

The Romance of Caffeine and Aluminum

Jeffrey T. Schnapp

The title of my essay echoes that of one of late antiquity's most learned works: Martianus Capella's *Marriage of Mercury and Philology*. But whereas the fifth-century Neoplatonic philosopher was concerned with timeless nuptials of the intellect, allegorical nuptials joining the trivium to the quadrivium, eloquence to learning, I am interested instead in the convergence between two bodies in the accelerated time frame that corresponds to the advent of modernity. The first of these bodies is the active ingredient in coffee, isolated for the first time in 1820, a substance emblematic of the modern individual's striving for hyperproductivity and appetite for hyperstimulation. The second is the most important of the new metals embraced by twentieth-century industry: aluminum—a material discovered in 1854 but first produced on an industrial scale at the turn-of-the-century mark.

Viewed in hindsight, the coming together of coffee and aluminum seems inevitable. However divergent the time lines governing the rise to prominence of each substance, however different the uses to which each

This essay was originally composed on the occasion of a November 2000 conference held at the Carnegie Museum of Art to celebrate the opening of an exhibition entitled *Aluminum by Design: Jewelry to Jets*, curated by Sarah Nichols. I am grateful to the conference organizers for having granted me the opportunity to formulate these reflections before a lively audience of designers, curators, collectors, historians, and “aluminuts.” I must also gratefully acknowledge the invaluable assistance provided me by the marketing division of Bialletti Industrie, in particular, by its director, Claudia Canesi, and by her assistant, Micaela Orizio.

Unless otherwise noted, all translations are my own.

is and was put, they shared certain common associations right from the start: associations with lightness, speed, mobility, strength, energy, and electricity. Fated or not, the meeting was long in coming. It had to wait until the mid-1930s, the golden era of aluminum designs for the kitchen and the beginning of fascist Italy's pursuit of economic autarchy, at which time it gave birth to a domestic object that can still be found in nearly every Italian home and in many a kitchen throughout the world: the Bialetti Moka Express (fig. 1).¹ The story that I would like to recount is that of this modest but characteristic product of Italy's design culture during the fascist decades. It is the story of the Moka's invention by Alfonso Bialetti in 1933, of its postwar marketing by his son Renato, and of its enormous success, indicated by global sales now closing in on the 220 million mark. Embedded within this tale is a web of other tales regarding the distinctive nature of Italian industrial development, the politics and symbolism of industrial materials, and the sociocultural significance of coffee and aluminum's movement back and forth between outdoors and indoors, between public and private consumption. In short, I hope to suggest that the romance of caffeine and aluminum is no less an allegory than the marriage of Mercury and Philology, though an allegory made up of distinctly this-worldly, sociohistorical object lessons. These lessons adhere so closely to the object under scrutiny that here allegory must be conceived of not in the Neoplatonic sense of truths veiled beneath the surface of a beautiful lie but rather in the incarnational sense of truths materially nested within other truths nested, in turn, within other truths. Industrial objects may appear forgetful and therefore reducible to function, whether understood as the emanation of a psyche or of practical needs and concerns, or subsumed within abstract (and sometimes analytically too facile) processes like rationalization and commodification. Yet such understandings strip away the actual density that characterizes the object world: the subtle incrustations of intention and invention, fantasy and ideology, tradition and accident that, like a family history that can be recovered only by means of exacting genealogical research, an object carries in the train of its existence. Things may be opaque, but they are

1. On aluminum's emergence as a domestic metal, see Penny Sparke, "Cookware to Cocktail Shakers: The Domestication of Aluminum in the United States, 1900–1939," *Aluminum by Design*, ed. Sarah Nichols (exhibition catalog, Carnegie Museum of Art, Pittsburgh, 2000), pp. 112–39.

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FIG. 1.—Father and Son. The original 1933 Bialetti Moka Express accompanied by its 1950s descendant. Source: Bialetti.

rarely dull, and the stories of imaginary and material investments that they tell, like the story of the Bialetti Moka Express, conjoin the minutia of history to large-scale social processes, the actions of individuals to those of collectivities, in ways that expose the workings of history within everyday forms of communion like the morning cup of coffee that you and I imbibe before heading off to work.

Like chocolate and tea, coffee first reached Western Europe as an exotic commodity. It first appeared in the seventeenth century as Greek, Turkish, and Armenian vendors walked the streets of the major European capitals. But coffee drinking became fashionable only in the course of the eighteenth century, when it gave rise to what, in the West, was a novel institution: the coffeehouse. Like the product that they served up, usually in the Turkish fashion, coffeehouses at first proved controversial. Moralists called attention to their all-too-evident “oriental” derivation,

suggesting that, as was imagined to be the case with its Turkish and Egyptian counterparts, coffeehouses were dens of iniquity, gambling, prostitution, and even pederasty.² Yet this insalubrious reputation altered both as coffee took hold in the royal courts and as coffeehouses proliferated to the point of becoming the defining feature of a newly emerging public sphere.³ No longer the Western image of an Eastern other, the coffeehouse became a site increasingly associated with novelty and news, with present-centered, "modern" activities like the reading of newspapers, with commerce, advertising, the promiscuous mixing of social classes, contemporary culture, and, of course, politics, particularly revolutionary politics. In London, a coffeehouse founded in 1668 was at the origin of the insurance syndicate known as Lloyd's of London. By 1700 there were 2000 such establishments and such was their liveliness that Charles II banned them momentarily, fearing that they were hotbeds of freethinking and revolutionary fervor. By 1800, there were tens of thousands. The same proliferation may be found in Italy, France, Germany, and the United States, accompanied by the same functional link between public coffee consumption and trade, contemporary culture and politics.⁴

My purpose in briefly sketching out this backdrop, rendered in all its details by Heinrich Eduard Jacob in *The Saga of Coffee: The Biography of an Economic Product*, is to underline a couple of historical facts that will be substantially altered neither by the increasing grandeur and luxury of nineteenth-century and early twentieth-century cafés nor by the gradual spread of coffee drinking at home:

1. that coffee was a beverage to be consumed *publicly* well into the twentieth century; public consumption remained the norm, with private preparation and consumption tending to be restricted to the middle and upper classes until the second half of the nineteenth century;

2. that, accordingly, places of public consumption such as coffeehouses tended to dominate the coffee trade, functioning as wholesale buyers and retail sellers of beans, as well as serving as coffee bean roasters;

3. that coffee machines were typically devised with coffeehouses, not

2. On the coffeehouse and coffee consumption in the Near East, see Ralph S. Hattox, *Coffee and Coffeehouses: The Origins of a Social Beverage in the Medieval Near East* (Seattle, 1985), and Hélène Desmet-Gregoire, *Les Objets du café dans les sociétés du Proche-Orient et de la Méditerranée* (Paris, 1989).

3. Carlo Goldoni's *La bottega del caffè* (Milan, 1750) accurately depicts the transitional period, emphasizing as it does the coffeehouse's links to vice and virtue alike.

4. Among the sources that are worth consulting on this topic are Ulla Heise, *Kaffee und Kaffeehaus: Eine Kulturgeschichte* (Hildesheim, 1987); Ermanoel Araujo et al., *O Café* (exhibition catalog, Praça do Banco Real, São Paulo, 28 Aug.–20 Oct. 2000); Antoinette Schnyder-von Waldkirch, *Kleine Kulturgeschichte des Kaffees* (exhibition catalog, Johann Jacobs Museum, Zürich, 1991); Heise et al., *Süsse muß der Coffee sein! Drei Jahrhunderte europäische Kaffeekultur und die Kaffeesachsen* (exhibition catalog, Stadtgeschichtliches Museum, Leipzig, 28 Apr.–12 June 1994); and Alberto Manodori et al., *Il caffè: Storia e cultura* (exhibition catalog, Biblioteca Vallicelliana, Rome, 16 Oct. 1989).

private users, in mind, domestic coffee machines remaining elementary by comparison;

4. that, due to the normativity of public consumption, coffee itself became closely identified both with processes of sociopolitical change (progress, reform, technological innovation, revolution) and with modern forms of individualism; and, finally,

5. that public consumption rendered coffee drinking a predominantly male practice with emancipatory significance for women as, in the course of the nineteenth and twentieth centuries, they struggled to conquer a place in the public sphere. (The obvious analogy would be with cigarette smoking in the twentieth century.)⁵

The gender divide is crucial for understanding the social and symbolic impact of twentieth-century inventions such as the Moka Express and may be traced back to the beginnings of European coffee consumption as indicated by such seventeenth-century tractates as “The Women’s Petition against Coffee representing to public consideration the Grand Inconveniences to their SEX from the Excessive Use of that Drying, Enfeebling Liquor” and the male response “vindicating their own performances, and the Vertues of their Liquor” (fig. 2). But to what sort of “performances” was coffee thought to give rise as one approaches the turn-of-the-twentieth-century mark? There was general agreement that they were mental rather than carnal. In his 1825 classic, *The Physiology of Taste*, the gastronome Jean Anthelme Brillat-Savarin underscored coffee’s role as an agent of cerebral excitement and perceptual sharpening, free from “the agitation and unhappiness which accompany insomnia brought on by any other cause.”⁶ But accelerated living contained the danger of accelerated aging; for instance, children were supposed to be reduced to “little dried-up machines, stunted and old at the age of twenty” (*PT*, p. 105).⁷ Honoré de Balzac confirms the fear in his *Treatise on Modern Stimulants*, where coffee finds a place of honor alongside tobacco and distilled spirits. An immoderate coffee drinker (like myself), the great novelist erroneously assigns to tannin the role of *agent agitateur* with remarkable powers when ingested on an empty stomach. After an initial purgative

5. On this subject, in addition to Heinrich Jacob, *The Saga of Coffee: The Biography of an Economic Product*, trans. Eden and Cedar Paul (London, 1935), see Wolfgang Schivelbusch, *Tastes of Paradise: A Social History of Spices, Stimulants, and Intoxicants*, trans. David Jacobson (New York, 1992), pp. 62–84. Schivelbusch’s emphasis upon coffee as “the great soberer” (that is, as an agent of antialcoholism and the Protestant ethic) is sometimes overdone, as indicated by the insistence in Balzac and others (see the subsequent quotation) upon coffee’s intoxicating properties.

6. Jean Anthelme Brillat-Savarin, *The Physiology of Taste*, trans. Anne Drayton (London, 1994), p. 104; hereafter abbreviated *PT*.

7. Elsewhere Brillat-Savarin describes coffee’s potentially toxic effects with reference to its figurative transformation of the brain into “a mill with all its wheels revolving, but nothing for them to grind” (*PT*, p. 106).

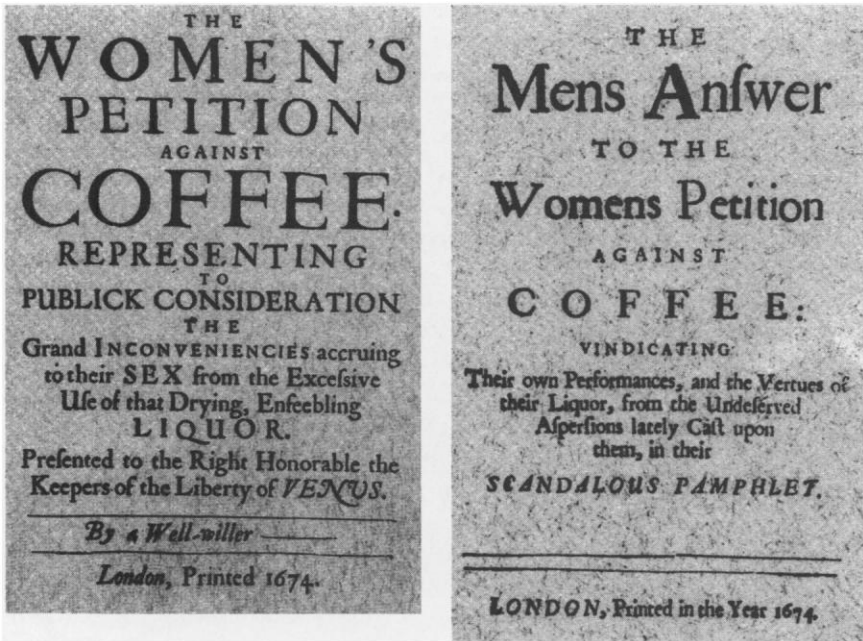


FIG. 2.—Two seventeenth-century English pamphlets for and against coffee consumption. Source: Stanford University Library.

effect, ferocious in nature, no less ferocious untapped powers are unleashed:

Ideas surge forth like the battalions of a great army on the field of battle and the combat begins. Memories attack with their banners unfurled. The light cavalry of comparisons develops at a magnificent gallop. The artillery of logic comes to the rescue with its artillerymen and shells. Witticisms appear as sharpshooters. Figures begin to take shape. The paper covers itself with ink, since the evening begins and ends in torrents of black liquid, just like the battlefield in gunpowder.⁸

Balzac's description goes on and on (as if to prove that it was written under the influence). My point in citing it is to call attention to how the

8. Honoré de Balzac, *Traité des excitants modernes* (Paris, 1992), p. 44. At the conclusion of this chapter, Balzac connects the excess mental productivity fueled by tannin with sexual impotence: "Two young voyagers, Mssrs. Combes and Tamisier, found that Abyssinians are generally impotent and did not hesitate to ascribe the cause of this unfortunate state to the abuse of coffee, which the natives indulge in to the nth degree" (*ibid.*, p. 46).

disruptive and creative effects attributed to coffee establish the framework for understanding provocative claims like that made some eighty-five years later by Filippo Tommaso Marinetti that, as the founder and evangelist of futurism, the first full-blown cultural-political avant-garde movement, he was the *caffeine of Europe*. Marinetti styled himself the *caffèine* of Europe because he envisaged himself both as a purgative agent, dedicated to freeing Europe from its idolatry of the past, and as a new sort of industrial-era human being—a hyperactive multiplied man immune to the snares of romantic love . . . which is to say, a caffeinated man. Such descriptions also help us to make sense of the meanings and urges that gave rise the emergence, at the turn of the century, of that most distinctive of Italian forms of coffee: *caffè espresso*.

Heretical though it may seem to admit it, espresso coffee is not an Italian invention, experiments with steam pressure brewing having been undertaken in Britain and France as far back as the early 1800s. Nor is the word *espresso* a genuinely Italian word. The label was borrowed from the English *express* via the French *exprès*, meaning something made to order and, by extension, produced and delivered with dispatch. This meaning was modified by the rise in mid-nineteenth-century England of special trains running “expressly” to single locations without making intervening stops, trains that soon came to be known throughout Europe as *expresses* (fig. 3).⁹ The connection with coffee brewing may not appear obvious. But it was prefigured by a subgenre of coffeemakers known as coffee locomotives, manufactured between 1840 and 1870, that played upon the functional analogy between the boilers of steam engines and the boilers in coffee machines (fig. 4).¹⁰ So when in 1901 Luigi Bezzera filed his patent for the first restaurant-style espresso machine, a machine consisting in a large boiler with four double pumps subsequently commercialized by the La Pavoni company, he could pretty much count on the fact that consumers would understand the symbolic valences of drinking a product bearing the designation *caffè espresso*. As I have already noted, coffee had been progressively entering ever larger numbers of private homes during the second half of the nineteenth century, and, when and where it did so, at least on Italian soil, it was prepared by recourse to one of two simple devices: either a *napoletana*—a reversible pot heated on the stove and then flipped over so that the boiling water trickles down through the coffee—or a *milanese*—in which water is boiled until it seethes through the ground coffee held in a strainer near the pot’s top

9. The picture is actually slightly more complex, inasmuch as the word *express* was, before the era of trains, already associated with express messengers who could be counted upon to deliver messages at speeds superior to those of the ordinary mail service. So “express” train services were themselves tapping into a prior usage.

10. On coffee locomotives, see Edward and Joan Bramah, *Coffeemakers: Three Hundred Years of Art and Design* (London, 1989), pp. 104–9, which also contains a comprehensive history of coffeemaker design.

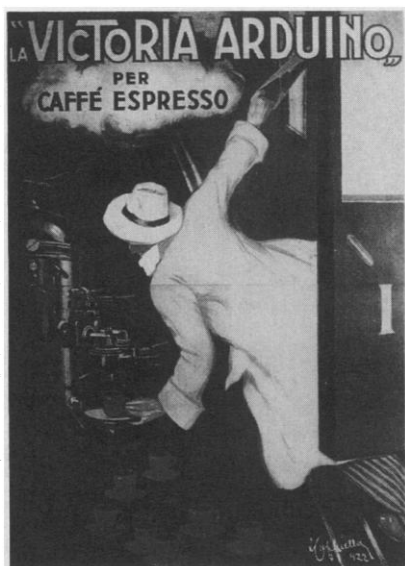


FIG. 3.—Advertisement for the *Vittoria Arduino* espresso coffeemaker, 1922. Source: Bialetti.

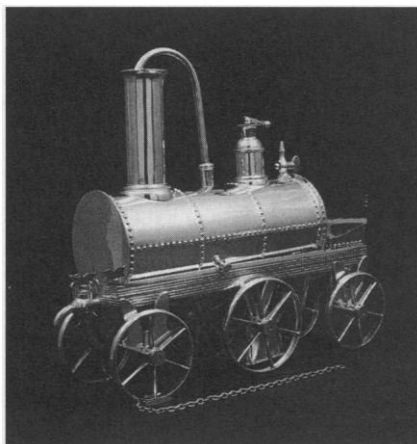


FIG. 4.—English coffee locomotive in silver based on design by Jean Baptiste Toselli, nineteenth century. Source: Bialetti.

(fig. 5). Unlike these domestic peers, the new espresso machines were designed to dazzle through their size and speed, with rumbling boilers, brass fittings, enameled ornaments, vulcanized rubber knobs, and gleaming metallic lines all at the command of the caffeinated double of the train conductor-engineer—the *barista* (fig. 6). They reinforced and reinterpreted the long-standing conviction that strong coffee was the virile liquor with which modern men powered their corporeal and corporate boilers. And even if the steam-brewed coffee that these behemoths turned out often tasted burnt, the brew was power-packed, intense, and quickly consumed. It translated the values of efficiency and excitement associated with the express train into an everyday beverage in comparison to which domestic coffee was but a slow and pallid imitation.

Enter Alfonso Bialetti, freshly returned from a decade-long stint of work in the French aluminum industry. In 1918 Bialetti founded a small metal and machine shop in Crusinallo, in his native Piedmont.¹¹ The region already had a long tradition of metal work and, in the wake of World

11. Although there is some confusion about the matter among current Bialetti employees, it may be that Bialetti's shop evolved into the firm known as Metallurgica Lombarda-Piemontese dei Fratelli Bialetti-Piedimulera, listed in the review *Metalli leggeri e loro applicazioni* 1 (May–June 1931) as specializing in “lathe-turned products in billet metal, stamped sheet metal, foundry services, laminates and metal wire; in particular, casting in molds, especially of items for the home and hotel supplies” (p. 27).



FIG. 5.—Napoletana (left) and Milanese (right) coffeemakers from the late nineteenth century. Source: Bialetti.

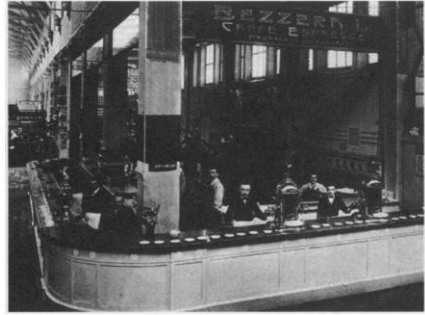


FIG. 6.—Luigi Bezzera company espresso stand manned by *baristi* at the Fiera di Milano (Milan Trade Fair), 1906. Source: Bialetti.

War I, had established itself as the principal manufacturing region for place settings, pots, and kitchen utensils and appliances (a role that it has maintained to the present day thanks to companies like Alessi).¹² As corporate lore would have it, Bialetti begins with a small industrial oven, an anvil, and a milling machine, fabricating pieces to order for industrial clients by making use of a technique he acquired in France: that of gravity casting aluminum in reusable cast iron molds. A decade passes during which he becomes intrigued with how local housewives boil their linens in tubs built around a central conduit that draws the boiling soapy water upwards and redistributes it across the linens through a radial opening. Lightning strikes: why not adapt this simple physical principle to coffee making? Why not transform the unwieldy and complex restaurant espresso machine into a light, trouble-free, inexpensive domestic appliance? Why not democratize espresso coffee by introducing it into every Italian home? Whether Bialetti was aware of it or not, the major manufacturers of espresso machines, La Pavia, Cremonesi, and Gaggia, were all beginning to experiment with ways of eliminating steam infusion in favor of hot water introduced under pressure by means of a piston pump. But they focused on costly, large-scale machines made of brass, copper, and steel. Bialetti's solution was more elegant and simple. Design an entirely self-contained aluminum unit made up of three principal pieces that, on the model of the *napolitana*, could be heated on a mere stovetop, but capable of making precisely the same intensely flavorful coffee heretofore limited to restaurants and cafés. The lower portion of the device would serve as a boiler, sealed off from the upper portion so that, when heated, the increased pressure would force hot water up through a conduit and

12. It is perhaps worth noting that the founder of Alessi, Alberto Alessi, was the grandson of Alfonso Bialetti (this according to Charlotte Higgins, "Cheat Chic: Alessi Kettle," *The Guardian*, 18 Sept. 1998, p. 17).

basket packed with ground coffee that, once sufficiently pressurized, would surge up into the upper chamber and spill over to fill a pot (fig. 7). The only recently uncovered original patent (filed in 1951) insists that “without requiring any ability whatsoever” the new device embodies an “organic simplicity, making it very easy to use, at a more than accessible cost.”¹³ So much for *barista*-showmen and ritual trips to the *caffè*. So much also for the humble *napolitana* and the *milanese*. Domestic coffee making would be raised to the dignity of the local coffeehouse; domestic coffee-makers, which is to say housewives, would be raised to the dignity of the *barista*.

For several years Bialetti tinkered with his invention. There were technical glitches to confront: among them, the need to achieve the proper flow of coffee through the apparatus and to overcome the tendency for boilers to crack under pressure or blow up (addressed by adjusting the alloy employed, altering wall thicknesses and adding a safety valve). There were also design questions to resolve. Bialetti may have been an expert aluminum craftsman, but he was no designer and worked largely on his own. Accordingly, when it came to designing the Moka Express, he did as so many others had done before him: he borrowed his designs from contemporary sources like the silver coffee services on display in the luxury emporia of Milan. In other words, he *copied* high-end designs by the likes of Hoffmann, Puiforcat, Genazzi, and Hénin, adopting the flared, symmetrical eight-faceted design that has remained the signature of the Moka Express (and, indeed, the signature of much of the subsequent family of Bialetti products that build on the Moka’s legacy) (fig. 8).¹⁴ Bialetti’s very first design differed in two important respects from the later product: the original boiler was convex and not conical; and the lateral handle and lid cover handles were initially made out of wood (not plastic or vulcanized rubber) (fig. 9). Fabrication and strength considerations led to the abandonment of the former; durability problems led to a shift to plastic in the latter case, though it is worth noting that a slight design change was involved since the original lid handle had

13. “Progetti di oggetti-tipo: Brevetti di design in Italia 1946–1964,” *Domus* (Apr. 1995): 141. Alfonso Bialetti hadn’t apparently bothered to apply for a patent, so the formal patent application was drawn up in the immediate postwar in the course of Renato’s reorganization of the family firm to protect it from imitators. The result was that competitors had to list their observance of the Bialetti patent in their advertising.

14. A *caffelatte* service by Hénin closely resembling the Moka Express was featured in *La casabella* 59 (Nov. 1932): 73, accompanied by the following text (written, most likely, by Giò Ponti):

We commend to our readers this *caffelatte* service by Hénin, the noted Milanese silversmith. Everyone is aware of the difficulties in locating objects on the market that harmonize with modern taste from the standpoint of style and execution. To run across objects as refined as those forged by Hénin, thus, means bringing to a happy resolution the problem of merging practicality and elegance (something all lovers of useful and beautiful objects take to heart) and the pursuit of a stylish contemporary habitat.

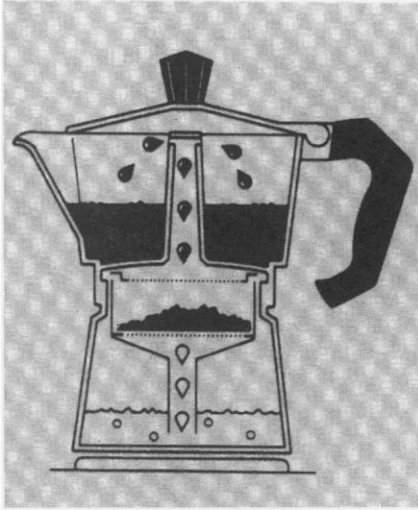


FIG. 7.—Internal diagram of 1960s Moka Express. Source: Bialetti.

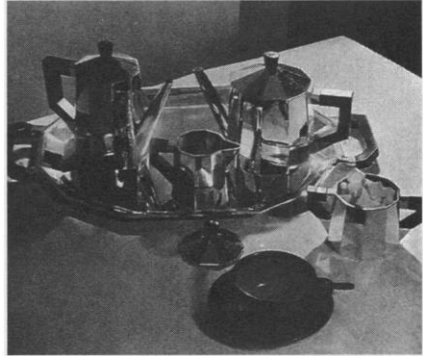


FIG. 8.—Announcement by Giò Ponti of Hénin's newest silver coffee service, published in *La casabella*, Nov. 1932. Source: author.

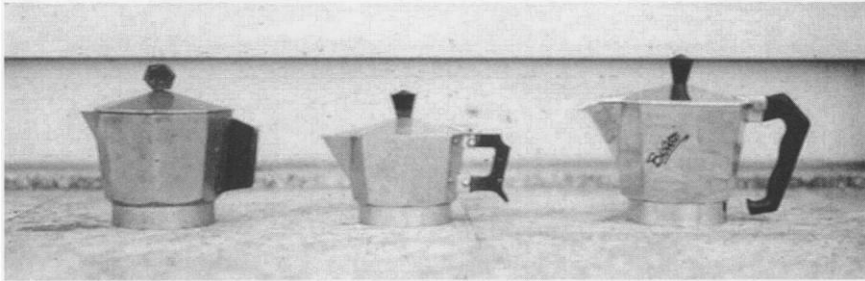


FIG. 9.—Top sections, three generations of Moka Express coffeemakers (1930s, 1950s, 1960s). Source: author.

a hexagonal profile that, in the definitive version, is altered into a upwardly flaring octagonal stem.¹⁵ Once these solutions were arrived at in 1933, the tinkering ended. The moral of the story is that, for all its current ubiquity, the Moka Express remains a characteristic design of the mid-1930s marooned in the 1950s and 1960s. That is, its triumph as a mass-market appliance would have to be delayed, for reasons that I will shortly adumbrate, until the Italian postwar “economic miracle.”

The context within which Bialetti's invention came about had rendered aluminum no ordinary metal. From the standpoint of global production and the international market for aluminum, particularly in the

15. Also worth noting is the fact that the original top wasn't attached to the upper body of the coffeemaker in the original design. In the definitive design, the top hinges right above the handle.

domains of transportation, household products, furniture, and architecture, the thirties represent something of a golden age. And Italy aspired to be among the leaders of this golden age, despite its belated entry into aluminum production and despite the still relatively small scale of its national aluminum industry at the end of the 1920s. Even the official statistics furnished by the fascist Ministry of Corporations were unpromising: in 1929 the per capita annual consumption of aluminum in Italy was a mere .226 kilograms, three times less than the .62 kilograms consumed in France and Germany, and five times less than the 1.14 kilograms consumed in the United States. This implied that with a total production of eleven thousand tons (the estimate for 1931), Italian industry was able to exceed the needs of the entire domestic market. The fascist government set out to improve the situation by favoring the Montecatini group's gradual takeover from various American, Swiss, and German interests of the entire Italian aluminum industry, concentrated around production facilities in Mori and Marghera and bauxite mines in Istria, Campania, and Sicily. A de facto monopoly resulted by decade's end, with Italy rising to the modest rank of fourth largest European producer behind France, Hungary, and Yugoslavia. The governmental campaign hinged on the principle of autarchy, which is to say on the pursuit of economic self-sufficiency by means of a heroic overcoming of Italy's deficiencies in the domains of raw materials and natural resources. The population was mobilized for causes such as the so-called Battle for Grain aimed at reducing Italy's dependence on imported wheat. Likewise, new autarchic technologies and products were promoted so as to exploit available materials and to avoid imported ones.¹⁶ Such was the framework within which magazines like Giò Ponti's *La casa bella* issued a call to designers, architects, and manufacturers to "organize aluminum" (*organizzare l'alluminio*). And organize they did (fig. 10).

Italy was poor in iron ore, coal, and petroleum. But it was far richer in bauxite and leucite. So, even before the League of Nations imposed trade sanctions in retribution for Mussolini's 1935 invasion of Ethiopia, leading to an intensification of the autarchy campaign, aluminum had emerged as the autarchic metal of choice. Two reviews were launched to promote its diffusion: *Metalli leggeri e loro applicazioni*, an industry review established in 1931; and a government counterpart, *Alluminio*, founded in the following year.¹⁷ Both set out to codify what would become one

16. For a case in point, see my discussion of the rayon campaign in "The Fabric of Modern Times," *Critical Inquiry* 24 (Autumn 1997): 191–239.

17. *Metalli leggeri e loro applicazioni* had a silver foil cover and claimed that it was the "only Italian review exclusively dedicated to the development of light metal industries, product applications, and manufactured goods." Every issue had on its cover a quote from the engineer Giuseppe Belluzzo, formerly Minister of the National Economy (1925–1928) and of Public Instruction (1928–1929): "Italy has abundant raw materials, abundant enough to forge the new productive Civilization that is already shining on the horizon: a

of the defining propagandistic credos of the decade: aluminum is Italy's national metal, a populist metal, the "real material of the unreal velocities" and accelerated progress achieved thanks to the fascist revolution.¹⁸ The July-August 1931 special issue of *Metalli leggeri e loro applicazioni*, for instance, opened with an editorial piece entitled "Rally!" (*Adunata*) that summoned all Italians:

to acknowledge that a new and decisively important protagonist has emerged in the nation's economic life: ALUMINUM. An Italian metal, the abundance of which makes us the envy of the world. Thanks to its manifold applications, aluminum is sure to permit us to reduce to a bare minimum the importation of other metals, freeing the Fatherland from the onerous tributes that, to this day, continue to be exacted abroad. Aluminum is the inexhaustible Italian resource. It embodies Italy's unyielding destiny! . . . RALLY ROUND! Our rally is not only theoretical and spiritual, but effectual and practical as well. Every individual must assume his place in this overall renewal of mentalities and methods.¹⁹

A second example of this myth seems particularly apt inasmuch as it suggests (more realistically) that Italy's distinctive contribution to the use of aluminum will be to conjoin large-scale industrial production to small-scale craft traditions:

It might be said that metals have their own physiognomy and character, just as there exist certain somatic attributes of nations that are present in all individuals. . . . [And] we would be tempted to assert the *Latinity* of aluminum to the degree that no other metal lends itself so well to the temperament of Latin peoples, in general, and of Italians, in particular. This, at least, can be deduced by the speed with which Italian craftsmen have assimilated the complex technical principles of working with light metals and by their mastery over the unprocessed material itself. The latter being the necessary precondition for achieving the sense of refinement and good taste that have always distinguished Italian craftsmanship when working with traditional metals. In the artistic and decorative domains one can declare

Civilization principally based upon the ubiquity of light metals and their alloys in everything including national defense." The full title of the second journal was *Alluminio: Rivista tecnica del gruppo metalli leggeri della Associazione Nazionale Fascista fra gli Industriali Metallurgici Italiani*.

18. The full text in Carlo Panseri, "Introduzione all'anno IV," *Alluminio* 4 (Jan. 1935): 1 reads:

Aluminum is not only the *metal* of the Fatherland; it is also the metal of progress, the real material of unreal velocities [*la materia reale dell'irreale velocità*]. Above all, it is that metal which demands the highest degree of knowledge [*dottrina*], understanding and research in order to fully unveil the polyhedric character of the applications to which it lends itself [*il poliedrico aspetto della sua applicabilità*].

19. Anon., "Adunata," *Metalli leggeri e loro applicazioni* 1 (July-Aug. 1931): 73-74.

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ORGANIZZARE L'ALLUMINIO

Poichè tutti ne parlano in questo momento, discerriamo anche noi delle «leghe leggere», non — si capisce — in rapporto a macchine od altre cose pesanti, bensì all'arredamento e alla decorazione, che son cose che interessano noi e i nostri lettori.

Sono il nome cadenzato di «leghe leggere» si nasconde l'alluminio, ricchezza italiana, che incominciamo anche noi ad usare per facciate di negozi, parti di mobili e altro, seppur ancora timidamente, con incertezza e non di rado, se vogliamo esser sinceri, più per ragioni di moda o di stile che per convinzione.

Noi pensiamo invece che l'alluminio potrebbe vantaggiosamente portare la sua simpatica nota nei nostri interni, surrogando altri più costosi materiali e trovando la sua schietta indicazione, quando le nostre industrie dell'arredamento, poco informate di quanto è già stato realizzato in questo campo, riceversero adeguate direttive generali.

Da chi? Non sappiamo. Probabilmente dai produttori stessi dell'alluminio, *qui prodest*.

Non si tratta di soppiantare il legno che conta in Italia, malgrado le nostalgie stilistiche di tanti mobiliari, illustri tradizioni e possiede indicazioni insostituibili, ma di prescrivere l'impiego dell'alluminio dove appare inutile adoperare altri materiali d'importazione straniera. Il sedianne curvato si fa in legno: perchè non costruirlo in alluminio? Vi sono in Italia centinaia di fabbriche di mobili in ferro: perchè non lavorerebbero esse il nuovo metallo?

Per l'impiego, poi, di esso nella decorazione e nell'arredamento vero e proprio, non vi sembra che la creazione di un organismo tecnico che ne studiasse le varie applicazioni e le rendesse note a cui potesse interessare, faciliterebbe lo svolgimento di un'opera faticosa ben più di cento articoli di giornale?

Si sa, sono idee buttate là e *les consaillieux ne sont pas les payeux*. Ma è certo che se si vorrà far qualcosa di serio perchè l'alluminio, razionalmente adoperato da ogni specie di artisti della casa, porti anch'esso il suo contributo al benessere della nazione, bisognerà inoltrar questa strada.

CASA BELLA

FIG. 10.—*Let's organize aluminum*: frontispiece of *La casa bella*, March 1931 issue. Source: author.

without hesitation that, although Italy possesses neither the colossal potential of the United States of America nor the meticulous technological precision of Germany, it has achieved a degree of aesthetic expressivity and a measured understanding of effects that place it in the forefront, even if the experiments and applications pursued thus far remain limited.²⁰

The nineteenth century was the century of socialism and heavy metals; the twentieth century, the century of fascism and aluminum.²¹ Comical as they may appear today, these were the sorts of equations that industry advertising and state propaganda sought to promote within the framework of fascism's claim that the March on Rome marked at once a radical rupture with Italy's past and a recovery of its ancient glory. The result was the interweaving of two distinct aluminum iconographies throughout the 1930s, simultaneously present in a two-page spread from the magazine *Domus*, which juxtaposes the image of a modern military aircraft with an Assyro-Babylonian bas-relief of warrior-charioteers (fig. 11). In keeping with this twofold emphasis, aluminum circulated under both modernist and traditionalist labels. *Avional* may serve as an example of the first. The term echoes the French and Spanish words for airplane (*avion*) and corresponds to a wide array of aluminum expressions of fascist modernity: from advertising images that link aluminum to abstract art; to Giò Ponti's brilliant 1937 showcase of aluminum applications, the Montecatini headquarters building in Milan; to the sequence of trade fair installations at the Fiera di Milano that began in 1930 and culminated in 1938 with the Autarchic Exhibition of Italian Minerals at the Circus Maximus held in Rome (100-plus exhibitors in an entire hall celebrating aluminum and magnesium designed according to the canons of rationalist architecture).²² A second label, *anticorodal*, alluding as it does to the metal's resistance to corrosion, may be taken as referring to a parallel but alternative mythology that associated aluminum not with revolutionary change but with the preservation of the historical values of Italian art and/or the resurgence of ancient Roman glory. This "traditionalist" iconography may be observed in the advertising campaigns that accompa-

20. Anon., "La mostra dell'alluminio alla XIII Fiera di Milano," *Alluminio* 1 (Apr. 1932): 166. The text was meant to consecrate the aluminum hall mounted within the thirteenth Fiera di Milano, organized by the Montecatini group.

21. The notion was formulated by none other than Arnaldo Mussolini, il Duce's trusted brother: "We have often said: just like the nineteenth century was the century of iron, heavy metals, and carbon, so the twentieth century should be the century of light metals, electricity, and petroleum. In the course of history discoveries sometimes serve as the beneficiaries of peoples. If we [Italians] haven't iron, we have aluminum" (quoted by Nicola Parravano of the Italian Royal Academy, preface to the inaugural issue, *Alluminio* 1 [Jan–Feb. 1932]: 1).

22. On the exhibition, see Partito nazionale fascista, *Mostra autarchica minerale italiano: Guida della mostra* (exhibition catalog, Rome, 18 Nov. 1938–9 May 1939).

nied the construction of the Olympic Stadium in Rome or in sculptures like this *Fascist Victory* flanked by an ad in which one of the corroded bronze horses from Saint Mark's square is shadowed by an immaculate aluminum outline (figs. 12 and 13).²³ Many other examples could be cited: the decorative fountain in *anticorodal* forged by Dante Parini for the fourteenth Fiera di Milano and the gargantuan *Genius of Fascism* mounted horseman devised for the Italian pavilion at the Paris International Expo of 1937. But the key point remains that these two iconographic strains were really one. The values of lightness, agility, and speed emphasized in the first were coupled in the second to solidity, strength, monumentality, and duration in time; and vice versa (fig. 14).

Whether or not Alfonso Bialetti was susceptible to this decade-long campaign to establish the Latinity of aluminum, the earlier cited portrait of the Italian craftsman at ease with the complex technical principles of working with light metals fits him like a glove. Bialetti was a better craftsman, however, than a businessman, for the 1930s would prove a decade of limited success for his invention. The reasons had nothing to do with a decline in coffee drinking. The contrary was true, especially after 1935 when coffee came to figure ever more prominently in the mythology both of empire and of autarchy: of *empire* because Ethiopia, the nation Italy

23. The horses on Saint Mark's square were, of course, a particularly apt symbol inasmuch as they were already in danger due to centuries of corrosion thanks to Venice's sea air, pigeon droppings, and the like.

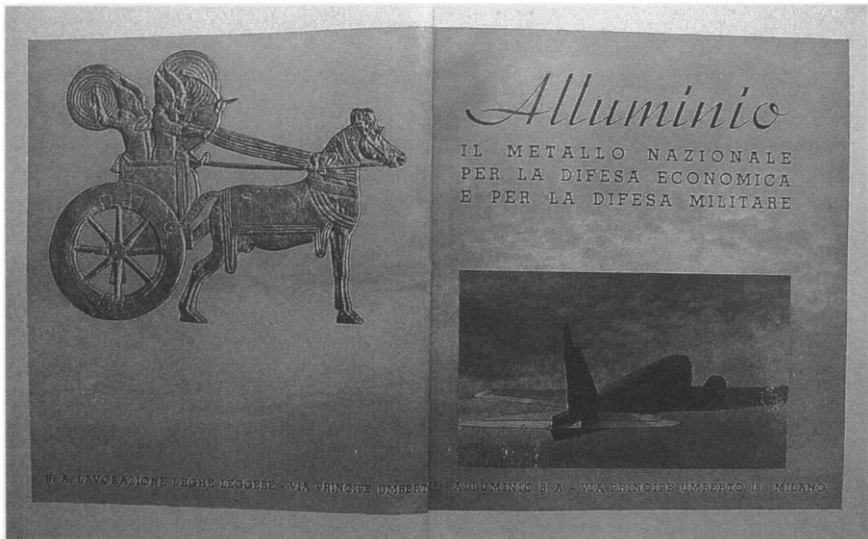


FIG. 11.—Advertisement for “Aluminum, the national metal for Italy’s economic and military defense,” published in *Domus*’s 1935 special issue on *Italians*. Source: author.

La lega di Alluminio Anticorodal, sia sotto forma di getti, che di laminati, profilati e rubi, permette di ottenere le più razionali e le più estetiche soluzioni dei problemi di decorazione. Mediante opportuni trattamenti la superficie dei pezzi può essere resa lucida come il cromo o "matt", come il vecchio argento. Chiedete notizie, campioni e letteratura allo speciale ufficio di consulenza tecnica della nostra Società.

L. L. L. LAVORAZIONE LEGNE LEGGERE
MILANO - VIA PRINCIPE UMBERTO N. 18

L. Arpesani - "VITTORIA FASCISTA", 400 N. 230, foto a sinistra in ANTICORODAL

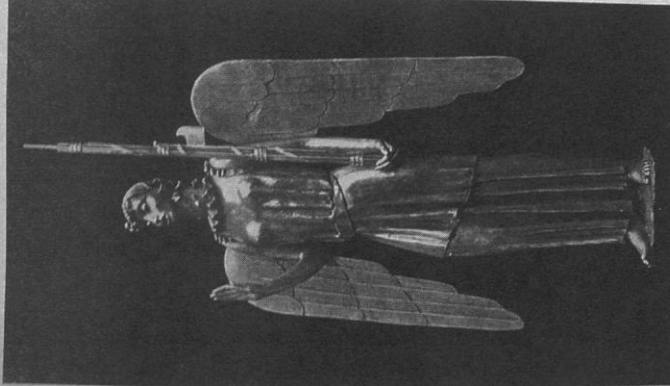


FIG. 12.—Advertisement featuring L. Arpesani's Fascist *Victory*, sculpture in cast and carved *anticorodal* alloy. *Domus* 70 (Oct. 1933): iv. Source: author.

FOTO SIMONATI

ANTICORODAL

IL METALLO PIÙ IDEALE PER DECORAZIONE E PER IL VANTO

ALLUMINIO S.A. - VIA PRINCIPE UMBERTO, MILANO

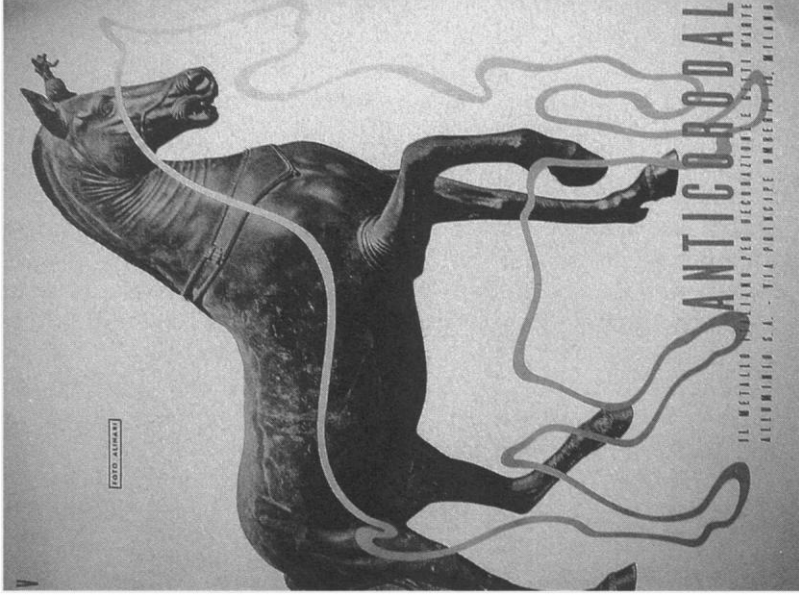


FIG. 13.—Advertisement for *anticorodal*, "the Italian metal for decoration and art objects," in *Domus*'s 1935 special issue on Roman art. Source: author.

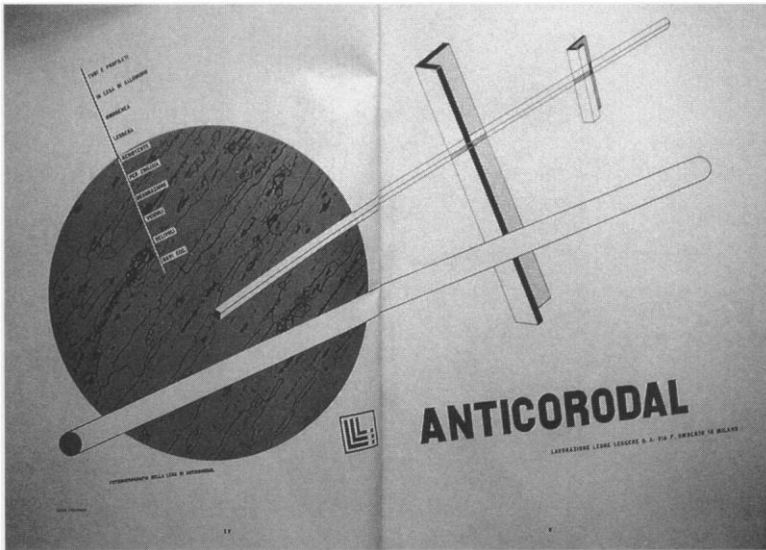


FIG. 14.—Advertisement designed by Luigi Veronesi for *anticorodal* published in various issues of *Domus* 1936. Source: author.

had invaded, was a major coffee producer of Moka-type coffee beans; of *autarchy* because Brazil refused to follow the League of Nations sanctions imposed by the world community and continued to furnish Italy with its coffee beans (fig. 15). Nor were fascism's regressive gender politics to blame, favoring as they did women's roles as housewives and mothers over public roles.²⁴ Rather, the problem was Bialetti's only partial understanding of the importance of marketing. Initially Moka Expresses were sold by the inventor himself, who set up stands at weekly public markets in the Piedmont region. Later, the coffeemakers were delivered directly from the factory to regional retailers. No effort to industrialize their production or to market them on a national (not to mention, international) scale was undertaken. Bialetti's shop continued to turn out an array of other products, all on an equally small scale. The result was that a mere 70,000 units were produced between 1934 and 1940. Then came the war. Imports ceased and Italy's national metal became Italy's military metal, unavailable for civilian purposes. Coffee too became scarce. Bialetti shut down his shop, oiled up his casting molds, and safely packed them away in the basement of his home for the duration of the conflict.

There exists a secondary reason for the difficulties encountered by the Moka Express: the relatively high cost of Italian aluminum until the 1950s. The industry had grown under the umbrella of autarchy and ex-

24. On this subject, see Victoria de Grazia, *How Fascism Ruled Women, Italy, 1922–1945* (Berkeley, 1992), esp. pp. 201–3.

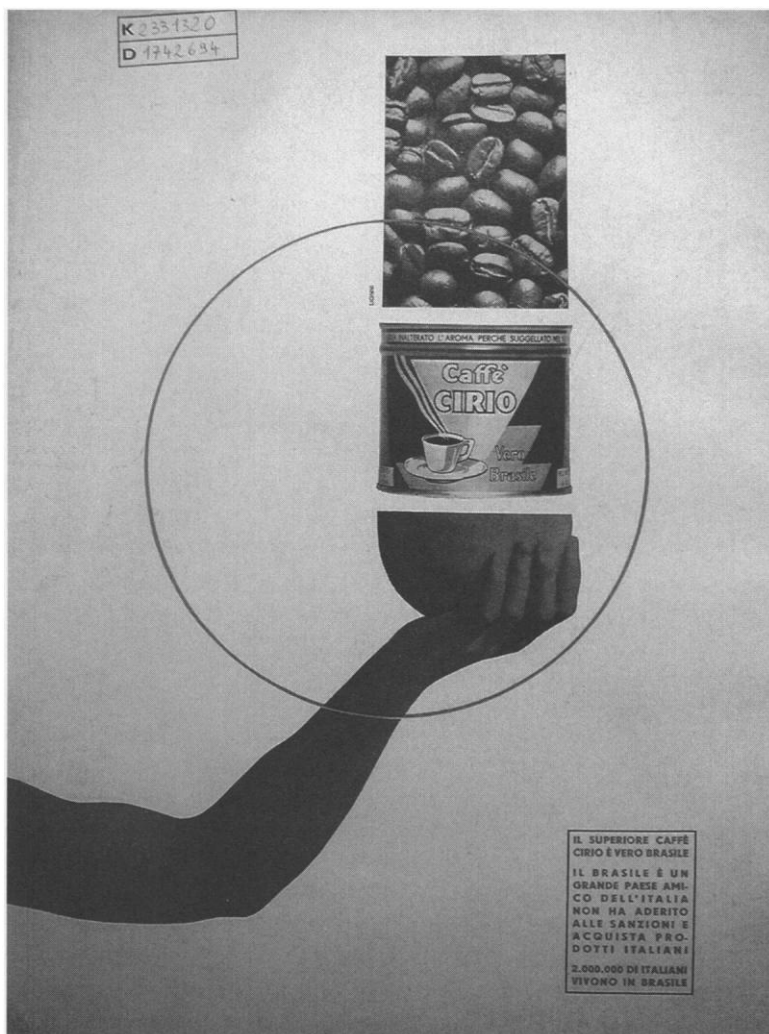


FIG. 15.—Advertisement for “Cirio’s superior coffee, a true Brazilian coffee. Brazil is a great friend of Italy / it hasn’t observed the sanctions and purchases Italian products / 2 million Italians live in Brazil.” Published in *Domus’s* 1935 special issue on *Italians*. Source: author.

panded even more rapidly thanks to the war effort. But tariff barriers and Montecatini’s virtual monopoly had eliminated pressures to contain costs or improve efficiency. As a result, in 1946 domestically produced aluminum averaged about 140 lire per kilo while American aluminum (including shipping costs to Genoa) was available at 42 lire per kilo. The alarm was sounded by Elio Vittorini’s militant *Il politecnico*, a new review

dedicated to the cultural, political, and economic reconstruction of post-war Italy. *Il politecnico* called for a true democratization of aluminum, in keeping with its antifascist program of institutional reforms. Calling the lie to fascism's assertion that aluminum was Italy's national metal, it entitled one polemical sally "Aluminum: An Aristocratic Product." The anonymous author went on to argue that "aluminum this expensive will never give rise to widespread popular consumption, whether for domestic or craft uses, for tools, bicycles, etc."²⁵ Structural inefficiencies were to blame as well for the elevated costs. Montecatini was also in the electrical power business, and it was channeling a significant portion of the aluminum it produced into its own (overpriced) power lines; Montecatini's competitors, not wanting to aid the industrial giant, were instead importing tin ones from abroad, thereby contributing to a mushrooming trade deficit.

This was the new republican Italy to which Alfonso's son, Renato, returned in 1946, after several years in a German prisoner-of-war camp, to take over his father's business. Renato was intimately acquainted with metallurgy, having worked alongside Alfonso before he was conscripted into the army. But he brought an entirely new sensibility and understanding to manufacturing and to marketing. Production was resumed in the same modest facility in Crusinallo in the late 1940s but with the Bialetti product line narrowed down to a single object: the Moka Express, now fabricated in a full range of sizes (from two cups to ten) and in larger numbers (up to 1,000 units per day). This exclusive focus on coffeemakers was buttressed by national advertising campaigns on billboards, in newspapers and magazines, on the radio, and, later, on television programs such as the wildly popular *Carosello*. The campaigns were initially financed by means of loans (daring for such a small concern) and strove to build a distinctive brand identity in the minds both of vendors and consumers, as well as to differentiate the Moka Express from the swarm of clones and competitors that were emerging as Italy's domestic market came back to life thanks to the postwar boom: rivals like the Columbia Crème (fig. 16).²⁶ Characteristic of the younger Bialetti's bold approach were the publicity blitzes undertaken during Italy's most important trade fair, the Fiera di Milano. Year after year, the company would purchase every available billboard in the entire city of Milan, literally saturating

25. The article reads: "American aluminum costs 42 lire a kilo in the port of Genoa. Italian aluminum costs from 130 to 150 lire a kilo. . . . Aluminum this expensive will never become the object of mass consumption [*di largo consumo popolare*], whether for purposes of household uses, crafts, tools, bicycles, etc." (anon., "L'alluminio, un prodotto aristocratico," *Il politecnico*, 5 Jan. 1946, p. 2).

26. The 1956 edition of the *Catalogo ufficiale, 34esima Fiera di Milano* (Milan, 1956), for example, includes yet another competitor: the "Nova Express" by Irmel, a company located (like Bialetti) in Omegna. The advertising copy reads: "the coffeemakers stamped out in a single piece of ultra-pure aluminum (99.5% pure) with a heavy base. Economical—Hygienic—Practical—Speedy" (p. 502).



FIG. 16.—A page from the catalog of the 1955 Fiera di Milano. Source: Bialetti.

the city with images of its coffemaker (fig. 17). Bialetti's booths became legendary for their scale and inventiveness. In 1956, for instance, the indoor installation was paired with an outdoor sculpture consisting of a giant Moka Express suspended in the air by a stream of coffee above a cup sitting atop a faceted platform bearing its name (fig. 18). The forging of a brand identity was completed with the creation in 1953, at Renato's instigation, of the Bialetti mascot: the *omino con i baffi*, the formally attired mustachioed man with his index finger upraised as if hailing a cab or ordering an espresso (fig. 19). Originally a doodle by Paul Campari, the symbol was, in fact, a cartoon of Alfonso meant at once as humorous and familiar. Familiar in the literal sense that the *omino* was devised so that every Italian might relate to him with a mix of fondness and nostalgia: as the image of the sort of patriarch, be he a father, uncle, or grandfather, who, heretofore, had lived their lives in coffeehouses. Yet while evoking this past, the advertisements promised a radical innovation: "in casa un espresso come al bar" ("an espresso at home just like at a café"). By implication, they promised to bring the once itinerant patriarch back into the household. The home would become a café, instead of the café becoming a home away from home.



FIG. 17.—Billboard-lined streets of Milan, during period of 1956 Fiera di Milano. Source: Bialetti.

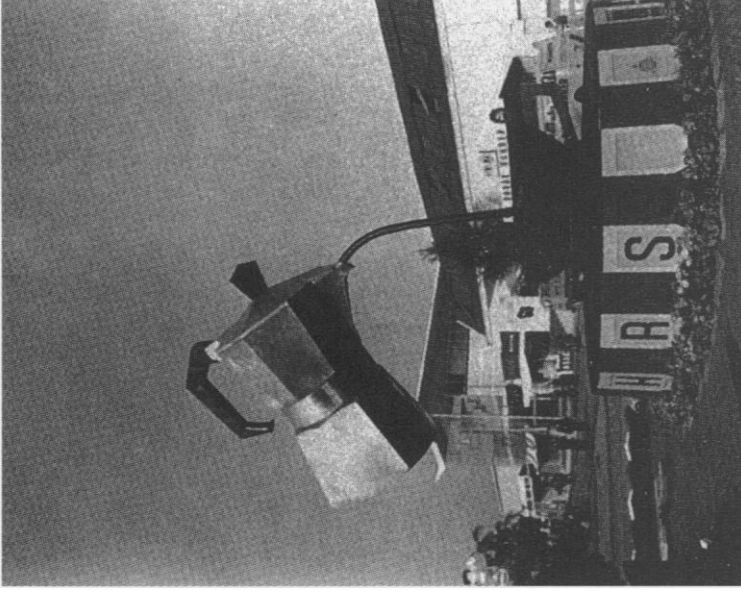


FIG. 18.—Moka Express fountain display at entrance of 1956 Fiera di Milano. Source: Bialetti.

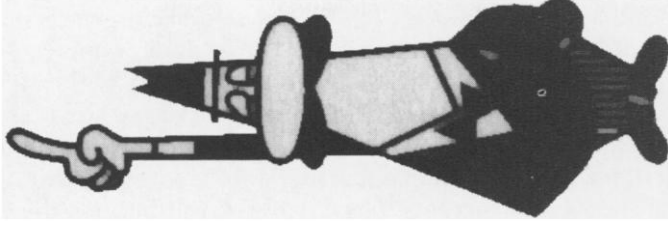


FIG. 19.—Paul Camparini's drawing of the Bialetti trademark, the *ommo con i baffi* (mustachioed little man), early 1950s. Source: Bialetti.

Times had changed. Memories of the fascist debacle were conveniently fading, and consumerism was on the rise as Italian homes were increasing in comfort and size thanks to the economic boom of the 1950s. And a new American-influenced social imaginary envisaged them as activity and entertainment centers for a tightly knit nuclear family. Through Bialetti's advertising campaigns, the Moka Express placed itself at the center of these cross currents (figs. 20 and 21). It became the emblem of an increasingly egalitarian, do-it-yourself attitude. "Dove è papa?" ("Where is Daddy?") asks one ad, the answer being, "He's in the kitchen with the Moka Express," whose simplicity permits a reversal of conventional gender roles. The reversal corresponds, in turn, to the casting of Italian women in active, nondomestic roles: "for everyone, also for the female skier" reads another ad, adding that "at home, anywhere at all, an espresso just like at a café." Thanks to the "organic simplicity" of the Moka Express, Dad could be trusted in the kitchen and Mom was free to hit the slopes.

I conclude with the final step in the transformation of the Bialetti firm from craft workshop into a modern medium-scale industry: namely, with the construction between 1952 and 1956 of a state-of-the-art factory in Omegna. By now profits were rising, the price of aluminum was falling (due to a global aluminum glut), and the success of Bialetti's advertising blitzes was such that the old facility would suffice no more. Renato Bialetti set about the task like a true visionary, much like Adriano Olivetti in the prewar period, insisting upon the rationalization of every feature of the building and upon the streamlining of the Bialetti production line (fig. 22). A massive freight elevator was devised so that arriving trucks could dump their holds of aluminum ingots not on the ground floor, as in a conventional factory, but directly into cauldrons located up on the fifth floor. The entire production process consisted of a smooth lateral and downward motion floor by floor, ending with the inspection and packaging of every item right on the threshold of the ground-floor loading dock from which trucks could depart for their destinations. Workers were assigned individual lockers and showers, as well as provided with houses and with various other progressive amenities. Renato expanded the Bialetti product line to include other household appliances (toasters, vacuum cleaners, meat grinders), but the backbone of the company remained the production of a growing family of Moka Express machines, now being turned out at the rhythm of 18,000 per day or 4 million per year. Yet, for all this emphasis upon modernization, there remained a paradoxical, characteristically Italian touch that renders the romance between caffeine and aluminum also an enduring marriage between the new and the old.

At the sparkling new production facility in Omegna, the very heart of Alfonso Bialetti's remarkable little invention, the boiler, continued to be produced precisely as it was in 1933: that is, cast and then individually finished, inspected, and sorted not by a production line worker but in-



FIG. 20.—Late 1950s advertisement illustrating the ease with which espresso coffee can be made at home, even by men, thanks to the Moka Express; published in various popular magazines. Source: Bialetti.

FIG. 21.—Another late 1950s advertisement juxtaposing a captain (the Bialetti mascot) who is making himself an espresso and a housewife serving her husband an espresso at home 'better than that available at cafés'; published in various popular magazines. Source: Bialetti.

Indovinare che cosa fa questo signore... ...Eh... Eh... Eh...	Non è più così facile vero?			Non l'avete indovinato?
Beh... Vi verrò incontro.	ve lo farò rivedere... te?	Allora?... Eh... Nien-	Per aiutarvi direi che il signore non ha questo cappello.	Ma... questo...
E, non ha tra le mani una ruota come questa...	Ma come questa... Beh, adesso è facilissimo...	Il signore fa del suo per non andare a fondo.		
E intanto, direte voi, fa?	il capitano che cosa	Eh... Quel vecchio lupo di mare si sta facendo un espresso e... E' facile indovinare...		Con la caffettiera...
...Moka Express!	Quella che usiamo anche noi!	Con la caffettiera Moka	Express!	
Un espresso meglio che al bar!...	Caffettiera Moka Express prodotta da Bialetti nella più grande fabbrica di caffettiere			Caffettiera Moka Express!

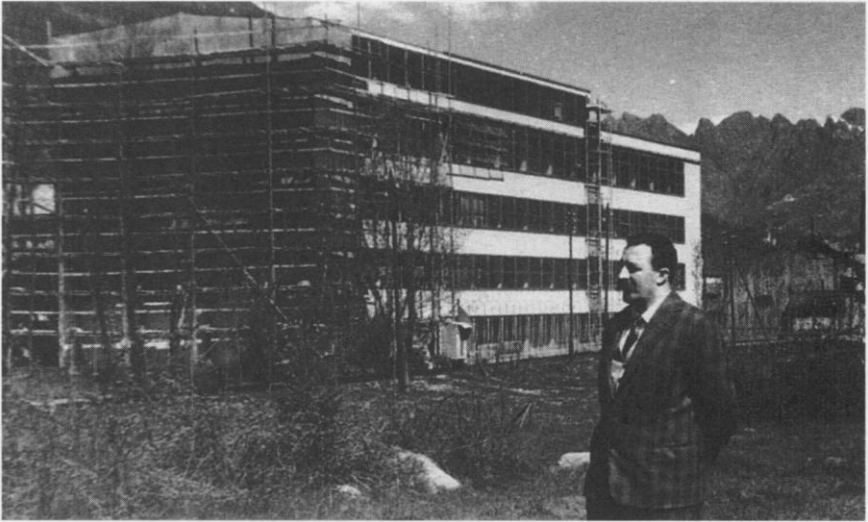


FIG. 22.—Renato Bialetti standing in front of the new rationalist factory (still under construction) in Crusinallo, Apr. 1955. The current Bialetti factory is a half-mile from this site. Source: Bialetti.

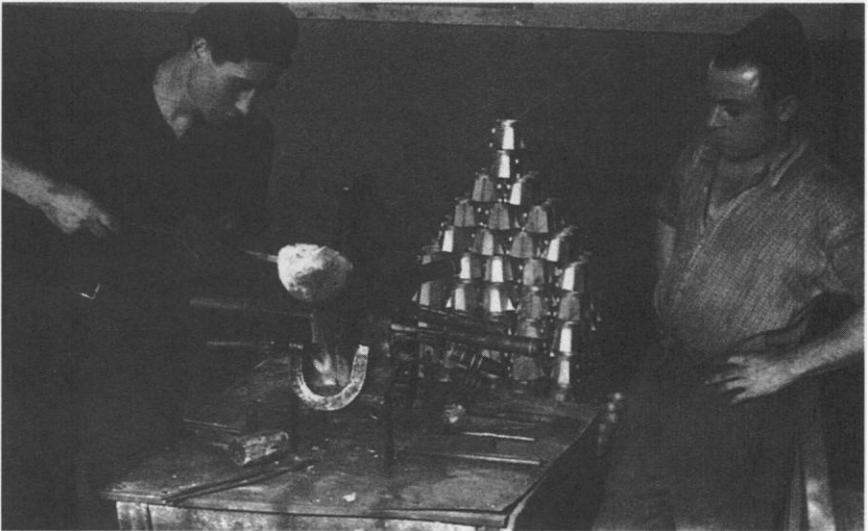


FIG. 23.—The forging of the boiler of a Moka Express, late 1950s. Today the molten aluminum and casting is mechanized, but the finishing of each piece is still carried out by an individual metal worker. Source: Bialetti.

stead by a skilled craftsman. Twenty years had passed and nothing had changed (fig. 23). Another forty-seven have transpired since then and, once again, nothing has changed. When I visited the current factory in the summer of 2000, I was amazed and requested an explanation. Bialetti's head engineer reassured me: automated pressure casting and finishing had been tried many times and the result was too many flaws; gravity casting and an intimate working knowledge of aluminum were required to ensure a resistant and reliable product. I was in no position to argue, given my limited understanding of materials science. But the contrast kept me company all the way back to Milan. On the one side, artisans; on the other, computer-actuated robots. The two working together on a hybrid artifact: an icon of the machine age that is a throwback to the era of manual production. In short, a portrait in aluminum of the original *omino con i baffi*.