

A New Musical Reality": Futurism, Modernism, and "The Art of Noises"

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Away! Let us break out since we cannot much longer restrain our desire to create finally a new musical reality, with a generous distribution of resonant slaps in the face, discarding violins, pianos, double basses and plaintive organs. Let us break out!

-- Luigi Russolo

In 1917, four years after the appearance of Luigi Russolo's Futurist manifesto "The Art of Noises," and eight years after F. T. Marinetti's founding manifesto, the ultra-conservative German composer Hans Pfitzner published a passionate, polemical essay entitled *Futuristengefahr* (Danger of Futurists),¹ directed not at the Italian Futurists but at the recently published second edition of Ferruccio Busoni's *Sketch for a New Aesthetic of Music*.² Pfitzner, deeply disturbed by the eminent composer's vision of a freer music to come that would finally realize the art's full--but as yet unattained--potential, took it as an unwarranted attack on the glorious achievements of music's past, with only vague and uncertain proposals for its future offered in return.

Shortly afterwards, in a brief reply, Busoni remarked that Pfitzner's title alone led the reader astray, "heaping on my name...all the weaknesses and faults with which you could possibly reproach a certain group of people--a group from which I am far removed. The word 'Futurism' is not used on any page of my little book. I have never attached myself to a sect--Futurism, a movement of the present time, could have no connection with my arguments."³

Strictly speaking, Busoni was right: the first edition of his essay had appeared in 1906, three years before Marinetti's first manifesto. Though it had originally had a small and limited circulation, attracting little attention even within the musical community, the somewhat enlarged 1916 edition to which Pfitzner responded was widely circulated and heatedly discussed; and by then the Futurist movement was firmly established, already near the end of its first and most productive phase. Busoni moreover had specific contacts with Futurism. He responded publicly to an unsigned 1912 Futurist music manifesto published in a Parisian newspaper, expressing approval of its positions and even claiming priority in advocating microtonal scale divisions.⁴ He also had ties with Marinetti and the Futurist painter Umberto Boccioni, whose wellknown painting *La città che sale* (The city rises) he purchased in 1912 and who subsequently became a close personal friend.

Shortly before his death in 1916, Boccioni vacationed with Busoni and his wife at their summer villa near Lake Maggiore while on leave from the Italian army. It was here that he painted his fine full-length portrait of the composer, one of his last and most impressive works.⁵ After Boccioni's death the grief-stricken composer wrote a moving tribute to the young painter.⁶

Even if Pfitzner was unaware of these connections, the content of the *New Aesthetic* alone would have been sufficient to trigger associations with Futurism.⁷ Despite a calm and reasoned manner, the essay is decidedly inflammatory in devaluing the art's past and extolling its future, vigorously asserting music's need to break away from inherited shackles--its restricted tonal system, exhausted forms, and outmoded instruments. Even such towering figures of the past as Bach and Beethoven are considered only beginnings rather than "unsurpassable finalities."⁸

Pfitzner responded sharply, even contemptuously: "Busoni places all his hopes for Western music in the future and understands the present and past as a faltering beginning, as the preparation. But what if it were otherwise? What if we find ourselves presently at a high point, or even that we have already passed beyond it?"⁹ For Pfitzner, the idea that one should discard the past for an entirely new, unproven world of artistic expression and technical experimentation was both incomprehensible and inimical to all he stood for. His title, invoking guilt by association, simply castigates Busoni by linking him with the most recent, extreme, and ideologically colored manifestation of his own position: the Italian Futurist movement.

The Busoni-Pfitzner controversy reminds us that the moment of Italian Futurism, its first and most productive phase (roughly 1909 to 1916), was part of a more encompassing "Futurist moment," in Renato Poggioli's phrase: "a significant symptom of a broader and deeper state of mind."¹⁰ In one of the most brilliant of his publicity-conscious maneuvers, Marinetti drew upon the widespread future-orientation of the time to give the movement its name. Yet that "deeper state of mind," the larger Futurist context, is critical for understanding the movement; and nowhere is this more so than in Futurist music.

II

Many, if not all, of the principal ideas associated with Futurism, as well as the larger Futurist moment, developed and intensified over a long period, going back at least to the early years of the nineteenth century. That century's belief in progress, focussing attention toward the future, was first and foremost tied to achievements in science, industry, and technology; but it was no less critical for the arts, including music. Robert Schumann, writing in 1835 in the journal *Neue Zeitschrift für Musik*, which he had founded in the previous year, treats the current period (his "recent past") as a tawdry moment separating a lustrous former age from a beckoning future:

Our attitude runs as follows: to recall the past and its music with all the energy at our disposal, drawing attention to the ways in which new artistic beauties can find sustenance at a source so pure, then to take up arms against the recent past as an age inimical to art...and finally to prepare for and help expedite the advent of a new poetic age. ¹¹

Schumann's view was sharpened by his successor Franz Brendel, who invoked the forces of historical evolution in order to support the progressive tendencies of the Wagnerian New German School against the more traditionally aligned Brahms-oriented composers that were associated with the critic Eduard Hanslick. But the most vehemently future-directed nineteenth-century musical figure was Wagner himself, who in 1849 titled one of his major theoretical studies *Das Kunstwerk der Zukunft* (The artwork of the future), and who wasted no occasion to rail against all music of the past that in his view failed to point forward toward his own.

This Futurist orientation was fueled by a widespread belief among progressive composers that the language of Western music, its tonal system and formal conventions, was reaching a state of exhaustion and thus required constant expansion and renewal. This fostered a growing sense of crisis, reaching a climax shortly after the turn of the century as composers pushed musical language to the outer edges of traditional tonality. Busoni's *New Aesthetic*, appearing at this moment of crisis, stands poised between two worlds: its radically conceived pleas for innovation are rooted in aesthetic assumptions inherited from the past. Innovation is required because music must be renewed to retain its "spiritual," otherworldly essence, an essence defined by the literary and philosophical representatives of musical romanticism (notably Wackenroder, Tieck, Hoffmann, and Schopenhauer) and then echoes by such nineteenth-century composer-writers as Schumann, Liszt, and Wagner. Far from rejecting the romantic conception of music as a world apart, Busoni, caught in the crisis of musical language, simply refashioned it as a yet-to-be-attained goal, achievable only by escaping the limitations of music's past.

Near the very beginning of his essay, Busoni notes that music can achieve its full potential only in acknowledging "its untrammelled immateriality":

Young as it is, this child [music]...possesses one radiant attribute which signalizes it beyond all its elder sisters [the other arts]. And the lawgivers will not see this marvelous attribute, lest their laws should be thrown to the winds. This child--*it floats on air!* It touches not the earth with its feet. It knows no law of gravitation. It is wellnigh incorporeal. Its material is transparent. It is sonorous air. It is almost Nature herself. It is-- free. ¹²

This mirrors the dominant line of nineteenth-century aesthetics, which privileged music first among the arts due to its lack of association with the material world. "No other art," wrote Wackenroder, "has a basic material

[Grundstoff] in itself already so impregnated with heavenly spirit." ¹³
Shielded from material existence, music offered a language transcending ordinary meaning. Wackenroder, likening it to "the language of angels," ¹⁴ believed it could speak the unspeakable, communicate fundamental metaphysical truths beyond the grasp of mere words and reason. Busoni's views are strikingly similar. What is new is the belief that music's current technical and spiritual impasse (and for Busoni the two are inseparable) requires the composer to reach beyond its traditional materials and syntax. Only then can music win its freedom and realize its true nature.

A sizable proportion of Busoni's essay is thus devoted to presenting new technical possibilities, music's only hope if it is not to be grounded in a morass of outworn formulas and clichés. Discussing harmony, he urges composers to move forward: "for all signs presage a revolution, and a next step toward that 'eternal harmony.' Let us once again call to mind that in this latter the gradation of the octave is *infinite*, and let us strive to draw a little nearer to infinitude." The recommended step is thus additional (microtonal) divisions of the octave, since the current "system of tone, key, and tonality, taken in its entirety, is only a part of a fraction of one diffracted ray from that Sun, 'Music,' in the empyrean of the 'eternal harmony.'" ¹⁵

Perhaps most novel is Busoni's suggestion that if music is to acquire richer sonic and expressive power, it must abandon traditional instruments. He reports enthusiastically on an invention by the American Thaddeus Cahill, the "Dynamophone," which, through transformations of electrical current, allows for infinitely small and mathematically exact pitch variations. Contemplating these possibilities, Busoni approaches a state of rapture:

And what a vista of fair hopes and dreamlike fancies is thus opened...Who has not dreamt that he could float on air? and firmly believed his dream to be reality?--Let us take thought, how music may be restored to its primitive natural essence; let us free it from architectonic, acoustic and aesthetic dogmas; let it be pure invention and sentiment, in harmonies, in forms, in tone-colors...let it follow the line of the rainbow and vie with the clouds in breaking sunbeams.... ¹⁶

Yet for all its utopian tone and pleas for renewal through technical experimentation and innovation, the *New Aesthetic* had little effect on Busoni's own compositions. Purely theoretical and speculative, it is an early instance of that separation of musical thought and practice so characteristic of the twentieth century.

A sense of crisis was of course no less evident in the other arts. The appearance around the turn of the century of so many different movements espousing new artistic aims, usually with revolutionary intent, reflected a general feeling of malaise. Those centered on the visual arts, such as Die Brücke, Der blaue Reiter, fauvism, and cubism, responded to the breakdown

of the traditional syntax of objective representation, a development that corresponded to, and temporally coincided with, the dissolution of traditional tonality and its concomitant formal conventions in music. What set Futurism off from these others was in part its unique ability to master and manipulate the resources of mass communication, especially newspapers, to promote its artistic principles and (largely totalitarian) political program. But more significantly, it differed in not associating itself so exclusively with a particular aesthetic or technical orientation (a tendency reflected in the names of such movements as symbolism, cubism, and Vorticism). It allied itself first and foremost with the "future" itself, and thus opposed itself to the past. The Futurist manifestos, stressing creation *ex nihilo*, proposed a total rejection of tradition--a desire "to mock everything consecrated by time," as Marinetti put it.¹⁷ The movement thus seemed to epitomize more fully than any other the revolutionary spirit of the age.

To be sure, the Futurists advocated specific artistic approaches for achieving their ends, setting them forth in the various technical manifestos issued as sequels to the more general, ideologically focussed initial ones. But while the tone and visual layout of their proposals were new and arresting, the content was not so distant from what had already been advocated by the movement's various predecessors. The appeals of the two main statements on painting, for example, the 1910 "Futurist Painting: Technical Manifesto" and the catalogue introduction for the 1912 Futurist exhibition in Paris ("The Exhibitors to the Public"), were by no means unprecedented:¹⁸ that painting deal with modern subjects in modern dress; that it present "the simultaneousness of states of mind"; that the spectator be located in the center of the picture; that the painter "carry within himself the landscapes" intended for depiction on canvas; that imitation be rejected; that objects interpenetrate one another; that the tendency toward the "infinite" be revealed through "force-lines."¹⁹

Though expressed with remarkable energy and revolutionary fervor, these ideas are to a marked degree derived from the artistic and theoretical contributions of symbolism, impressionism, post-impression, cubism, fauvism, and German expressionism. New, however, is the emphasis on symbols of "victorious science" and technology: airplanes, high-speed automobiles, motorcycles, trams, railroad trains, etc.-- references that lend the manifestos a palpably hard edge, sharpened by suggestions of violence, destruction, and danger (most egregiously so in the glorification of war).

These technical suggestions are all ultimately directed toward a more encompassing project: the sanctification of modern life as an embodiment of "universal dynamism." Here again one finds precedents, as much art of the late nineteenth and early twentieth century concerned itself with ideas of motion and transience--for example the impressionists' interest in spontaneity, in capturing moments of passing, in abruptly juxtaposing vibrating colors that had to be actively recombined by the viewer at a distance. The critic Félix Fénéon, writing in 1886, described these

developments in terms strongly anticipating those employed of the Futurists: "From the beginning, the impressionist painters, from a concern for truth that made them limit themselves to the interpretation of directly observed modern life and to landscape painted directly from nature, had seen objects as interdependent, without chromatic autonomy, sharing luminous characteristics with their neighbors."²⁰

Indeed, by the end of the nineteenth century the idea that flux and change were characteristic attributes of modern life had become commonplace. When Baudelaire, writing in 1863 on the relationships between modern painting and modern life, described modernity as "the transitory, the fugitive, the contingent," he already grasped the age not simply as something new but as a state of instability, propelled by change and dynamic energy (although he continues: this is "the half of art whose other half is the eternal and the immutable").²¹ Marx similarly stressed transience in his famous maxim: "all that is solid melts into air."²² But the roots go back to post-Kantian German idealist philosophy, to Fichte and Schelling, and from there to Schopenhauer and Hegel, eventually surfacing with renewed vigor at the turn of the century in Bergson. However different in other respects, these thinkers all comprehended reality as a process of transformation and evolution.

IV

Such notions of the mutability and impermanence of reality led nineteenth-century thinkers to embrace music as an ideal medium for conveying fundamental truths. Music's lack of materiality--its "floating on air," in Busoni's phrase, free from attachments with the external world--made it the "transcendent" art par excellence. It was accorded the highest position among the arts--a remarkably swift ascent considering its lowly status during the eighteenth century (all the more so since at the time its subservience stemmed from exactly those qualities that later brought it preeminence). Pater's oft-cited phrase that all art "aspires to the condition of music" is but one of countless such paeans voiced by artists and writers throughout the century.²³ Music was thrust forward as a model for all the arts. Unburdened by words or literal representations, it communicated a purely symbolic meaning (and only in that evasive, nonliteral sense characteristic of the nineteenth century) through an autonomous language of pure form based on its own internal relationships; and it offered an ideal escape from the increasing materialism of modern life.²⁴

If music supplied a key to otherwise hidden truths, however, it did so in large measure because it was able to project a sense of pure motion: it was itself in a state of constant transformation, always becoming something other than it was, directed toward the future. And this meant, paradoxically, that it was equally suited to evoke those qualities of transience and dynamism associated with the modern. Baudelaire, in discussing correspondences among the arts in his essay on *Tannhäuser*, neatly linked

the attributes of immateriality and flux when he described his reactions to Wagner's music: "I imagined the idea of a soul moving in a luminous environment, of an ecstasy of voluptuousness and knowledge, floating above and beyond the natural world." ²⁵

Nineteenth-century composers, responding to such notions of unrestricted movement, began to feel hampered by the more solid, articulated musical forms inherited from the previous century. Such forms treated music "spatially," carving it up into well-defined units joined together in cohesive, architectonic groups. Composers accordingly began to rethink musical structure in terms better suited to an image of reality as flux. Forms became more ambiguous, more unstable, in a state of permanent development--an idea quite foreign to eighteenth-century composers, for whom stability and instability were joined in an unmistakable, if delicate, balance. Wagner perfectly expressed the tendency toward fluidity when he described his music as "an art of transition." ²⁶ And the idea is still fully alive in Busoni's remark in the *New Aesthetic*: "all composers have drawn nearest the true nature of music in preparatory and intermediary passages (preludes and transitions)." ²⁷

I have discussed elsewhere how the Romantic idea of music as a language of pure form and motion encouraged nineteenth-century composers to undermine the conventional tonal syntax inherited from the eighteenth century. ²⁸ If music was to be truly free, it had to unburden itself of the constraints imposed by received conventions. The collapse of traditional tonality, so closely allied with modernism, evident in both the "neotonal" leanings of Debussy, Stravinsky, and Bartók and the atonal ones of Schoenberg, was the seemingly inevitable consequence of the Romantic idea of music's autonomy, of an art sheltered from all worldly involvement, including ultimately even a shared--and thus socially constituted--musical language.

The aesthetic orientation fostering music's preeminence had important consequences for the other arts. In literature it encouraged efforts to purge words of their ordinary meanings, often to the extent of conferring upon them a purely sonic value devoid of literal references, an idea that found typically drastic expression in Marinetti's *parole in libertà*, his "words set free" from syntax, punctuation, linear placement on the page, "stupid formulas," and "the logical canal of syntax." This "unchained lyricism" would--and here one hears distinct echoes from the aesthetics of musical romanticism--"bring us to the essence of material." ²⁹

The influence of the aesthetics of autonomous music is perhaps most clearly recognizable in the visual arts, especially in painting's break with objective representation as it approached pure abstraction around 1912. The "language" of nineteenth-century painting was--like that of music (but unlike literature)--an artificial one; and it too was tied to "syntactical" conventions, in this case those of perspectival representation. Hence the

prevalent idea that painting should become more like music, an autonomous pictorial language of pure colors and form, and that it should do so by renouncing all ties to external reality and objective representation. As early as 1908 the German art historian Wilhelm Worringer argued "the presupposition that the work of art, as an autonomous organism, stands beside nature on equal terms and, in its deepest and innermost essence, devoid of any connection with it, insofar as by nature is understood the visible surface of things."³⁰ The English critic and painter Roger Fry, writing two years later about Cézanne, mentioned "a new courage to attempt in painting that direct expression of imagined states of consciousness which has for long been relegated to music and poetry," and a year afterwards added that Cézanne had "recovered for modern art a whole lost language of form and color."³¹ These views reflected the more general belief, fundamental to the whole modernist enterprise, that each art should develop its own immanent language, fashioned from its own intrinsic properties and value--a belief that, paradoxically, as often as not was felt to make these arts more like music.

Many painters were consciously aware of their debt to music. Indeed, most of those associated with abstractionism's earliest phase, whether in the Germanic, expressionistic line, like Wassily Kandinsky (then resident in Munich), or in the French cubist line, like Robert Delaunay and the Paris-based František Kupka, described their work in musical terms. Kandinsky, who often gave his paintings musical titles, such as *Composition* or *Improvisation*, remarks in a letter written to Schoenberg in 1911: "I am certain that our own modern harmony [i.e., that of painters] is not to be found in the 'geometric' way, but rather in the anti-geometric, anti-logical way. This way is that of 'dissonances' in art...in painting, therefore, just as much as in music." A few months later he adds: "How immensely fortunate (though only relatively!) musicians are in their highly advanced art, truly an art which has already had the good fortune to forego completely all purely practical aims. How long will painting have to wait for this?"³² Delaunay, writing to Kandinsky in 1912, notes that his new "laws" were "based on studies in the transparency of color, whose similarity to musical notes drove me to discover the 'movement of color.'"³³

Kupka seems to be an exception, for in his *Création dans les arts plastiques*, completed in 1913 (not published until 1923), he remarks:

It would be better to treat with greater circumspection than hitherto the analogies ...between colors and sounds....The fact is that a piece of music suggests different images to each of its listeners....In other words, chromaticism in music and the musicality of colors are of value only as metaphors. Such a shame...yet another illusion goes up in smoke.³⁴

But Kupka is referring here to specific analogies between sound and color (about which he is no doubt correct), not to a more general analogy

between the formal languages of music and abstract art. Moreover, he himself gave a musical title to the first purely abstract work he exhibited, *Amorpha, Fugue in Two Color* (1912); and shortly before its appearance, he was, as he acknowledged, intensely preoccupied with the music of J. S. Bach.

V

I have taken this excursion to be in a better position to understand the particular conception of music that developed within the Futurist camp. Consistent with the modernist tradition just sketched, Futurist painters also were prone to emphasize the "musicality" of their work. In the 1912 catalogue essay for the Paris exhibition, the Futurist idea of "painting of states of mind" is explained through a comparison "drawn from the evolution of music":

[we] suddenly and purposely intersect each motive with one or more other motives of which we never give the full development but merely the initial, central, or final notes.

As you see, there is with us not merely variety, but chaos and clashing of rhythms, totally opposed to one another, which we nevertheless assemble into a new harmony.³⁵

And there are references to prolongations of the rhythms, and to "spots, lines, zones of color...which, in accordance with a law of our interior mathematics, musically prepare and enhance the emotion of the spectator."³⁶ By the time this essay appeared, however, music had already assumed an explicit role within the Futurist project. This is of considerable interest, since, despite the symbolic importance music enjoyed in the development of both literary and visual modernism, almost none of the major avant-garde movements before Futurism had incorporated a specifically musical component.³⁷ Yet the Futurists, with their genius for defining ideas in terms equally applicable to all the arts, quickly accepted it as a central part of the movement's aesthetic platforms and artistic activities.

The first indication was Balilla Pratella's 1910 "Manifesto of Futurist Musicians."³⁸ Pratella was a talented and relatively successful composer of thirty, but by no means a progressive one measured within international musical circles; and by Futurist standards his initial manifesto is disappointing. It decries the "shame and filth" of Italy's musical past, and "the intellectual mediocrity, commercial baseness and misoneism" that make current Italian music inferior to that of other countries. But it provides only generalities in response: the need "to proclaim the unique concept of Futurist music, as absolutely different from music to date, and so to shape in Italy a Futurist musical taste, destroying doctrinaire, academic and soporific values."³⁹

Pratella's "Technical Manifesto of Futurist Music," issued the following year, offers a more concrete idea of how a Futurist music might be developed:

melody and harmony should be conceived as a single element; traditional scales and modes should be rejected for the chromatic scale; tempered scales, including the chromatic, should eventually give way to microtonal scales; traditional meter should be expanded to encompass combinations of all meters and rhythms; and the orchestra should become "a sonorous universe in a state of constant mobility."⁴⁰ While none of this goes beyond Busoni, a final passage, apparently written by Marinetti and added at his insistence, more faithfully reflects the tone of the movement as a whole:

All forces of nature, tamed by man through his continued scientific discoveries, must find their reflection in composition--the musical soul of the crowds, of great industrial plants, of trains, of transatlantic liners, of armored warships, of automobiles, or airplanes. This will unite the great central motives of a musical poem with the power of the machine and the victorious reign of electricity.⁴¹

Pratella's compositions of this period, including his *Musica futuristica* of 1912, offer little indication that he followed his own advice (again reminding us of Busoni). Though competently written, they are remarkably tame. Here the frequent objection of Futurism's critics--that the movement's true interest lies in its manifestos, and is thus more theoretical than artistic in nature (unless one sees the whole movement, as have some, as "performance art")--seems justified.

Pratella's manifestos nevertheless had a critical role. They were read by the Futurist painter Luigi Russolo, who, taking them seriously, succeeded in imagining a truly Futurist music. Russolo was an artist of some significance--he was one of the five signatories of the two Futurist painting manifestos and the Paris exhibition essay --and his career effectively illustrates the importance that musical thinking, in both its literal and metaphorical sense, played within the movement. Indeed, the figure of Russolo as theorist-musician is fully comprehensible only in relation to his work as a painter.

VI

Of the five painters who signed the Futurist painting manifestos, Russolo had the most short-lived reputation. He nevertheless held a privileged place in the early stages of the movement, exhibiting actively with Boccioni and the others. His earliest extant paintings, such as *Profumo* (Perfume), which dates from 1910 (earlier works were apparently destroyed by the artist), are relatively conservative, with a decided art nouveau flavor; yet they show a fascination with creating impressions of motion on two-dimensional surfaces. *Profumo* depicts a woman's head in profile, enveloped in swirling linear movements that extend the swirls of her hair. Interest in dynamism becomes more explicit in *Riassunto dei movimenti di una donna* (Synopsis of a woman's movements) of 1912, whose title figure appears to execute a turn suggested through blurred and overlapping multiple images (a

technique much favored by Boccioni at the time), arranged in a circular pattern.

Particularly revealing, given the artist's later turn to music, is the slightly earlier *La Musica* (Music; 1911-12), a canvas over seven feet in height depicting a multihanded pianist, positioned near the bottom and playing on an oversized keyboard, out of which a massive, snake-like arabesque rises upwards in a turning motion. Interacting with this shape, numerous mask-like faces seem to move toward the surface of the canvas as the endpoints of columnar projections thrusting toward the center from various locations. Russolo's own discussion is telling: "In this picture the painter has attempted to translate into painting the melodic, rhythmic, harmonic, polyphonic, and chromatic impressions that comprise the totality of a musical experience."⁴² Here there is no doubt of a conscious effort to translate musical effects into painterly ones.

Given this interest, and the ties binding music to nonrepresentational painting, it is not surprising that Russolo was attracted to pure abstraction. His *Automobile in corsa* (Speeding automobile) of 1913, though still containing a distorted, if identifiable, car-like shape, is largely dominated by continuous, brightly colored abstract wedges forming a dynamic leftward thrust. Finally, *Le case continuano in cielo* (The houses continue into the sky), dating from the same year, is entirely abstract, projecting motion through geometrical shapes that extend both upward and outward in space, encircling one another. A painting of considerable character and originality, it has been termed Russolo's "masterpiece."⁴³

Yet it was nevertheless his last painting. Thereafter, as if fearing that his search for an autonomous pictorial language had reached a point of termination, Russolo gave up painting and turned to music. The first evidence was the pamphlet *l'Arte dei rumori* (The art of noises), published by the Direzione del Movimento Futurista in Milan in March 1913. This remarkable document offers a fundamentally new conception of the kinds of sounds appropriate to music and, no less significant, of music's relationship to its physical and human environment. It proposed, in short, no less than a reformulation of what music should be.

Though Russolo begins by describing his ideas as "a logical consequence" of Pratella's, what follows reveals fundamental differences.⁴⁴ Pratella, echoing Busoni, understood the expansion of musical resources as an extension, rather than rejection, of the essential sonic and organizational structures of Western music. Pure pitched sound is retained, but extended microtonally beyond the twelve-tone chromatic scale; and metrical rhythm is retained, but redefined as a complex network encompassing all possible meters.

Russolo's proposals are far more drastic. After sketching the evolution of Western music from the Greeks to the present, he notes that, despite all change and diversity, this music has always remained tied to pitched sounds associated specifically with music. He continues:

This limited circle of pure sounds must be broken, and the infinite variety of "noise-sound" conquered. Besides, everyone will acknowledge that all [musical] sound carries within it a development of sensations that are already familiar and exhausted, and which predispose the listener to boredom in spite of the efforts of all the innovatory musicians. We Futurists have deeply loved and enjoyed the harmonies of the great masters. For many years Beethoven and Wagner shook our nerves and hearts. Now we are satiated and we find far more enjoyment in the combination of the noises of trams, backfiring motors, carriages and bawling crowds than in rehearsing, for example, the "Eroica" or the "Pastoral."⁴⁵

No mere extension, this proposes that we open up music to embrace all possible sounds.

To experience something of the sonorous richness this would provide, Russolo recommends that we traverse a modern city with "our ears more alert than our eyes," adhering to the complex sounds of motors, throbbing valves, pounding pistons, screeching gears, the flapping of awnings and flags, the noise of metal shutters and store windows, doors slamming, the roar of railroad stations, forges, mills, printing presses, power stations, and subways. The goal is not to achieve a realistic imitation of the noises of real life, but to "attune and regulate" such sounds for specifically musical purposes.⁴⁶ The noises are not transformed into ordinary musical tones, however, but are analyzed so that they can be manipulated in a controlled way:

To fix the pitch of noises does not mean to take away from them all the irregularity of tempo and intensity that characterizes their vibrations, but rather to give definite gradation or pitch to the stronger and more predominant of these vibrations. Indeed, noise is differentiated from musical sound merely in that the vibrations that produce it are confused and irregular, both in tempo and in intensity. Every noise has a note--sometimes even a chord--that predominates in the ensemble of its irregular vibrations. Because of this predominant note it becomes possible to fix the pitch of a given note, that is, to give it not a single pitch but a variety of pitches, without losing its characteristic quality--its distinguishing timbre. Thus certain noises produced by rotary motion may offer a complete ascending or descending chromatic scale by merely increasing or decreasing the speed of the motion.⁴⁷

To realize his project Russolo devised a threefold plan: (1) to select, coordinate, and control noises, for which purpose he distinguishes six noise "families" (the number was later increased) ranging from "rumbles" and "whispers" to "screeches" and "shouts"; (2) to employ new instruments to

be designed and constructed by Russolo, subsequently to be named *intonarumori*, which can produce these noise-sounds mechanically and modify them through a continuum of microtonal increments; and (3) to create a Futurist orchestra composed entirely of such instruments.⁴⁸ With the help of his assistant Ugo Piatti, Russolo managed to complete an initial set of noise instruments within the year; and the first public concert featuring his own compositions for *intonarumori* ensemble was held in April 1914, in Milan. A month later a second concert took place in Genoa, and a month thereafter, a series of twelve in the London Coliseum.

Not surprisingly, these concerts attracted considerable public attention, though perhaps less as musical events than as quasi-theatrical occasions.⁴⁹ A subsequently arranged international tour, extending to Moscow, was organized but then cancelled due to the outbreak of World War I.⁵⁰ Despite attempts to revive Futurist music after the war, Russolo's "new musical reality" never reached full fruition. One factor was the misguided effort to enhance the commercial appeal of the *intonarumori* by combining them with traditional orchestral instruments, condemning them to a merely decorative function. But in any event, by the 1930s Russolo was essentially a forgotten man.

VII

Just what Russolo's music actually sounded like unfortunately remains a mystery.⁵¹ As if jinxed by the music's visionary and theoretically engendered nature, its material traces--both scores and instruments--have virtually all disappeared, having been either lost or destroyed in World War II. A 1921 recording of two brief pieces featuring *intonarumori* tells disappointingly little. The sound is poor, and the compositions (by Luigi's brother Antonio, a professional musician) are meager in quality. The noise-makers moreover are combined with and subordinated to traditional instruments, rendering them scarcely audible.⁵²

More suggestive, indeed tantalizingly so, is the only other surviving compositional artifact: two pages of score from Russolo's composition *Risveglio di una città* (The awakening of a city), reproduced to accompany an article by the composer published in 1913. This piece, with a title echoing one of Futurism's major paintings, *La città che sale* (The city rises) by Russolo's friend Boccioni (coincidentally, the painting owned by Busoni),⁵³ was performed at the first *intonarumori* concert. It offers at least some indication of just how unprecedented this music was. Notated on standard music paper, the score designates pitches with continuous lines rather than traditional noteheads; and movement from one pitch to another occurs as often as not by continuous glissando-like motion rather than discrete step, giving rise to unbroken pitch transformations quite foreign to previous Western music. One cannot reconstruct the exact effect, of course, since the sounds of the instruments are unknown. But this music was evidently composed according to fundamentally different organizational principles,

with the primary focus placed on timbre and timbral groupings, and on changes in registration and in dynamic and density levels, rather than on conventional tonal and rhythmic relationships. The rhythmic aspect nevertheless seems surprisingly tame: the score is notated in 3/4 time, with clearly indicated beats and barlines, marked off on the page according to a strict grid of spatial-durational correspondences. Important musical changes are carefully aligned, occurring on rather than off the beats. The score nevertheless has a decidedly graphic appearance, quite different from the look of traditional music, somewhat resembling Krzysztof Penderecki's scores from the 1960s. Whatever this music may have sounded like, it looked like "the music of the future."⁵⁴

Eighty years later it is easy to recognize--as many have--the historical significance of Russolo's Futurist experiment. As forerunner of such phenomena as the "mechanistically" inspired compositions of the 1920s--e.g., Artur Honegger's *Pacific 231* and Alexandr Mosolov's *The Iron Foundry*, Edgard Varèse's "sound-liberated" compositions, especially the all percussion *Ionisation* (1931), John Cage's 1940s noise-dominated works for prepared piano, and textually organized music of the 1960s by Penderecki and György Ligeti--Russolo's work initiated an important and enduring line in twentieth-century music, regardless of specific, much less acknowledged influence. (Except for Cage, none of the composers mentioned admitted influence; and Varèse flatly denied it.)

As for the impact of Russolo's Futurist music on the larger "Futurist moment" in which it appeared, it was admittedly minor measured by the response of other composers of the period. Viewed within the larger musical and cultural context, however, Russolo's manifesto and music marked a moment of considerable significance. To a far greater extent than any of his contemporaries, Russolo gave expression--by implication if not direct statement--to a remarkable idea: that with the abandonment of traditional tonality everything became musically possible--not just nontriadic harmonies or nonmetric rhythm, but any kind of sonic structure whatever. No longer in possession of a common language founded on purely formal conventions, music relinquished the sole basis for limiting itself to a "specifically musical" kind of material. Music could be whatever one wanted it to be.

Yet if Russolo's manifesto seems to imply that any sonic event can be called "music," his actual musical realizations were from all appearances--the fragment of score, reports of concerts, etc.--considerably less radical than their theoretical foundations. To judge from the two pages of *Risveglio di una città*, for example, Russolo confined his work to a carefully prescribed and regulated body of sounds that, though consisting entirely of "noise," was nevertheless created especially for musical purposes. The concerts were also traditional in layout, featuring a sequence of previously announced compositions, presented as "works of art." They even had the appearance of traditional affairs: photographs reveal an all-male orchestra in formal attire,

seated in ordered arrangement.

There are nevertheless intriguing suggestions in Russolo's manifesto for the far reaching implications of linking music with noise, almost reaching the point of an equation of music with life that is reminiscent of Cage. Toward the end of the tract, the following appears:

Every manifestation of life is accompanied by noise. Noise, therefore, is familiar to our ear and has the power to conjure up life itself. Musical sound, alien to our life, always musical and a thing unto itself, an occasional but unnecessary element, has become to our ears what an overfamiliar face is to our eyes. Noise, however, reaching us in a confused and irregular way from the irregular confusion of our life, never entirely reveals itself to us, and keeps innumerable surprises in reserve. We are therefore certain that by selecting, coordinating, and dominating all noises we can enrich men with a new and unsuspected sensual pleasure.⁵⁵

The last sentence, with its reference to human domination and control, pulls back somewhat, but the implication of the preceding is clear: that music, rendered "alien" by an "overfamiliar" grammar, must now become as "confused and irregular" as life itself. This represents the last stage in music's century-old search to develop a language of ever greater expressive immediacy. In an extraordinary moment of dialectical reversal, the romantic idea of "music as a world apart," having been pushed to its logical consequences, concedes to the idea of "music as part of the world."⁵⁶

VIII

Russolo's undertaking, with its negation of specifically "musical" sound, can again be illuminated by considering a corresponding development in contemporary painting: the rejection of all exterior content. The widespread appearance of purely abstract art in 1912 encouraged several painters to strip down the content of their work to what Kasimir Malevich a few years later called "the zero of form," apparently denying everything previously held necessary to the definition of "painting," including even its craft. The evolution of both Piet Mondrian and Malevich during this period can be viewed in this light, though their reasons for such a radical reduction of painterly conventions were quite different.

The most telling example is this connection, however, is Marcel Duchamp, an artist much concerned with movement and transformation, and himself influenced by Futurist painting. Thierry de Duve, in a study of Duchamp's "passage" to the readymade, has interpreted the artist's retreat from painting as a final response to a series of historical abandonments undergone by painting in its search for a purely pictorial language free of external representation: the abandonment of chiaroscuro in Manet, linear perspective in Cézanne, empirically experienced space in Picasso, and, in a

culminating convergence around 1912; objective representation in several artists, including Kandinsky, Mondrian, Delaunay, Kupka, and Malevich. These abandonments both mirrored and promoted the rejection of a particular, traditionally established conception of painting, ultimately leading to pure abstractionism.

While acknowledging that Duchamp's work was never fully abstract, de Duve maintains that "the question of abstraction" was essential to it. Instead of redefining painting as abstraction, however, Duchamp extended the series of abandonments a final step, abandoning painting altogether and along with it the name of "painting" (de Duve stresses a Duchamp 1912 diary entry: "Marcel, no more painting; go get a job.").⁵⁷ This decision was publicly announced in his first exhibition of a readymade, the *Bicycle Wheel* of 1913. For de Duve this final abandonment was

the paradoxically historical condition for the survival of painting, the reprieve that comes from its name being unpronounceable for a while it was the "invention" of the readymade that would confirm this revelation. Duchamp abandoned painting for the first time, or, to be more precise, he abandoned painting as a making and seeing, as an artisanal pleasure, an "olfactory masturbation." But he did not abandon the paradoxical contract that tied him to the history of painting; rather, he reduced the act of painting to nothing more than the enunciation of the contract itself: to name the death of painting and its survival all at once, to name the broken pact and the new pact that, since Manet at least, were part of the rhythm of the destiny of an avant-garde painter, and, by a supplementary turn of the crew, to name the name.⁵⁸

Although one cannot claim that Russolo created the first "musical readymade" (that honor, I suppose, would belong to Cage), I believe that his "Art of Noises," which appeared in the same year as Duchamp's *Bicycle Wheel*, can be read as providing the theoretical basis. It seems to advocate something Russolo the composer was never able, or wished, to realize: a vision of music that, inseparable from nonmusic, comes to us "like life itself." Like Duchamp's readymade, Russolo's manifesto responds to a series of abandonments: monotonality in Wagner, the triad in Scriabin, tonal centrality in Schoenberg, metrical rhythm in Stravinsky. Having reached the zero degree of form, the art of music gives way to the art of noise.

There are several intriguing ties linking Duchamp to Russolo. In 1913, the same year as Russolo, Duchamp abandoned painting and turned to "nonart," his "readymade" matching the former's "noise"; and shortly before this abandonment he produced a painting of a musical performance, *The Sonata* of 1911, as Russolo did with his *La Musica* of the same year. But most remarkable, Duchamp also turned to musical composition in breaking away from painting, though less intensely and exclusively than Russolo. Among various excursions into aural-musical territory throughout

Duchamp's career, three dating from the time of the abandonment of painting are particularly relevant, especially since they appear to deny the boundaries separating painting from music. One is a drawing executed on music paper of a bicyclist, who defines--as if in analogy to a melodic line--a path of motion extending across the staves. Another, never realized, consists simply of the self-injunction to "make a painting of frequency."

Most suggestive however is the third, an actual musical composition entitled *Eratum Musical*, produced in 1913, the year of the first readymade, and conceived in conjunction with the early stages of the *Large Glass*, *The Bride Stripped Bare by her Bachelors, Even* (yet another form of nonpainting). Purely conceptual in intent (Duchamp himself remarked that a performance would be "useless"), the work exists in two versions, one for three voices and one "for a designated music instrument (player piano, mechanical organs or other new instruments for which the virtuoso intermediary is suppressed)." (Cahill's "Dynamophone," so enthusiastically described by Busoni, would have been--conceptually--ideal.) Both versions exploit a chance procedure: a limited number of pitches is selected (25 in one, 89 in the other) and placed in sequence by a random procedure that establishes their order for a given realization (in the vocal piece the pitches are indicated on separate pieces of paper, placed in a hat, shaken, and removed one-by-one).⁵⁹ Apparently after the abandonment of objective pictorial representation, visual art too can become anything you want it to be.

In view of the simultaneous turn by both Russolo and Duchamp to a "foreign" artistic enterprise, the former's closing words in "The Art of Noises" take on particular interest:

I am not a musician, I have therefore no acoustic predilections, nor any works to defend. I am a Futurist painter using a much loved art to project my determination to renew everything. And so, bolder than a professional musician could be, unconcerned by my apparent incompetence and convinced that all rights and all possibilities open up to daring, I have been able to initiate the great renewal of music through the Art of Noises.⁶⁰

Here Russolo touches upon an important factor related to both his success and failure as a composer. While his status as a nonmusician often led him to be dismissed as little more than a joke, that same lack of professional training enabled him to extend his vision beyond the most distant regions of what had previously been musically imaginable. Like Duchamp, Russolo embodies that almost mythical modernist prototype, the artist as outsider--the painter who has no professional training, or who does not paint at all; the writer who produces in a foreign tongue; the composer who is not a musician.

Though Russolo remains a largely forgotten figure in music history, his sudden appearance on the musical scene in 1913 can be viewed as marking a critical historical juncture, supplying the final link in a chain initiated in the

early Romantic aesthetics of autonomous music. That he represented not merely a point of termination, but one of origin, has been made clear by subsequent Western music. Russolo's vision of a new kind of music, offering materiality as a replacement for its lost spirituality, has proved remarkably fertile, and has shown little sign of exhaustion.

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Notes

1. Originally published in the *Süddeutsche Monatshefte* and reprinted in Hans Pfitzner, *Gesammelte Schriften*, vol. 1 (Augsburg: Benno Filler Verlag, 1926).

2. Ferruccio Busoni, *Entwurf einer neuen Ästhetik der Tonkunst*, 2nd ed. (Leipzig: Insel Verlag, 1916). An English translation by Th. Baker, including most of the new material for the second edition, appeared in 1911 and is reprinted in *Three Classics in the Aesthetic of Music* (New York: Dover, 1962), hereafter abbreviated *TCAM*

3. "Open Letter to Hans Pfitzner," in Ferruccio Busoni, *The Essence of Music*, trans. Rosamond Ley (London: Salisbury Square, 1957), 17. The letter was originally published in the June 1917 edition of Berlin *Vossische Zeitung*. The original reads: "Schon durch die Betitelung 'FuturistenGefahr' führen Sie ihre Leser irre, indem Sie auf meinen Namen--in den Augen des Publikums--alle Schwächen und Fehler häufen, die Sie einer Gruppe--die mir fernsteht--, etwas vorwerfen könnten. Auf keiner Seite meines Büchleins ist das Wort 'Futurismus' gefallen, niemals habe ich mich einer Sekte angeschlossen: der Futurismus, eine Bewegung der 'Gegenwart,' konnte zu meinen Argumenten keine Beziehung haben." "Offener Brief an Hans Pfitzner," in Ferruccio Busoni, *Von der Macht der Töne. Ausgewählte Schriften*, ed. Siegfried Bimberg (Leipzig: Verlag Philipp Reclam jun., 1983), 83, hereafter abbreviated *VMT*.

The Busoni-Pfitzner controversy has been the subject of a number of studies, mostly in German, usually including discussion of Pfitzner's opera *Palestrina*, underway at the time of the exchange. and a subsequent, related debate between Pfitzner and the German music critic Paul Bekker. For a recent example see Reinhard Ermen, *Musik als Einfall. Hans Pfitzners Position in ästhetischen Diskurs nach Wagner* (Aachen: Rimbaud Presse, 1986), in particular the chapters "Fortschritt als Utopie--Pfitzner und Busoni," "*Palestrina*," and "Pfitzner contra Bekker." Two recent studies in English are Peter Franklin's "*Palestrina* and the Dangerous Futurists," *The Musical Quarterly* 70 (fall 1984): 499-514, which deals mainly with ideological aspects of the opera; and Marc A. Weiner's "Music in the Modern Imagination: The Polemics of Hans Pfitzner," the first chapter of his

Undertones of Insurrection: Music, Politics, and the Social Sphere in the Modern (Lincoln: University of Nebraska Press, 1993), 35-71, which focusses upon the political and nationalistic implications of the entire Busoni-Pfitzner-Bekker exchange.

4. The reply originally appeared in the September 1912 edition of the periodical *Pan* and is reprinted in Busoni, *The Essence of Music*, 28-9. The manifesto appeared in *La Liberté* in the spring of 1912.

5. Busoni's admiration for Boccioni is evident from a letter written to his wife in 1913, in which he remarks, apparently of the sculpture *Forme uniche della continuità nello spazio* (Unique forms of continuity in space), which he found "ugly and unintelligible" but also arresting: "Compared to *this* art...Schoenberg's *Pierrot Lunaire* is a tepid lemonade!" Ferruccio Busoni, *Letters to his wife*, trans. Rosamond Ley (London: Edward Arnold, 1938), 223. In other letters Busoni refers to Boccioni as "something of a genius," and notes that he represents "at last, after a lengthy interval, an Italian painter of historical significance." Ferruccio Busoni, *Selected Letters*, ed. and trans. Anthony Beaumont (New York: Columbia University Press, 1987), 236-248.

6. Published in the 31 August 1916 edition of the *Neue Zürcher Zeitung*.

7. In the teens some commentators even began referring to all advanced music as "futuristic," no doubt influenced by the considerable publicity surrounding the Italian Futurist movement. The November and December 1913 issues of the *Monthly Musical Record* of London, for example, contain "Futurist Examination Papers," complete with such questions as "Compare the older diatonic, 'sex-tonal' and the 'duodecuple' scale with the present 'tri-partitional' one," prepared by A. Eaglefield Hull as a "suggestion of what the examination papers at our leading institutions may be like in a few years hence, if the Modernists are really coming into complete possession of the field." *Monthly Musical Record*, 1 November 1913, 282.

8. *TCAM*, 80. The original reads: "unzuübertreffende Abgeschlossenheiten" (*VMT*, 12).

9. The original reads: "Busoni erhofft sich von der Zukunft alles für die abendländische Musik und fasst die Gegenwart and Vergangenheit auf als einen stammelnden Anfang, als die Vorbereitung. Wie aber wenn es anders wäre? Wenn wir uns auf einem Höhepunkt befänden oder gar der Höhepunkt schon überschritten wäre?" Hans Pfitzner, *Gesammelte Schriften*, vol. 1, 220-21.

10. Renato Poggioli, *The Theory of the Avant Garde*, trans. Gerald Fitzgerald (Cambridge: Harvard University Press, 1968), 69. More recently Marjorie Perloff has taken Poggioli's phrase for the title of her excellent book *The Futurist Moment* (Chicago: University of Chicago Press, 1986).

11. Quoted in Carl Dahlhaus, *Nineteenth-Century Music*, trans. J. Bradford Robinson (Berkeley: University of California Press, 1989), 247.

12. Busoni, *TCAM*, 77. The original reads: "die Ungebundenheit ihrer Unmaterialität," and

So Jung es ist, dieses Kind, eine strahlende Eigenschaft ist an ihm erkennbar, die es vor allenseinen älteren Gefährten auszeichne. Und diese wundersame Eigenschaft wollen die Gesetzgeber nicht sehen, weil ihre Gesetze sonst über den Haufen geworfen würden. Das Kind--es schwebt! Es berührt nicht die Erde mit seinen Füßen. Es ist nicht der Schwere unterworfen. Es ist fast unkörperlich. Seine Materie ist durchsichtig. Es ist tönnende Luft. Es ist fast die Natur selbst. Es ist frei! (*VMT*, 8)

13. The original reads: "Demnach hat keine andere Kunst einen Grundstoff, der schon an sich mit so himmlischem Geiste geschwängert wäre, als die Musik." Wilhelm Heinrich Wackenroder, *Werke und Briefe*, ed. Friedrich von der Leyen (Berlin: Verlag Lambert Schneider, 1938), 186.

14. The original reads: "die Sprache der Engel." Wackenroder, *Werke und Briefe*, 168.

15. *TCAM*, 93, 91. The originals read: "Denn alles verkündet eine Umwälzung und einen nächsten Schritt zu jener 'ewigen'" (*VMT*, 42); and "Unser ganzes Ton-, Tonart- und Tonartsystem ist in seiner Gesamtheit selbst nur den Teil eines Bruchteils eines zerlegten Strahls jener Sonne 'Musik' am Himmel der 'ewigen Harmonie'" (*VMT*, 40).

16. *TCAM*, 95. The original reads:

Welch schöne Hoffnungen und traumhafte Vorstellungen erwachsen für sie! Wer hat nicht schon im Traume 'geschwebt?' Und fest geglaubt, dass er den Traum erlebe? Nehmen wir es uns doch vor, die Musik ihrem Urwesen zurückzuführen; befreien wir sie von architektonischen, akustischen und ästhetischen Dogmen; lassen wir sie reine Erfindung and Empfindung sein, in Harmonien, in Formen and Klangfarben...lassen wir sie der Linie des Regenbogens folgen and mit den Wolken um die Wette Sonnenstrahlen brechen....(*VMT*, 45-46)

17. The phrase is from Marinetti's second manifesto "Let's Murder the Moonshine," included in F. T. Marinetti, *Let's Murder the Moonshine: Selected Writings*, ed. R. W. Flint, trans. R. W. Flint and Arthur A. Coppotelli (Los Angeles: Sun and Moon Classics, 1991), 54. The original reads: "sbeffeggino tutto ciò che è consacrato dal tempo." F. T. Marinetti, "Uccidiamo il chiaro di luna!" in idem, *Teoria e invenzione futurista*, ed. Luciano de Maria (1968: reprint, Milan: Mondadori, 1983), 15.

18. Umberto Boccioni et al., "Futurist Painting: Technical Manifesto" (1910), in *Futurist Manifestos*, ed. Umberto Apollonio, trans. Robert Brain et al. (New York: Viking Press, 1970), 27-31, hereafter abbreviated "FPTM," and *FM* respectively. Idem, "The Exhibitors to the Public" (1912), in *FM*, 45-50,

hereafter abbreviated "EP." For the originals, see idem, "La pittura futurista--Manifesto tecnico" (1910), in *Futurismo*, ed. Umbro Apollonio (Milan: Gabriele Mazzotta Editore, 1970), 55-59, hereafter abbreviated "PFMT" and *F* respectively; and idem, "Prefazione al catalogo delle esposizioni di Parigi, Londra, Berlino, Bruxelles, Monaco, Amburgo, Vienna, ecc." (1912), in *F*, 88-96, hereafter abbreviated "P."

19. For painting dealing with modern subjects in modern dress, see "FPTM," 29, "PFMT," 57; "the simultaneousness of states of mind" and ("EP," 47), the original reads: "la simultaneità degli stati d'animo" ("P," 91); for the spectator located at the center of the picture, see "FPTM," 29, "PFMT," 57; "carry within himself the landscapes" ("FPTM," 28), the original reads: "il pittore ha in sé i paesaggi che vuol produrre" ("PFMT," 55); for the rejection of imitation, see "FPTM," 30, "PFMT," 58; for the interpenetration of objects, see "FPTM," 28, "PFMT," 57; for the tendency toward the "infinite" be revealed through "force-lines," see "EP," 48, the originals read "infinito," and "linee-forze" ("P," 94).

20. Félix Fénéon, "The Impressionists in 1886," reprinted in Joshua C. Taylor, *Nineteenth-Century Theories of Art* (Berkeley: University of California Press, 1987), 480.

21. Author's translation. The original reads: "La modernité, c'est le transitoire, le fugitif, le contingent, la moitié de l'art, dont l'autre moitié est l'éternel et immuable." Charles Baudelaire, "Le Peintre de la vie moderne," in *L'Art romantique*, vol. 3 of *Oeuvres Complètes* (Paris: Louis Conard, 1925), 66.

22. Karl Marx, *Communist Manifesto*, in *The Marx-Engels Reader*, 2nd ed., ed. Robert C. Tucker (New York: W. W. Norton, 1978), 331-62. The original reads: "Alles Ständische und Stehende verdamft." Karl Marx, *Die Frühschriften*, ed. Siegfried Landshut (Stuttgart: Alfred Kröner Verlag, 1964), 529.

23. Walter Pater, "The School of Giorgione," in *Selected Works*, ed. Richard Aldington (London: William Heinemann, 1948), 271.

24. For a wide ranging discussion of this topic, see Carl Dahlhaus, *The Idea of Absolute Music*, trans. Roger Lustif (Chicago: University of Chicago Press, 1989).

25. The original reads: "Alors je conçus pleinement l'idée d'une âme se mouvant dans un milieu lumineux, d'une extase faite de volupté et de connaissance, et planant au-dessus et bien loin du monde naturel." Baudelaire, "Richard Wagner et *Tannhäuser* à Paris," in *L'Art romantique*, 207.

26. *Selected Letters of Richard Wagner*, ed. and trans. Stewart Spencer and Barry Millington (London: J. M. Dent, 1987), 475. His words, which appear in a letter to Mathilde Wesendonk, are "die Kunst des Übergangs."

27. *TCAM*, 79; the original reads: "Überhaupt kamen die Tondichter in den vorbereitenden und vermittelnden Sätzen (Vorspielen und Übergängen) der wahren Natur der Musik am nächsten...." (*VMT*, 11).

28. Robert P. Morgan, "Secret Languages: The Roots of Musical Modernism." *Critical Inquiry* 10 (March 1984): 442-61.

29. See F. T. Marinetti, "Destruction of Syntax--Wireless Imagination--Words-in-Freedom," in *FM*, 98, 106, 99, 100. The originals read: "stupide definizioni," "il canale logico della sintassi," "lirismo scatenato," "c'introduiranno nella essenza della materia," in F. T. Marinetti, "Distruzione della sintassi--Immaginazione senza fili--Parole in libertà--La sensibilità futurista," in *F*, 147, 153, 147, 148.

30. Wilhelm Worringer, *Abstraction and Empathy*, trans. Michael Bullock (New York: International Universities Press, 1953), 3. The original reads: "Unsere Untersuchungen gehen von der Voraussetzung aus, dass das Kunstwerk also selbstständiger Organismus gleichwertig neben der Natur und in seinem tiefsten innersten Wesen *ohne* Zusammenhang mit ihr steht, sofern man unter Natur die sichtbare Oberfläche der Dinge versteht." Wilhelm Worringer, *Abstraktion und Einfühlung* (Munich: R. Piper Verlag, 1959), 35.

31. Quoted in Richard Shiff, *Cézanne and the End of Impressionism* (Chicago: University of Chicago Press, 1984), 147.

32. Wassily Kandinsky, quoted in *Arnold Schoenberg Wassily Kandinsky: Letters, Pictures, and Documents*, ed. Jelena Hahl-Koch, trans. John C. Crawford (London: Faber and Faber, 1984), 21, 27. The originals read: "Ich finde eben, dass unsere heutige Harmonie nicht auf dem 'geometrischen' Wege zu finden ist, sondern auf dem direkt antigeometrischen, antilogischen. Und dieser Weg ist der der 'Dissonanzen in der Kunst', also auch in der Malerei ebenso, wie in der Musik," and "Ich beneide Sie sehr! Sie haben ihre Harmonielehre schon im Druck. Wie unendlich gut (wenn auch nur verhältnismässig) haben es die Musiker in ihrer so weit gekommenen Kunst. Wirklich *Kunst*, die das Glück schon besitzt, auf reinpraktische Zwecke vollkommen zu verzichten. Wie lange wird wohl die Malerei darauf warten müssen?" *Arnold Schönberg Wassily Kandinsky. Briefe, Bilder und Dokumente*, ed. Jelena Hahl-Koch (Salzburg: Residenz Verlag, 1980), 19, 25. Kandinsky even envisioned that painting might eventually develop a *malerische Generalbass* and *Harmonielehre der Malerei*, a "figured bass for painting" and "theory of harmony" for painting. Wassily Kandinsky, "On the Spiritual in Art," *Complete Writings on Art*, ed. Kenneth C. Lindsay and Peter Vergo (Boston: 1982), 1:196, 209.

33. Robert Delaunay, quoted in *Theories of Modern Art*, ed. Herschel B. Chipp (Berkeley: University of California Press, 1968), 318.

34. Quoted in Serge Fauchereau, *Kupka*, trans. Richard Lewis Rees, (New York: Rizzoli, 1989), 19.

35. "EP," 49; the originals read: "pittura degli stati d'animo," "tratto dall'evoluzione della musica," and

tagliamo bruscamente e a piacer nostro, ogni motivo con uno o più altri motivi, di cui non offriamo mai gli sviluppi, ma semplicemente la note iniziali, centrali o finali. Come vedete; c'è in noi, non solo varietà, ma caos ed urto di ritmi assolutamente opposti che riconduciamo non meno ad un'armonia nuova. ("P," 94-95)

36. "EP," 49-50; the original reads: "delle macchie, delle linee, delle zone di colore, che non corrispondono a nessuna realtà ma, secondo una legge della nostra matematica interna, preparano musicalmente ed aumentano l'emozione dello spettatore" ("P," 95).

37. The principal exception was the German expressionist group associated with Kandinsky, whose publication *Der Blaue Reiter* contained articles on music as well as reproductions of scores by Schoenberg, Webern, and Berg.

38. Balilla Pratella, "Manifesto of Futurist Musicians," in *FM*, 31-38, hereafter abbreviated "MFM"; for the original see Balilla Pratella, "Manifesto dei musicisti futuristi" (1911), in *F*, 61-68, hereafter abbreviated "MMF."

39. For "shame and filth," see "MFM," 34; "the intellectual mediocrity, commercial baseness and misoneism" ("MFM," 31-32); "to proclaim the unique concept of Futurist music, as absolutely different from music to date, and so to shape in Italy a Futurist musical taste, destroying doctrinaire, academic and soporific values" ("MFM," 37). The originals read: "l'onta e il fango" ("MMF," 65); "il mediocrismo intellettuale, la bassezza mercantile e il misoneismo" ("MMF," 61); and "proclamare un concetto unico di musica futurista, cioè assolutamente diversa da quella fatta finora, formare così in Italia un gusto musicale futurista e distruggere i valori dottrinari, accademici e soporiferi" ("MMF," 67).

40. Balilla Pratella's "Technical Manifesto" is reprinted in Nicholas Slonimsky, *Music Since 1900*, 4th ed. (New York: Charles Scribner and Sons, 1971), 1296-98. The original reads: "considerare l'strumentazione sotto l'aspetto di universo sonoro incessantemente mobile," in Balilla Pratella. "La musica futurista--manifesto tecnico" (1911), in *F*, 77-78.

41. Slonimsky, *Music since 1900*, 1298. The original reads:

Portare nella musica tutti i nuovi atteggiamenti della natura, sempre diversamente domata dall'uomo per virtù delle incessanti scoperte scientifiche. Dare l'anima musicale delle folle, dei grandi cantieri industriali, dei treni, dei transatlantici, delle corazzate, degli automobili e degli aeroplani. Aggiungere ai grandi motivi centrali del poema musicale il dominio della Macchina ed il regno vittorioso della Elettricità. (*F*, 78)

For the Marinetti attribution, see Barclay Brown's introduction to Luigi

Russolo, *The Art of Noises*, trans. Barclay Brown (New York: Pendragon Press, 1986), 2, hereafter abbreviated *AN*. This volume includes both the manifesto and the much longer publication that Russolo issued under the same title in 1916.

42. Quoted in Karen von Maur, *Vom Klang de Bilder. Die Musik in der Kunst de 20. Jahrhunderts* (Munich: Prestel-Verlag, 1985), 121. Russolo also remarks that the "different masks represent, through particular human expressions, the indefinite feelings that belong to this music." Both the von Maur book and the extensive bibliography in G. F. Maffina, *Luigi Russolo e L'Arte dei rumori: con tutti gli scritti musicali* (Torino: Martano, 1978) cite Russolo's brief description as originally appearing in the Italian Futurist periodical *Poesia* in 1920, though that journal ceased publication in 1913.

43. By Marianne W. Martin in her important study *Futurist Art and Theory*, 2nd ed. (New York: Hacker Art Books, 1978), 150. Martin's book is a useful source for additional information about Russolo, and includes black-and-white reproductions of all five of the paintings mentioned here, as well as several others by the artist. A number of color reproductions, including all these five except *Profumo*, are found in *Futurisme et Futurismes*, ed. Pontus Hulten (Paris: Editions le Chemin vert, 1986), 204-11.

44. See Luigi Russolo, "The Art of Noises," in *FM*, 74, hereafter abbreviated "AN"; the original reads: "logica conseguenza," in Russolo, "L'arte dei rumori," in *F*, 127, hereafter abbreviated "AR."

45. "AN," 76; the original reads:

Bisogna rompere questo cerchio ristretto di suoni puri e conquistare la varietà infinita dei "suoni-rumori." Ognuno riconoscerà d'altronde che ogni suono porta con sé uno sviluppo di sensazioni già note e sciupate, che predispongono l'ascoltatore alla noia, malgrado gli sforzi di tutti i musicisti novatori. Noi futuristi abbiamo profondamente amato e gustato le armonie dei grandi maestri. Beethoven e Wagner ci hanno squassato i nervi e il cuore per molti anni. Ora ne siamo sazi e godiamo molto di più nel combinare idealmente dei rumori di tram, di motori a scoppio, di carrozze e di folle vocianti, che nel riudire, per esempio, l'"Eroica" o la "Pastorale." ("AR," 128-29)

Marinetti's famous verbal depiction of modern warfare, *Zang-Tumb-Tuum* (introduced with: "Recently the poet Marinetti, in a letter from the trenches of Adrianopolis, described to me in admirable unfettered language the orchestra of a great battle"), is cut from Russolo's manifesto in the Apollonio collection. Complete versions are found in *AN*, 23-28 and Slonimsky, *Music Since 1900*, 1298-1302.

46. "AN," 85; the originals read: "con le orecchie più attente che gli occhi," and "intonare e regolare" ("AR," 130).

47. *AN*, 27. The original reads:

Intonare i rumori non vuol dire togliere ad essi tutti i movimenti e le vibrazioni di tempo e d'intensità, ma bensì dare un grado e un tono alla più forte predominante di queste vibrazioni. Il rumore infatti si differenzia solo in quanto le vibrazioni che lo producono sono confuse e irregolari, sia nel tempo che nell'intensità. Ogni rumore ha un tono, talora anche un accordo che predomina nell'insieme delle sue vibrazioni irregolari. Ora, da questo caratteristico tono predominante deriva la possibilità pratica di intonarlo, di dare cioè ad un dato rumore non un solo tono ma una certa varietà di toni, senza perdere la sua caratteristica, voglio dire il timbro che lo distingue. Così alcuni rumori ottenuti con un movimento rotativo possono offrire un'intera scala cromatica ascendente o discendente, se si aumenta o diminuisce la velocità del movimento. ("*AR*," 131)

Russolo's interest in controlling noise through scalar increments analogous to those in pitch scales led him to introduce a system of notation incorporating microtonal divisions. It must be understood, however, that what is transformed through Russolo's scalar adjustments is not a fixed pitch, but a noise made up of irregular frequencies. Russolo's proposal thus goes well beyond what Busoni and Pratella had suggested regarding microtonal scale divisions. For a recent discussion of Russolo's notational innovations, see Mark A. Radice, "*Futurismo: Its Origins, Context, Repertory, and Influence*" *Musical Quarterly* 73, no. 1 (1989): 7-13.

48. "*AN*," 86. The originals read: "rombi," "bisbigli," "stridori," and "gridi" ("*AR*," 131).

49. The *London Times* reported of the opening concert: "It is impossible to say that the first of the 'noise-spirals' [a term Russolo applied to his compositions] performed, 'The Awakening of a Great City,' was as exhilarating as Futurist art usually is; on the contrary, it rather resembled the sounds heard in the rigging of a Channel-steamer during a bad crossing, and it was, perhaps, unwise of the players--or should we call them 'noisicians?'--to proceed with their second piece, 'A Meeting of Motor-cars and Aeroplanes,' after the pathetic cries of 'No more!' which greeted them from all excited quarters of the auditorium." *London Times*, 16 June 1914, 5. A description of a rehearsal preceding the first concert in the *Pall Mall Gazette* of 12 June, 1914 (page 1, column 4) is only somewhat less dismissive: "Thunder rolling, bulls roaring, hurricanes blowing, factories buzzing, dogs barking, pigs grunting, and occasionally some gentle and necessary murmurs like the approach of a calm dawn, were amongst the noises that were heard at a rehearsal of the Futurist band on the stage of the Coliseum this morning." *Pall Mall Gazette*, 12 June 1914, 1. According to the account given by R. W. Nevinson in his *Paint and Prejudice* (New York: Harcourt Brace, 1938), the first concert caused such a furor that Marinetti was thereafter obliged to add

a gramophone recording of music by Elgar to the performances in order "to bring a little melody into the act" (83). See also Felix Barker, *The House that Stoll Built: The Story of the Coliseum Theatre* (London: Frederick Muller Ltd., 1957), 183-86. I am indebted to Lawrence Rainey for bringing these reports to my attention and making copies available to me.

50. For a more detailed account, in Russolo's own words, see "Polemics, Battles, and the First Performances of the Noise Instruments" in *AN*, 31-36.

51. Contemporary descriptions, such as those quoted in note 49, are not very helpful.

52. The two compositions, *Corale* and *Serenata*, were released on a 78 recording, *His Master's Voice* R6919/20.

53. See the opening section of this article.

54. A clear reproduction of the two pages appears in *AN*, 72-3.

55. "AN," 85-86. The original reads:

Ogni manifestazione della nostra vita è accompagnata dal rumore. Il rumore è quindi familiare al nostro orecchio, e ha il potere di richiamare immediatamente alla vita stessa. Mentre il suono, estraneo alla vita, sempre musicale, cosa a sé, elemento occasionale non necessario, è divenuto ormai per il nostro orecchio quello che all'occhio è un viso troppo noto, il rumore invece giungendoci confuso e irregolare dalla confusione irregolare della vita, non si rivela mai interamente a noi e ci serba innumerevoli sorprese. Siamo certi dunque che scegliendo, coordinando e dominando tutti i rumori, noi arricchiremo gli uomini di una nuova voluttà inaspettata. ("AR," 131)

56. A similar point has been made by Peter Bürger in his *Theory of the Avant-Garde*, trans. Michael Shaw (Minneapolis: University of Minnesota Press, 1984), though principally in connection with the somewhat later dada and surrealist movements, which Bürger views as rejecting art as an "autonomous institution" in order to reintegrate it into the "praxis of life." See especially the section "The Negation of the Autonomy of Art by the Avant-Garde," 47-54.

57. Thierry de Duve, *Pictorial Nominalism: On Marcel Duchamp's Passage from Painting to the Readymade*, trans. Dana Polan (Minneapolis: University of Minnesota Press, 1991), 152-15.

58. *Ibid.*, 98.

59. Cf. Gavin Bryars, "Notes on Marcel Duchamp's Music," *Studio International* 192 (November-December 1976): 274-79; and Craig Adcock, "Marcel Duchamp's Gap Music Operations in the Space between Art and Noise," in *Wireless Imagination. Sound, Radio, and the Avant-Garde*, ed. Douglas Kahn and Gregory Whitehead (Cambridge: MIT Press, 1992),

105-38. Realizations by Duchamp of a version of each piece, notated on music paper, are included in the former.

60. "AN," 88. The original reads:

Non sono musicista: non ho dunque predilezioni acustiche, né opere da difendere. Sono un pittore futurista che proietta fuori di sé con un'arte molto amata la sua volontà di rinnovare tutto. Perciò più temerario di quanto potrebbe esserlo un musicista di professione, non preoccupandomi della mia apparente incompetenza e convinto che l'audacia abbia tutti i diritti e tutte le possibilità, ho potuto intuire il grande rinnovamento della musica mediante L'Arte dei Rumori. ("AR," 133)

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