of the masses and visits by their leaders appeared weekly in the company of interviews, industry updates, technical bulletins, and drawings and photographs of Italy's newest fashions, along with fables, aphorisms, essays, and short stories singing rayon's praises by popular writers such as the onetime futurist Enrico Cavacchioli. The highlight of every rayon page was the brilliantly playful rayon poems of Luciano Folgore (a longtime futurist fellow traveler), gathered together under such titles as "Mythology and Rayon" and "Rayon and Poetry." Some examples are in order. Rayon myth 1:

Ercole un giorno diventò un ossesso perchè indossò la tunica di Nesso; invece se la tunica indossata di rayon fosse stata
Ercole avrebbe fatto, in pochi istanti impazzir d'invidia tutti quanti.
[Hercules one day became obsessed because in Nessus's hairshirt he was dressed; yet if his tunic had been of rayon instead With envy he would have knocked 'em dead.]

"Dress of rays? Better a fancy patterned rayon dress." [un bel vestito rayon fantasia] [Reco, "Il poeta e Nina," Corriere Padano, 30 Oct. 1934, p. 3]

Another "Nina" song appeared under the title "Anacreontica" on the 18 Dec. 1934 rayon page of *Corriere Padano*.

51. One of the announcements for the rayon truck convoy, published on the 18 May 1934 rayon page (in *Corriere Padano*, among other newspapers), promises the following:

The convoy has a double aspect for, once it reaches a destination, it will unfold its coverings in a flash and transform itself into an authentic exhibition hall for rayon products. From the threateningly armed vehicle, in the meantime, songs, sounds, and phrases singing the praises of the new textile will emanate. And a luminous beam [fascio] will issue from it, projecting on an overhead screen the splendors of rayon. Then, as soon as the mob has admired (as it will never tire of doing), as soon as all have impressed on their memory that vision of lights, colors, and elegance, the hall will in a few seconds transform itself anew into a motorized caravan and will depart to greet "other folks who perhaps await it." [Corriere Padano, 18 May 1934]

# 'AUTOTRENO continuando la sua trionfale marcia sarà a FORLI' e PREDAPPIO il 9 e 10 corr. a CESENA l' 11 corrente a RAVENNA a FAENZA il 13 VISITATEL e vi farete persuasi che il meraviglioso prodotto italiano significa ELEGANZA - DURATA - RISPARMIO al TEATRO COMUNALE di FORLI' la sera di domenica 9 corrente alle ore 22 GRAN BALLO BENEFICO per iniziativa dell' ITALRAYON e con la collaborazione della Ditta Bernocchi-Fisac Presentazione di BITI DA SIGNORA della Ditta Palmer con tessuti RAYON

FIG. 12.—"The truck caravan of the 5,000 miles of rayon continuing its triumphal march." Advertisement. From *Corriere Padano*, 8 Sept. 1934.

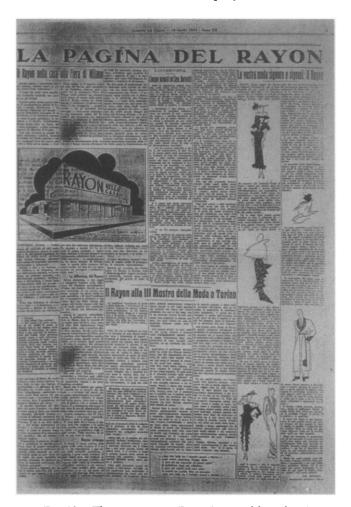


Fig. 13.—The rayon page. From Gazzetta del popolo, 18 Apr. 1934.

## Rayon myth 2:

La nuda Verità disse agli Dei: Se dovessi vestir, senza vergogna, solo col rayon mi rivestirei perchè non è un tessuto . . . di menzogna. [Naked Truth said to the Deity: If I were to dress without indignity, only rayon would I not despise for it's not a tissue . . . of lies.]

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Rayon myth 3:

Fu Diana una provetta cacciatrice, ma per battere il piano e la pendice, per traversar le macchie e le foreste, senza perdere un fil della sua veste, di rayon si vestiva e dalla prova la veste usciva intatta e sempre nuova. [Diana was an able huntress, a stalker in nature's fortress. She dreamed of hunting, it is said without fear of snagging a single thread. So she donned a rayon dress. It passed the test. She was impressed.]<sup>52</sup>

In brief: according to Folgore's new mythology, rayon is the fabric of modern comfort and hygiene. It is also the fabric of naturalness (that is, of truthfulness, not artifice), because in rayon nature—in the form of cellulose—is not falsified but instead multiplied and transfigured through the workings of science. Since "mere literature" and "mere art" were proverbially dismissed as tissues of lies, this naturalness renders rayon the touchstone for an authentic art of fascist times, which is to say, a realist, antiornamental, effectual art.

These myths for modern times find their parodic counterpart in Folgore's no less deft updating of Renaissance poets like Petrarch:

"Cosa bella e mortal passa e non dura."
Ma il rayon ch'è una stoffa eccezionale
non si sciupa, non cangia, non s'oscura.
Non oso dir che il rayon è immortale,
però posso affermar ch'è sempre quello:
più il tempo passa e più diventa bello!
[Some say that "mortal things cannot last."
But rayon does. Against time's ravages,
against pulls and tears and stains, it stands fast.
Does this mean that rayon is forever?
Maybe not, but its beauty doesn't weather.]

#### And Ariosto:

"La verginella è simile alla rosa" disse un giorno l'Ariosto ed io ci credo

52. Corriere Padano, 18 May 1934. Other rayon mythologies elaborated by Folgore include Mercury and Thalia, Jove and Venus, Penelope and Ulysses, and a story of a nymph.

specie quand'ella il giorno che va sposa porta in casa di rayon un corredo, perchè dimostra col cervello a posto d'essere niente fumo e tutto Ariosto. [Ariosto was the first to propose that a maiden is similar to a rose. The proof that he is right comes on her wedding night when a rayon trousseau she brings to her chateau, and confirms that, no joke, she's all fire and no smoke.]<sup>53</sup>

Folgore's compositions were immediately replicated in industry publications such as *Le fibre dell'eleganza*, a 1937 pamphlet produced by and for the Rome office of the CISA Viscosa. Celebrating the uses of fabrics such as Cisalfa, Cisafiocco, Cisnivea, and Fiocco di Ginestra, it features full-page color drawings of women, workers, imperial army soldiers, and colonial subjects, each accompanied by a ditty in which the final rhyme word is CISA Viscosa. The worker's poem reads:

Lavatore che col tuo badile vai sulla strada aperta dal fucile, per l'uniforme della tua fatica, che dà strade al lavor, solchi alla spica, t'offre la stoffa bella, vigorosa, tenace come te CISA-VISCOSA.

[Worker, you walk with pick in hand down roadways conquered by force, as the uniform of your exertions, clearing the road for your labor and the furrow for your wheat, the CISA-VISCOSA offers you beautiful cloth cloth as vigorous and tenacious as you are.]<sup>54</sup>

He subsequently added another three rayon fables: one concerning a siren (*Corriere Padano*, 19 July 1934) and the others on "Acquazzone and Solleone" and Sleeping Beauty (*Corriere Padano*, 30 Oct. 1934).

<sup>53. &</sup>quot;Il rayon e la poesia," *Corriere Padano*, 23 June 1934. There is no adequate way to render into English the closing line of the second poem which inverts the popular Italian expression "tutto fumo e niente arrosto" ("all smoke and no roast"), meaning something like "all talk and no action," into "niente fumo e tutto arrosto" or "no talk and all action." The verse is further complicated, however, by the substitution of the last name of the poet Lodovico Ariosto for the word *arrosto*. Other rayon rewritings by Folgore targeted Dante, Tasso, Manzoni, and Leopardi.

<sup>54.</sup> CISA Viscosa, Le fibre dell'eleganza (n.p., 1937), p. 10; hereafter abbreviated FE.

## The soldier's poem reads:

Soldato dell'Impero, veterano delle guerre che spinsero lontano l'aquila che da Roma aperse l'ali nella luce dell'alba imperïali, la divisa superba e glorïosa col suo fiocco ti dà CISA-VISCOSA. [Soldier of the Empire, veteran of the wars that extended the eagle's flight who spread his wings over Rome's new imperial dawn, the CISA-VISCOSA provides the stuff of your superb and glorious uniforms.]

[*FE*, p. 1]

### The colonial subject's poem reads:

Madamina color di cioccolato, che ami farti vedere sul mercato vestita di tessuti allegri e belli come i fiori e le piume degli uccelli che cantan dopo la stagion piovosa be ti può accontentar CISA-VISCOSA.
[O chocolate-colored little madam who loves to be seen at market appareled in joyous textiles, beautiful like flowers and like the feathers on birds who sing at the end of the season of rains, the CISA-VISCOSA can bring you happiness.]

In all of the rayon poems, verbal quickness and levity are implicitly designated as the poetic medium of an era in which, thanks to technological advances and a modern state, leisure, luxury, and even a secularized version of the glorified body have become available to the many. Folgore's poems in particular suggest that, under fascism, fashion and, by extension, literature and art, once the exclusive preserves of the bourgeoisie and the aristocracy, have become instruments for the forging of a true mass society.

The same point was made in graphical terms by the army of stick figures and mannequins found in period advertisements for rayon.<sup>55</sup>

<sup>55.</sup> This personification of textiles extended also to the Forlì and Rome exhibitions and was frequently picked up by commentators, as, for example, Luigi Antonelli, "Presentazione della protagonista," *Corriere Padano*, 15 Dec. 1937. On rayon and the mannequins that abound in period advertising, see *BR*, pp. 195–243. While sometimes acute and always

These modern everymen and everywomen appear either against the typographical backdrop of the phrase "rayon is a textile and not a surrogate nor an imitation of other textiles" or against texts describing rayon's Italianness, its resistance and economy, the almost miraculous array of textures that can be produced with it, and its no less miraculous adaptability to the multiple lives led by contemporary Italians (figs. 14 and 15). Indeed, the fabric is thought to be so rooted in the Italian soil and so infinitely adaptable that the ads depict it as suitable for applications such as flags, uniforms, pajamas, tablecloths, upholstery, and wall coverings. They display rayon fabric bolts coming to life, entire houses built out of rayon, and department stores rising up in the form of rayon skyscrapers (fig. 16). The globe itself is shown wrapped in rayon, Italy's imperial uniform (fig. 17).

The last element in this elaborate campaign assumed the form of a series of pavilions for Italy's most important trade fairs, starting with Emilio Lancia and Giancarlo Palanti's Rationalist pavilion for the 1934 Fiera di Milano, in whose central hall loomed an immense rayon flag, and eventually extending beyond the national borders to the Italian pavilion at the 1939 New York World's Fair, which featured a "demonstration of machines actually manufacturing synthetic fibers: rayon and artificial wool fiber derived from ordinary cow's milk."56 Dozens of these structures were built for the SNIA Viscosa between 1935 and 1940 by architects such as Eugenio Faludi, to the point that Rationalist glass architecture, accompa-

imaginative, Pinkus's analysis is weakened both by the looseness of her associative chains (rays-radiation-rayon-X-rays; spinneret-hymen) and by her overall claim that, despite their heterogeneity, their international character, and the evident continuities between pre-World War I, interwar, and post-World War II graphic culture, advertising images from the fascist period are to be considered the repressed material that forms "a ground for the present Italian state and its economy" (BR, p. 1). Yet as she herself observes, Bibendum, the Michelin man—an icon born in France well before the advent of fascism—was ubiquitous in 1920s and 1930s Italian advertising. He is alive today, along with many other prewar homunculi like the Perugina chocolate figure who survived the war much as Aunt Jemima has persisted in American culture. Hardly the "forgotten icons of a generation that now passes itself off as dead," these little creatures remain no less visible in "the present Italian state" than they were during the fascist decades (BR, p. 1). If, like Ronald McDonald and Poppin' Fresh, the Pillsbury Doughboy, they are able to shuttle so effortlessly back and forth across national, historical, and ideological barriers, some questions arise. To wit: is the psychoanalytic notion of repression—too unproblematically coupled here to fascism's literal repressive acts—the right tool to examine a phenomenon that pushes so insistently to the surface and seems unconcerned with either revealing or concealing its past? Moreover, if advertising culture and design practices (like so many other features of interwar industrial development) are so decidedly heterogeneous and transnational, to what degree can they tell us anything distinctive about fascism? (Unless, that is, one is willing to accept the crude presumption that fascism somehow distilled within itself the very essence of advanced capitalism.)

56. Nations: New York World's Fair, ed. William Bernbach and Herman Jaffe (New York, 1939), p. 99.



FIG. 14.—"What is rayon? Rayon allows the textile industries to create the most elegant and modern fabrics." Advertisement. From *Il popolo d'Italia*, 3 May 1934.

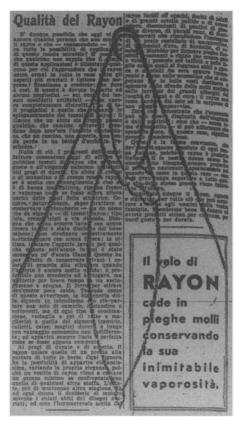


FIG. 15.—"Rayon's qualities. A rayon veil forms soft folds preserving all of its inimitable vaporousness." Advertisement. From *Il popolo d'Italia*, 14 June 1934.

nied by neon and halogen lighting and luminous Futura-type signage became identified with the fabrics themselves in the popular imagination (figs. 18 and 19).<sup>57</sup> The connection was not merely figurative, since the SNIA Viscosa was Italy's first producer of fiberglass, a substance that merged the worlds of glass and of modern textiles (a merger that, at the beginning of the 1940s, gave rise to an amusing debate between Massimo Bontempelli and the technical review *La seta* over the use of "glass ties"—men's ties fabricated out of fiberglass cloth).<sup>58</sup>

I have strayed far from The Non-Human Poem of Technicisms, but the

57. An excellent example of Faludi's work is the SNIA Viscosa pavilion for the Eighteenth Milan Trade Fair, whose illuminated tower was made up of large sheets of frosted glass across which shone the inscription "INDEPENDENZA."

58. On the "glass tie," see "La questione della cravatta," *Il vetro* 4 (Apr. 1941): 125. As noted above, the futurists had made their voices heard regarding the future of the tie in di

path of return leads back through two developments that directly informed the poems that make up the collection's core: the foundation by the SNIA Viscosa of the fascist new town of Torviscosa, celebrated in *The Poem of Viscose Tower*; and the discovery of a new fabric made entirely from Italian source materials, celebrated in *The Poem of the Milk Dress* (fig. 20). As regards the first, in 1936 SNIA Viscosa scientists discovered that "noble," high-quality cellulose could be obtained from a type of reed—the *Arunda donax*, or "canna gentile"—that was common to northern Italian marshlands (fig. 21). This led to the undertaking of a large-scale reclamation program in the lower Friuli, and, in 1938, to the accelerated construction of the state-of-the-art factory/city Torviscosa in the midst of the reclaimed land.<sup>59</sup> The event was much ballyhooed in the contemporary press, and Marinetti's poem was an important cog in the propaganda machine. After visiting the facilities on 27 August he wrote to his wife Benedetta:

Yesterday, a long exhaustive visit of Torre di Zuino [the prior toponym of Torviscosa]. . . . Kilometrical green reeds devoured by cubicity and sphericity of new geometrical city coming to life. It will be ready on September 21 for *il Duce*. Thus is born a new words-infreedom poem of genuine *originality* and power (or so I hope).<sup>60</sup>

Bosso and Scurto's 1933 "Futurist Manifesto of the Italian Tie," preferring metals such as aluminum, chrome, zinc, and tin.

59. For a telling indication of the importance of the foundation myth of Torviscosa, see SNIA Viscosa, *Torviscosa* (Milan, 1941), which was bound with an *Arunda donax* spine encasing green-tinted cover-boards on which cane fields were juxtaposed with the city's geometry (see fig. 21). As for the press, the intensive coverage found in the magazine *Tempo* is not unusual. See "*Arunda donax*: La canna gentile coltivata a Torre di Zuino per la cellulosa nobile," *Tempo*, no. 25 (16 Nov. 1939): 1; "Torre di Zuino: Città della cellulosa," *Tempo*, no. 26 (23 Nov. 1939): 1; and "Conquiste autarchiche della SNIA Viscosa," *Tempo*, no. 33 (11 Jan. 1940): 1. See also the special issue of the popular science magazine *Vedere*, no. 153 (15 May 1941), devoted entirely to Torviscosa and synthetic fabric production. As noted earlier, the inspiration for the building of Torviscosa may have come from the DuPont corporation, which had built a model factory/city in Marcus Hook, Pennsylvania, in the mid-1920s.

60. Though the handwriting of the letter is not always easy to decipher, the original reads something like this: "Ieri lunga minuziosa visita a Torre di Zuino con Marinotti. Chilometrico canneti verdi divorati dalle cubicità e sfericità di una nuova città nascente. Sarà pronta per il 21 settembre davanti al Duce. Nasce così un mio poema parolibero che spero originale e potente" (Marinetti, letter to Benedetta Marinetti Cappa, Bolzano, 28 Aug. 1938, Marinetti Archive, Beinecke Library, Yale University, box 5, folder 60.) Pinkus's assertions that the poem's publication "coincides with the regime's official denunciation of 'modern' and 'degenerate' art, which includes Futurism" and that "although Marinetti accepted his commission from the Torre Viscosa, he may also be expressing anti-Mussolini sentiments at this moment" are both counterfactual (BR, p. 265 n. 35). No such "official denunciation" was issued and, despite Marinetti's embarrassment regarding the proclamation of racial laws in 1938, his sentiments remained fiercely pro-Mussolinian.



FIG. 16.—"Rayon is the perfect fabric for today's fashions. Its elegance, durability, and convenience render it preferable to all other textiles in all of its infinite applications." Advertisement. From *Corriere Padano*, 6 Oct. 1934.



FIG. 17.—"Rayon is the modern textile with an infinity of applications." Advertisement. From Corriere Padano, 19 Nov. 1934.

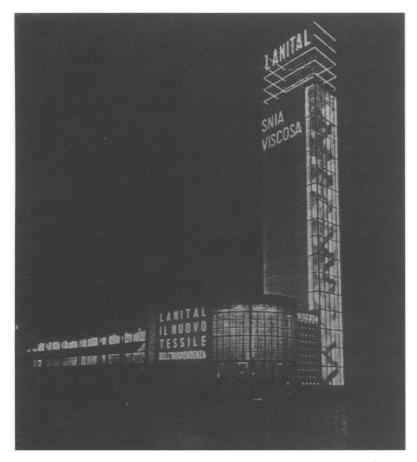


Fig. 18.—Night view of SNIA Viscosa pavilion for the 1936 Milan Trade Fair. Architect: Eugenio Faludi. Press photograph. From Architettura: Rivista del sindicato fascista di architetti (Aug. 1936). Author's collection.

The poem was written on trains so as to make the 21 September deadline, and its publication duly coincided with opening ceremonies (fig. 22). The logic of its narrative is that of a gradual unveiling, in the form of a ritualized battle between swirling cane fields made up of millions of tightly packed reeds, each ready to become "the warm flesh of an agile woman with the potential for aromatic inhalable tactilisms," pitted against the implacable chemistry and machinery of the Goddess Geometry ("PCA," p. 1156). 61 Armed with her projector-sun, the goddess's steel-bladed harvesters crush the reeds and pass them through sulfuric boilers, after

<sup>61.</sup> Cinzia Sartini Blum has offered a nuanced reading of this text, concentrating on its heavy-handed use of apostrophe and personification. See Cinzia Sartini Blum, The Other Modernism: F. T. Marinetti's Futurist Fiction of Power (Berkeley, 1996), pp. 140-43.

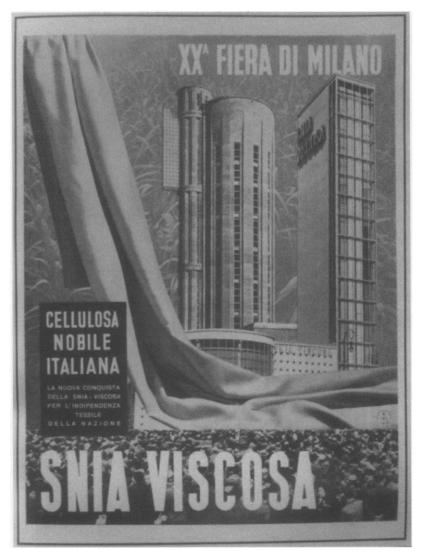


FIG. 19.—"Italian noble cellulose / The new conquest of the SNIA Viscosa in the name of national textile independence." Advertisement for the SNIA pavilion at the 1938 Milan Trade Fair, juxtaposing Eugenio Faludi's building with the cane tower of Torviscosa, atop an image of the masses and against a backdrop of cane fields. From La rivista illustrata del popolo d'Italia, Aug. 1938.

which they are rounded up like a revolutionary mob ("studentesse rivoluzionarie") and relayed up a funereal conveyor belt into the "transparent cathedral-like tower" of an industrial silo where they will undergo their final metamorphosis ("PCA," p. 1158). The poem's climax nears as out of "the solemn imperial night" the word DUX shines forth over the once-

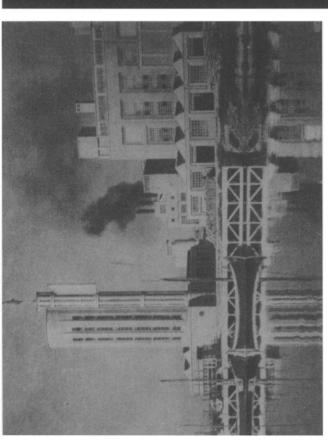


Fig. 20.—The fascist new town of Torviscosa (formerly Torre di Zuino) in 1939. Press photograph. From *Tempo*, 23 Nov. 1938. Author's collection.

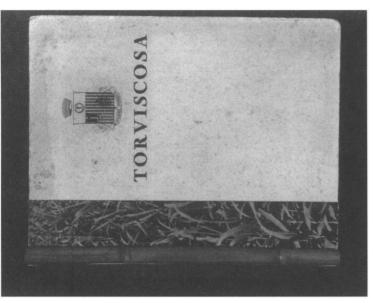


Fig. 21.—SNIA Viscosa, *Torviscosa* (1941). Bound with an *Arunda donax* spine. The Mitchell Wolfson Jr. Collection, The Wolfsonian, Miami Beach, Florida and Genova, Italy.

idle marshlands; overhanging it is "the luminous glassy axe blade" of Torviscosa's fasces-shaped tower ("PCA," p. 1159).62 Finally, the garden city itself appears and its unveiling marks the realization of a fascist utopia:

Continuous devouring of reeds of arising city of Viscose Tower O goddess Geometry

Calcium Bisulfite

Swimming pools for workers workers' children soccer fields bocce ball

Vittorio Veneto and Arnaldo Mussolini Streets

Theaters and refectories for thousands of workers

A lofty shelter of plane trees and horse chestnuts for a populace of bicycles

["PCA," pp. 1159–60]

The chemical allusion prefigures the arduous theme of the next nonhuman technicist exercise, "Simultaneous Poem of Woven Light," a demonstration of the miraculous effects of the harvest's violence that takes the reader step by step through baths and boilers filled with caustic soda, sulfuric acid, bleach, and the like; then through dryers, spinnerets, and weaving machines; and, finally, through surfacing and cutting machines onto retail shelves. 63 But, for the moment, the accent falls on the human: on leisure, labor, and sport; on the accelerated cadences of modern life; on geometries of steel unleashing hitherto-unknown potentialities of brute matter—this is the stuff of which Torviscosa is made (fig. 23). The deeper meaning of the epiphany (and of Marinetti's entire 1940 compilation) is still to come. It flashes before the reader in a valediction in which the clustered words of Mallarmé's Un Coup de dés jamais n'abolira le hasard are reconfigured as "the new constellation whose stars spell out the word AUTARCHY" ("PCA," p. 1160).64

My tale reaches its close with the development of a series of new fabrics by the SNIA Viscosa, the CISA Viscosa, and their peers: autarchic

- 62. Nearly two hundred feet tall, this tower was employed for the production of calcium bisulfite, a key ingredient in the viscose preparation process. The glass axe blade represents a borrowing from fascist show architecture: to be precise, from Libera's Italian pavilions for the 1933 Chicago world's fair and the 1935 Brussels international exposition.
- 63. See the appendix to this essay for a translation of an unpublished early draft of
- 64. Despite the upbeat tone of "Simultaneous Poem of Woven Light," Blum senses a fracture here: "the excuse of progress and national self-sufficiency does not outweigh the pathos of nature's destruction; the final, happy scene of prosperity makes sense only as a convenient diversion from an inescapable impasse, or perhaps as a token gesture of compliance with the requirements of the epideictic situation" (Blum, The Other Modernism, p. 142).



FIG. 22.—Mussolini on tour of Torviscosa at its September 1938 inauguration. From 10 anni di attività della SNIA Viscosa.

textiles like Cafioc (based on hemp), Lanital (based on casein), and Ginestra (based on the broom plant) whose large-scale production began in 1936. The success of each of these products varied, but, success or no success, they were featured as the stars of the decade's two most important textile exhibitions: the National Textile Exhibition of Forlì (held in mid-December 1936) (figs. 24, 25, and 26) and the National Textile Exhibition of Rome (inaugurated one year later at the Circus Maximus on the two-year anniversary of the imposition of sanctions) (figs. 27 and 28). Organized by industry but attended by large masses of spectators, these events ensured the widespread public diffusion of the story line of *The Non-Human Poem of Technicisms*, its technical vocabulary, and its materialist

65. On the Forlì exhibition, the best source is Federazione Nazionale dei Consorzi per la Difesa della Canapicoltura, Le fibre tessili nazionali e dell'Impero (Milan, 1937), which includes the technical reports presented at an accompanying symposium, reports on the presence of dignitaries and foreign journalists, and reports on Mussolini's visit, as well as room-by-room descriptions of the exhibition. No catalogue was apparently produced for the Circus Maximus exhibition, but the event was lavishly covered in the contemporary press—nowhere better than in the December 1937 issue of La rivista illustrata del popolo d'Italia.



Fig. 23.—Gymnasium for workers and their families at Torviscosa. From 10 anni di attività della SNIA Viscosa.

fantasies. By prominently juxtaposing actual raw materials with their photographically or industrially processed counterparts, both shows strove to exploit the central paradox celebrated in "Simultaneous Poem of Woven Light" and The Poem of the Milk Dress: the fabrics' ability to bring together the apparently distant worlds of farm and factory, nature and technology. The spectacle they put on, that is, wedded visions of a primitive peasant world (associated with the nation's origins), whose poverty and humility were on display in the form of crude materials and traditional handcrafted textiles, to visions of an advanced industrial world (associated with the nation's future), in which fabrics were celebrated for their unnatural resistance, their mutability, their ability to simulate traditional textile products, and their potential to invade export markets. In the case of the Circus Maximus exhibition, this emphasis upon natural artifice and archaizing avant-gardism was enhanced by the "crystalline and airy clarity" achieved through the abundant use of tempered glass by Rationalist architects such as Adalberto Libera, whose contributions included an Autarchic Winter Garden made exclusively of wood, cement, and glass.<sup>66</sup> As widely acclaimed as its successor, the Autarchic Minerals Exhibition, it followed Faludi's practice in the prior SNIA Viscosa pavilions—a practice borrowed, in turn, from the universal expositions of the prior century—of placing working machines on the premises interspersed with fabric samples and photomontages (figs. 29 and 30). But it went one step further. To these machines it added actual workers, peasant



Figs. 24, 25, and 26.—Exhibits from the National Textile Exhibition of Forlì, 1936. From Federazione Nazionale dei Consorzi per la Difesa della Canapicoltura, *Le fibre tessili nazionali e dell'impero*. The Mitchell Wolfson Jr. Collection, The Wolfsonian, Miami Beach, Florida and Genova, Italy.



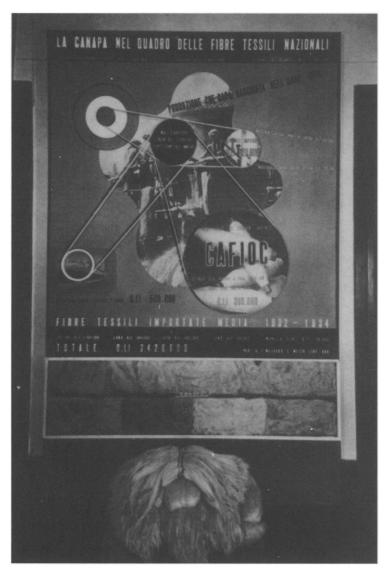


Fig. 26

women, animals, and natural products, all in the service of a sort of industrial magic realism aiming to reconcile an idealized rural Italy with an aggressive vision of the new civilization of machines. The exhibition hall was thus transformed into a virtual factory where spectators could see, touch, and smell the alchemy of modern textile production: from the raw materials with which the process started out; to their preparation in caustic soda baths; to their chemical processing; to the spinning and weaving process; to the folding and cutting of the finished product; to its conver-

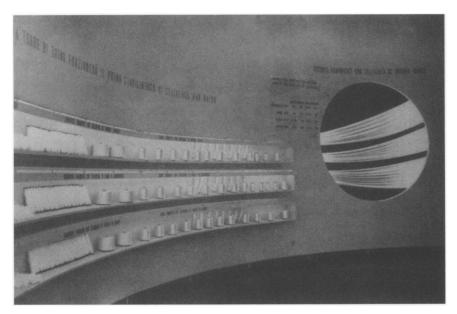
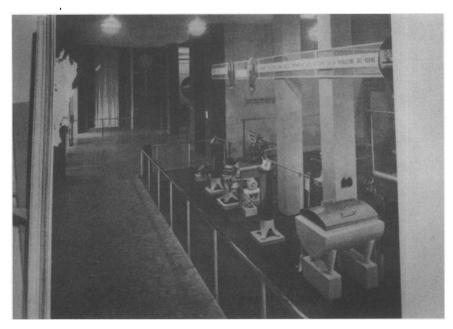


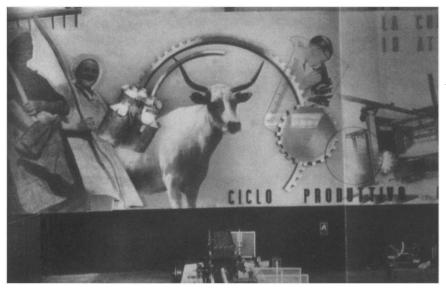
Fig. 27



FIGS. 27 and 28.—Two parts of the SNIA Viscosa pavilion at the National Textile Exhibition of Rome, 1937. Architect: Adalberto Libera. From *La rivista illustrata del popolo d'Italia*, Dec. 1937.



Fig. 29



FIGS. 29 and 30.—Photomontages from the SNIA Viscosa's virtual factory at the National Textile Exhibition of Rome, originally devised by the painter Mondaini for the 1936 Milan Trade Fair. From *La rivista illustrata del popolo d'Italia*, Dec. 1937.

sion into garments and everyday objects, first viewed in display cases and then on live models parading down catwalks. All of this magic, needless to say, unfolded under Mussolinian slogans such as "it is the spirit that tames and molds matter" (È lo spirito che doma e piega la materia), under images of the supreme leader, or under shimmering emblems of the keyword autarchia.

More could be said about the Forlì and Circus Maximus national textile exhibitions, but their ties to Marinetti's technicist poetics can best be understood by noting the remarkable degree to which *The Non-Human Poem of Technicisms* converges with viewers' responses to these two shows. One example will have to suffice: a review of the Circus Maximus show published in the weekly *Meridiano di Roma* quoted above. The reviewer begins by asserting that "less than an exhibition, it is a rally": a mass rally orchestrated and choreographed by a creative force and genius emanating from Piazza Venezia ("PA," p. 12). Then, after lauding the technical, economic, social, lyrical, and statistical inspiration the show provided its audience, the reviewer describes the natural fabric Ginestra:

Never has nature been so closely tied to the textile industry as today. . . . The gentle broom plant, as Leopardi had prophesied, bows its innocent head, but virtuoso machines and primitive spools transform it into textiles just as pristine and resistant as linen but naturally perfumed.<sup>67</sup> ["PA," p. 12]

As indicated earlier, this portrait of Leopardi as prophet of industry will be altered by Marinetti in the manifesto-preface that accompanies his *The Non-Human Poem of Technicisms*. But the linkage of poetry, chemistry, and weaving—based on the conventional poetic-making-as-woolspinning topos—is no accident. Already codified by the industry's own literature, it recurs over and over in press coverage, as in the following description of the production of Lanital:

Its subsequent transmutations are a full-fledged poem of candor, milk, butter, casein, made up of facets like minute crystals and powdered like semolina flour. The peasant woman moves about in her familiar kingdom. But where the cheese makers deliver their product to the factories, the blazing whiteness remains. ["PA," p. 12]<sup>68</sup>

<sup>67.</sup> Leopardi's most famous poem, a poem known by heart by every Italian schoolchild, was entitled "La ginestra" ("The Broom Plant"). The conceit was borrowed from Mussolini who, in a 23 March 1936 speech in the Campidoglio, had declared: "The broom plant that grows wild everywhere . . . known to Italians only because Leopardi dedicated one of his most pathos-filled poems to it, has today become a textile fiber capable of industrial production" (quoted in Aspesi, *Il lusso e l'autarchia*, p. 77).

<sup>68.</sup> The link between industrial weaving and creative writing, already invoked in the 3 August letter from Marinotti of the SNIA Viscosa to Marinetti, recurs in an anonymous write-up on the wool production section of the Circus Maximus exhibition, entitled "The

This transfiguring milk which is at once poetry's source and its end product is cast as the hero of *The Poem of the Milk Dress*, which begins:

Milk milk freshly milked I drink milk in an iron cup
I am baked an Ethiopian thirst burns my throat a friend
gave me the miraculous present of a can of luminous concentrated paradise<sup>69</sup>

Just as in the Meridiano di Roma review, this paradisiac substance is regularly viewed in relation to iron and steel machinery that multiplies it without watering down its candor. The poem's framework is, as always in Marinetti, rigorously autobiographical and leads the reader through a rapid-fire sequence of scenes—the African battle front, a crossing of the Suez canal, a train ride north to Rome—in preparation for a triumphal parade that circles the Coliseum in celebration of Italy's newly acquired empire.<sup>70</sup> Above the crowds looms "an imperial gourmet who dominates public squares and masses with his mute rotating mouth tasting horizons" ("PVL," p. 1165). Troops and war machinery stream by, among which "Colored Troops" march and flow "towards the ideal European milk" ("PVL," p. 1166). Imbibed by the taster/dominator, they form a confluence of currents that is parted only when we reach the poem's crux. This moment arrives in the form of an order, a monumental command that corresponds to the starting point both of the Exhibition and of the Lanital production process: "The Man commands // Milk, divide yourself" ("PVL," p. 1167). The man in question is Mussolini, cast in the role of industrial demiurge, supreme commander and supreme coagulator. From this point on the universe revels in its obedience—the subject of much of the rest of The Poem of the Milk Dress:

Everyone laughing joy participating in the ecstatic drunkenness of a casein thread which bounces due to the hilarity of its transmutation into a ribbon it then

Wool Novel": "[in addition to industrial machinery and botany] music also enters the picture, if only through an indirect action; for he was wise who stated that one cannot achieve greatness in industry without the spark of art animating the creations of pure thought. This is how it was with [the] Marzotto [wool works]. There is no doubt about it. In the epic of its factories fanfares sound and poetry flashes" ("Il romanzo della lana," *La rivista illustrata del popolo d'Italia*, no. 12 [Dec. 1937]: 78–79). The author later continues by rehearsing, one by one, the "chapters of the wool novel, brimming over with so much fantasy and poetry freely bestowed upon actual novelists" (ibid., p. 80).

69. Marinetti, "Poesia simultanea di un vestito di latte," *Il Poema non umano dei tecnicismi*, in *Teoria e invenzione futurista*, p. 1164; hereafter abbreviated "PVL."

70. In late 1935 Marinetti had volunteered to serve in the Ethiopian campaign, so the return from Africa figures events that occurred in early 1936. The Coliseum scenes seem to allude to the celebrations held in honor of the two-thousand-year anniversary of the birth of Augustus Caesar, held in Rome in tandem with the Mostra Augustea della Romanità, a year-long exhibition marking the anniversary (23 Sept. 1937–23 Sept. 1938).

cries out I am milk that beatifically returns to its pure nipple spool spool mine mine mine

["PVL," p. 1167]

The separation of cheese from whey and casein from water, treated both with humor and high drama in this modernist reworking of the Genesis story of the separation of land from water, yields ever-increasingly solid masses, then luminous threads, and finally fabrics that still bear the trace of their luminous milky origins. After numerous pages of oddly abstract yet sensuous descriptions of the struggle of threads to achieve their ultimate form, the poem closes with a celebration of the happy fusion of hard and soft, first in a heroic human subject,

# I AM THE HARD MAN NOT SUFFICIENTLY MILK-LIKE EVEN THOUGH NURSED ON THE BEST SNOWY MILK OF THE BEYOND

["PVL," p. 1170]

and then in a heroic nation-state,

And let this complicated milk be welcome **power power** power let's exalt this

# MILK MADE OF REINFORCED STEEL MILK OF WAR MILITARIZED MILK

["PVL," p. 1170]

Here, as elsewhere in The Non-Human Poem of Technicisms, a vertiginous play of substitutions insists upon the links between the magic of viscose rayon and Lanital, the asphalt roadways that il Duce unspools across Italian Africa, the activities of Italy's commercial ports, and the aerial battlefields opened up by World War II. But the deeper tale concerns not progress but a characteristically futurist creation myth, according to which a hard-edged new world of redeemed, spiritually-charged materials arises out of the primordial nothingness represented by the inchoate materiality of mother's milk. In this regard, Marinetti's identification of the futurist man of steel with a suckling infant pushes the central mystery that the poem celebrates—the process of cheese making, required in turn for the manufacture of casein-backwards in time towards the point of human origins. This choice may well be instructive, for cheese making, at least since Aristotle, had served as the privileged analogy in the Western tradition for describing how the masculine seed succeeds in "fixing" the blood secreted in the uterus, thereby initiating the formation of that peculiar composite of matter and spirit: the human embryo.<sup>71</sup> The Non-Human Poem of Technicisms thus returns to an archaic scene of human origins in order to proclaim more forcefully a nonhuman future in which all originary milks have coagulated, been spun into imperial uniforms worthy of fear and honor, and assumed a wondrous multiplicity of mechanical forms.

#### **Appendix**

Wrapping the World in Italrayon

Filippo Tommaso Marinetti

Sonia Delaunay's "simultaneous dresses"; the worker suits of Aleksandr Rodchenko, Vladimir Tatlin, and Ernesto Thayaht; the futurist vests of Giacomo Balla; the patterned fabrics of Varvara Stepanova, Kazimir Malevitch, and Fortunato Depero: these are but a few of the many experiments that bear witness to the avantgarde's abiding interest in the domain of clothing design as a site for fashioning a new humankind. The operation was typically envisaged in twofold terms: as a repatterning of fabrics and as a recontouring of garments. The first sought to replace the prior century's standard array of classical, organic, and figurative ornamental motifs with brightly colored, hard-edged, abstract geometries so as to mark a new rapport of intimacy between the surface of the wearer's body and the new century's machine-dominated context. The second sought to devise outfits ideally suited to the needs of modern bodies, whether these needs were functional—for hy-

71. The classic formulation of this doctrine can be found in Aristotle's treatise on the generation of animals:

When the material secreted by the female in the uterus has been fixed by the semen of the male (this acts in the same way as rennet acts upon milk, for rennet is a kind of milk containing vital heat, which brings into one mass and fixes the similar material, and the relation of the semen to the menstrual blood in the same, milk and the menstrual blood being of the same nature)—when, I say, the more solid part comes together, the liquid is separated off from it, and as the earthy parts solidify membranes form all round it; this is both a necessary result and for the sake of something, the former because the surface of a mass must solidify on heating as well as on cooling, the latter because the foetus must not be in a liquid but be separated from it. [Aristotle, Generation of Animals, trans. A. Platt, Complete Works of Aristotle, 2 vols., ed. Jonathan Barnes (Princeton, N.J., 1984), 1:1148 (2.4.739b.20–30)]

72. On this topic, in addition to Crispolti and Braun on Italian futurism, see, for example, Sigrid Weltge-Wortmann, Women's Work: Textile Art from the Bauhaus (San Francisco, 1993); Charlotte Douglas, "Russian Fabric Design, 1928–32," The Great Utopia: The Russian and Soviet Avant-Garde 1915–1932 (New York, 1992), pp. 634–48; The Werkbund: History and Ideology, 1907–1933, trans. Pearl Sanders, ed. Lucius Burckhardt (Woodbury, N.Y., 1980); and Otto Charles Thieme, Avant-Garde by the Yard: Cutting Edge Textile Design, 1880–1930 (Cincinnati, 1996).

giene, lightness, elasticity, breathability, and so forth—or symbolic—for the outfits to suggest movement, classlessness, agility, speed, and flight. The technicalities of weaving and dyeing sometimes found a place within these utopian or mythic musings (as they had, decades before, in the Arts and Crafts movement). More often they did not. The existence of industrially produced wools, cottons, silks, and linens was simply taken for granted, and the artist's task was to repattern and re-form them, while diminishing their exclusivity and cost.

Here, perhaps, lies the originality of The Non-Human Poem of Technicisms. For Marinetti the technicist, draping the body in patterned geometries and freeing it from physical constrictions no longer guarantees the fulfillment of modern clothing's revolutionary promise. His solution is to literalize the metaphor of clothing as a second skin: to demand that fabrics become the living prolongations of living beings—in his own words, the "tender elastic equivalent[s] to the human epidermis." Such is the fantasy that informs the text that follows, an unpublished lecture script and early draft of the "Simultaneous Poem of Woven Light" found among the resource collections of the Getty Research Institute. 73 The typescript probably dates from early 1939. It bears no title—the one listed above is of my devising—and may well have been intended for one of Marinetti's occasional radio talks. Like the poem that was culled from it, "Wrapping the World in Italrayon" links up directly to the harvest story recounted in The Poem of Viscose Tower, which had concluded with an external overview of the SNIA Viscosa's corporatist new town. It takes the reader inside the SNIA Viscosa factory through each and every step of the rayon production process. The process is understood, not as the transformation of dead matter into living forms, but instead as at once a trick and a transfiguration a trick inasmuch as, in its course, both the laws of nature and the wily silkworm are outwitted by modern science; a transfiguration inasmuch as the "deep life of Swedish fir-forests now subject to an Italian discipline of temperatures" is induced by artificial means (including baths, boilers, basins, and bobbins) to transmute itself into a radiant rayon "light=flesh," a light=flesh readily confused with a worker's arm and the perfect medium for "the coming revolution in male fashions." Whereas in The Poem of Viscose Tower the nonhuman consisted in the attribution of hyperbolic passions to plant life and to abstract mechanical nemeses, here it is associated instead with a glistening metallic world in which automation has endowed machines and viscous liquids with humanlike powers of agency and autonomy. It is their alternately ecstatic, riotous, and bellicose story that unfolds with "not a human in sight." Not a human in sight, that is, aside from the poet, who has slipped in "as if into a parenthesis full of automata." He is there to reassure us that, though nonhuman, the parenthesis in question is hardly inhuman. It summons up no specters of alienation, exploitation, or mass unemployment. On the contrary, the parenthetical microcosm is enframed by two superhuman promises: that of a heroic nation-state wrapping the planet in its radiant mantle and that of an airborne humanity, "cheek

<sup>73.</sup> Marinetti, typescript, F. T. Marinetti Papers, accession no. 920092, box 6, folder 29.

to cheek" with the sun, fulfilling the thwarted dream of Daedalus, artificer of artificers (fig. 31).

The tenacious efforts of numerous peoples—the Italian not least among them—to compete with the silkworm by creating wearable female and male clothing or better a tender elastic equivalent to the human epidermis are well known.

My fierce yearning for thoroughly Italian female fashions and for agile male fashions unlike the fussy Nordic uniforms<sup>74</sup> that we usually don led me to the machinery and laboratories of Royal Venice<sup>75</sup> to see for myself the degree of perfection attained by plant-derived silk.

To this end I set off in a sleek automobile that had already triumphantly trampled the sibylline savagery—all traps of water and caked mud—of the Athens-Delphi road.

Beautiful cadenced velocities of this our geometrical superhighway that the gaze threads like the soul of a long-range cannon piercing the horizon line's skeptical gray distances with bold explosive novelties.<sup>76</sup>

My inborn hatred for the worship of all things foreign<sup>77</sup> a vice that

- 74. Marinetti's anti-Nordic polemic represents the flip side of his pro-Mediterranean campaigns of the 1930s. Though its roots extend back to the intense anti-Austrian and anti-German sentiments of futurism's pro-interventionist activities before World War I, it became particularly pronounced in documents such as Thayaht and Marinetti's "First Futurist Manifesto of Italian Fashion" (1932): "Until now, the Nordic capitals (London, Paris, New York, Berlin) have laid down the law as concerns all aspects of modern dress, whether for men or for women. The time has come for a new turn in world taste and it is incumbent upon Italy to bring the joys of sleekness, speed, and color to the masses assembled in public squares, theaters, and on the boulevards" (Thayaht and Marinetti, "First Futurist Manifesto of Italian Fashion," typescript, F. T. Marinetti Papers, accession no. 850702, folder 172, p. 1).
- 75. "Royal Venice" here refers to greater Venice, including the Friuli region, the location of the SNIA Viscosa's Torviscosa facilities.
- 76. Much like Hitler's Autobahn system, the autostrada system was one of Mussolini's showpiece public works projects. Marinetti's mention of it here is suggestive, inasmuch as road building will be the topic of two other poems contained in The Non-Human Poem of Technicisms: "Simultaneous Poem of the Coastal Highway Dressed in Wheels" ("Poesia simultanea della litoranea vestita di ruote") and "Simultaneous Poem of the Coastal Highway Speed Watering Trough" ("Poesia simultanea della litoranea abbeveratoio di velocità"). Both come immediately after the "Simultaneous Poem of a Milk Dress" and further develop the weaving/road building connection: in the first, the coastal highway is imagined as a "long long brown loom with leaping black automobile spools that pumps out the brand new textile like a train" (Marinetti, "Poesia simultanea della litoranea vestita di ruote," Il Poema non umano dei tecnicismi, in Teoria e invenzione futurista, p. 1171); in the second, the poet sees "bobbins bobbins of rolled-up roadways liquefying themselves into ribbons of breathtaking lightness" (Marinetti, "Poesia simultanea della Litoranea abbeveratoio di velocità," Il Poema non umano dei tecnicismi, in Teoria e invenzione futurista, p. 1177).
- 77. The Italian word is *esterofilia*, or "foreignophilia": an increasingly important Marinettian theme during the fascist decades.

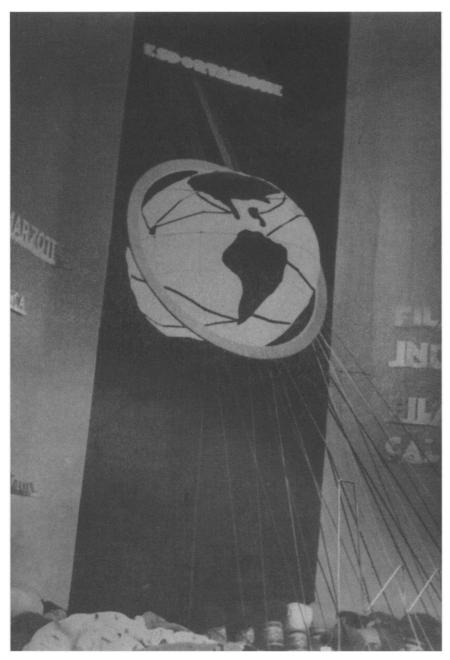


Fig. 31.—"Weaving an empire through exports." Display from the National Textile Exhibition of Rome. From *La rivista illustrata del popolo d'Italia*, Dec. 1937.

still imperils Italy's artistic industrial supremacy<sup>78</sup> sped up my wheels and blood as I became acquainted with the molecular drama of cellulose being soaked in cold caustic soda.<sup>79</sup>

An immense splendid hall harbors the deep life of Swedish fir forests now subject to an Italian discipline of temperatures.

For this purpose large ammonia-filled compressors churn and chill while they are watched over by the intermittent flutter of white and red pilot lights reminiscent of the luminous nocturnal telegraphy of mountain artillery duels. As on the Trentine front<sup>80</sup> where the few soldiers were often invisible here one would be hard put to spot fifteen hundred factory workers.

Step by step the cellulose is decanted purified pressed milled with no intrusion of human hands.

It is alive, no doubt: indeed, it requires a mysterious period of repose. I sense it transforming itself in enormous horizontal tanks whose slow rotations make them into the stomachs of gigantic silkworms.

The monstrous patience genius of legions of chemists long ago discovered the formula for achieving solubility: so let alkaline cellulose wed the carbon bisulfide to which it was betrothed so that it may liquefy<sup>81</sup> in a xanthogenate<sup>82</sup> orange- and rust-colored like a bloody weapon amidst the festive drumbeat of belts that fearlessly stretch between lower and upper wheels.

Left to sit the solution turns purple in an acid bath that causes it to precipitate into the thread's base components solid flocks or floss.

Not a human in sight.

I insinuate myself like a mute word into the chemistry lab as if into a parenthesis full of automata delicately extending silk threads across metal resistance meters.

On the wall magnified cross sections of the threads and floss whose ragged edges insure a more elastic absorption of dyes recalling the great sawmills of the fir forests.

The haunting sickly-sweet scent of sulphur guides me towards

- 78. The word *primato* encompasses meanings that include the notions of supremacy, sovereignty, preeminence, and the achievement of a championship or record (in the sense of "land speed record").
- 79. The Italian term is *macerantesi*, literally a reference to the process in which the cellulose is detached by being steeped or slaked, like flax or hemp, so as to remove the fiber from the woody tissue of the reeds; the technical term for this process is *retting*. The overlap between this text and "Simultaneous Poem of Woven Light" begins with this passage.
- 80. Among the most active fronts during World War I, the Trentine front was the site of much of Marinetti's military service.
- 81. Marinetti's use of *liquidarsi* in the sense of "to liquefy" is archaizing. In standard usage the term means "to liquidate," in the sense of liquidating debts or of annihilating.
- 82. In the original, *santogenato*, a learned technical term based on the Greek *xanthós* (yellow), referring here to a viscous, golden brown solution whose principal ingredient was cellulose xanthate in a sodium hydroxide solution.

squared-off basins filled with sulphuric acid and sodium sulfate where the viscose, now beatified thanks to its latest transfiguration and fully filtered through sheets of wadding, enjoys a final rest before its definitive travail.

Up to this point its mysterious day has unfolded under science's watchful eye and its molecular weight remains unknown and will remain so until after the impending marvel.

The vast hall thrusts in my face the feverish multiple noisemaking<sup>83</sup> of spinning machines to a depth of three hundred meters.

Air of urgency of battles and revolutionary rallies so greatly do the double files of bobbing bobbins resemble orators' shouting mouths and machine gun barrels. All are aimed at the fearless observer who is determined to find out at any cost why and how in the aforementioned filtration process the solution that has now been extruded through a golden spinneret<sup>84</sup> coagulates into a thread leaping up onto the bobbin around which it speedily coils. One meter per second.

Prodigy of this convulsive repetition of infinite prodigies. Imperturbability of machines that command other machines in military fashion. On rails massive cars roll by spitting up the insolent animality of radiant silk.

To the touch hands are fooled into enjoying fresh bread or the warm flesh of a beautiful woman.<sup>85</sup>

They vanish in the ample hall devoted to the twisting of threads.<sup>86</sup> The scent of sulphur becomes one with the orange-colored taste battling the furious din of cicadas on red-hot August roadways.

Chirping insanely drunk in fact with uncontainable joy the other thousand wheels stage a mock bicycle race seen from a glass-ceilinged basement.

Hilarity hilarity inexaustible hilarity of wheels happy to have defeated the sacred silkworm mantled in Chinese regality.

The hilarity spreads to motors in the adjoining room that stir up a tidal wave of resplendent skeins. Their boiling and frenzied desulphurization and their deeply affecting joyous bleachings find expression in a

- 83. In the original, polirumorismo. The term refers back to Luigi Russolo's 1913 manifesto, The Art of Noise. See Luigi Russolo, L'arte dei rumori: Manifesto futurista (Milan, 1913).
- 84. The process being described is the literal spinning of the rayon that here, as in present industrial practice, is accomplished by forcing chemically treated cellulose through tiny apertures in thimble-shaped platinum nozzles known as *spinnerets*. (The latter term is borrowed from the insect world, referring to the organs with which insects such as silkworms and caterpillars produce silk or thread.) The resulting rayon filament is subsequently hardened by drying or by chemical treatment, and/or is cut into short lengths that are then woven into yarn.
- 85. In the original, femmina, a term that bears stronger animal, and therefore sexual, connotations than donna.
- 86. The reference is to a process technically akin to the *torcitura della seta* or "throwing of silk," by means of which processed filaments are twisted into threads.

stormy or chestra of whinnies jingle-bells cracks-of-the-whip  $^{87}$  a cursing entanglement of wheels and horses.  $^{88}$ 

Let the substance now be rebaptized shiny radiant light=flesh because there is no disjunction between the delicate white skin of the worker's arm and the skein that she hands me.

Let the remarkable variety of its hues be enriched by the Futurist genius of Prampolini, Depero, Benedetta, Dottori, Fillia, Tato, Munari, etc.<sup>89</sup> and so many other inventors of lines=tones lightning-flash nuances.

This shall be the most suitable material for the coming revolution in male fashions.

Speed of reflexes and of almost fleshly pliancies amidst the mirror action of aeronautical aluminium competing and comingling with sheet-metal<sup>90</sup> wings at an altitude of three thousand meters cheek to cheek with a less remote sun, the new wingèd tailor for feathered humans and rival to the electrical searchlights that so divinely cut the heavy cloth of night.

So it is that our artistic industrial pride will drape the earth's curves in soft and resilient Italrayon racing against Marconi's short and long radio waves.<sup>91</sup>

- 87. The typescript reads "schioppi di frusta" or, literally, "carbine of whip," one of several transcription errors that I have had to correct. Schiocchi di frusta is the correct form of the expression.
  - 88. The overlap with "Simultaneous Poem of Woven Light" ends with this sentence.
- 89. The references are to various key members of Marinetti's futurist entourage: the painters and set designers Enrico Prampolini (1894–1956) and Depero (1892–1960); Benedetta Marinetti Cappa (1897–1977), Marinetti's wife and the author of Viaggio di Gararà: Romanzo cosmico per teatro (1931) and Astra e il sottomarino: Vito trasognata (1935); the painter Gerardo Dottori (1884–1977); the painter and sculptor Fillia (Luigi Colombo; 1904–36); the painter Tato (Guglielmo Sansoni; 1896–1974); and the graphic artist, designer, and painter Bruno Munari (1907–), responsible for the original layout of The Poem of the Milk Dress.
- 90. The original reads "compensati di metallo." *Compensato* occurs more commonly in phrases such as *legno compensato* (plywood) and here appears to refer to the relatively recent practice of building airplane bodies out of pop-riveted metallic skins.
- 91. The analogy is stronger than it might at first appear since rayon comes in short and long thread varieties. *Italrayon* was the trademark developed by the SNIA Viscosa in the early 1930s in order to confer a national identity upon its rayon products.

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### [Footnotes]

<sup>59</sup> Notes and News

*Tempo*, New Ser., No. 33. (Autumn, 1954), pp. 1-5+20. Stable URL:

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