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The Poet of Fire: Aleksandr Skriabin's Synaesthetic Symphony "Prometheus" and the Russian Symbolist Poetics of Light

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# KPABUHZ ASKRJABIN The Poet of Fire: Aleksandr Skriabin's Synaesthetic Symphony "Prometheus" and the Russian Symbolist Poetics of Light Polina D. Dimova Summer 2009 Polina D. Dimova is a Ph.D. candidate in the Department of Comparative Literature at the University of California, Berkeley Jean Delville, Cover Illustration for the Original Score of Aleksandr Skriabin's "Prometheus: A Poem of Fire"

LEAN DESVIUS

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Abstract: This paper discusses the synaesthetically informed metaphors of light, fire, and the Sun in Russian Symbolism and shows their scientific, technological, and cultural resonance in the novel experience of electric light in Russia. The essay studies the harmonic synaesthetics of Aleksandr Skriabin's symphony "Prometheus, A Poem of Fire"—which also includes an enigmatic musically notated part for an electric organ of lights, along with Symbolist texts concerning light and electricity and the synaesthetic poetry of fire by Skriabin's close associate Konstantin Bal'mont. The article investigates how Skriabin's Mystic sonorities and his language of colored lights square with the peculiar Symbolist engagement with scientific notions of electricity and light at the Russian fin de siècle. Thus, it demonstrates the Russian Symbolists' fascination not only with aesthetic synthesis and mystic transfiguration, but also with the sciences and technology: both with divine light and with electric light.

The Russian Symbolists inhabited a world informed by intense anticipation of the impending Apocalypse and the end of history. The all-pervasive millennial concerns of the Russian *fin-de-siècle* poets and thinkers were grounded in a long-lasting tradition of apocalyptic presentiments, blending Orthodox theology with science and social theory. The Apocalyptic quests of the Symbolists were anchored in the thought of the Russian religious philosopher Vladimir Solov'ev (1853-1900), who similarly shared the mystical-scientific aspirations of the latter half of the nineteenth century in Russia and envisioned the end of the world process. According to Solov'ev, the task of art was "the complete incarnation of spiritual fullness" in reality. As an example of the aesthetic transfiguration of matter by light, Solov'ev gives the scientifically motivated evolution of carbon from black coal into scintillating diamond. Yet, before the end of history, we can only witness incomplete aesthetic interpenetrations of matter and light, or "partial anticipations," "flashes of absolute beauty." Thus, great art "anticipates" and "prepares" the complete unity; yet, its fulfillment belongs to the future.

In joyful expectations of the complete aesthetic interpenetration of spiritual light and matter, which would complete the world process, the Russian Symbolists actively sought ways to transfigure reality. This utopian transfiguration was to be achieved through aesthetic, erotic, and religious means. The fusion of human beings and the arts in a religious act would help overcome the fragmentation of the modern world and the divisions imposed by rationalist thought. Following again Solov'ev, the Symbolists developed the concept of artistic theurgy, or divine action, and emphasized the role of the theurgical artist in the transfiguration of reality.

The Russian Symbolist artist who epitomized the mystical concerns of Russian Symbolism was Aleksandr Skriabin (1872-1915), an exceptionally gifted pianist and a composer of Wagnerian persuasions, whose style was refined with Chopinesque and French Impressionist sensibilities. Skriabin's megalomaniac conviction that he would create "The Mysterium"—the one theurgic work of art that would transfigure reality and put an end to this world—held a hypnotic sway over the Russian *fin-de-siècle* imagination. Skriabin described his "great final, cataclysmic opus as synthesizing all the arts, loading all senses in a hypnoidal, many-media extravaganza of sound, sight, smell, feel, dance, décor, orchestra, piano, singers, light, sculptures, colors, visions."iii Alternately perceived as a madman and a messiah, Skriabin began his work on the eschatological "Mysterium" in 1909, following his return to Moscow after a long sojourn in Switzerland. Having discovered his synaesthetic color-hearing, Skriabin aspired to compose music out of lights and fires, as well as poetry. iv His acquaintance with the Russian Symbolist poets Viacheslav Ivanov, erudite theoretician of Russian Symbolism and multilingual arcane poet, and Konstantin Bal'mont, a musical and lyrically intuitive poet-polyglot, opened to Skriabin the world of poetry. The three artists were closely associated in the early 1910s. vi Until 1915, the year of the composer's death, Ivanov patiently worked with Skriabin on refining his poetic technique and polishing his verses for "The Mysterium."

Skriabin, Bal'mont, and Ivanov shared a fascination with images of light, fire, and the sun. Likewise, they reveled in the artistic use of synaesthesia, the beloved Symbolist trope, which characterizes the rhetorical or physiological mixing of different sense-impressions, for instance, in the perception of sound as color. Figured synaesthetically, solar metaphors spread across the arts in Russian Symbolism and promoted interartistic exchanges. Always

conflating the visual, poetic, and musical potential of light, synaesthetic images of fire and the sun proliferate in Konstantin Bal'mont's book of poetry "Let Us Be Like the Sun," *Budem kak solntse* (1903) and Aleksandr Skriabin's symphony "Prometheus: A Poem of Fire," *Prometei: Poema ognia* (1909-1910), which prefigured "The Mysterium."

Aleksandr Skriabin began to work on his symphonic poem "Prometheus: A Poem of Fire" for orchestra, piano, mixed chorus, and a keyboard of colors and lights (*Luce*) in 1909 upon his return to Russia from Lausanne and Brussels. In Brussels, Skriabin had signed a contract with the conductor, publisher, and patron of new Russian music Sergei Kusevitskii for the next five years, the estimated time for the completion of his "Mysterium," which would fuse all the arts, as well as, allegedly, bring the end of the world. When Skriabin began composing "Prometheus," he thought he was working on "The Mysterium." In Brussels in 1908, Skriabin had befriended and mingled with theosophists, among them the linguist Emile Sigone, with whom Skriabin was devising a new synthetic language for "The Mysterium" and the painter Jean Delville, who designed the cover illustration for "Prometheus." At that time, Skriabin read voraciously the occult work of Madame Helena P. Blavatsky (1831-1891) and would draw inspiration from her Secret Doctrine until his death in 1915. Skriabin's encounters with theosophy inspired the Promethean symbolism of "The Poem of Fire," as well as the composer's preoccupation with conflating all the arts and collaborating with musicians, artists, and poets toward a mystical transfiguration.

In his interartistic aspirations, Skriabin conceived of a keyboard of lights (*Luce*), which would accompany the glimmering music for "Prometheus" and enhance visually the music's fiery imagery. He added the enigmatic musically notated part for *Luce* only in the later stages of composition<sup>ix</sup> and continued to refashion his ideas of music illumination for

the rest of his life, to which his close friend, biographer, and renowned music critic Leonid Sabaneev attests. Skriabin's detailed comments on Leonid Sabaneev's copy of the "Prometheus" score further reveal the atmosphere of the piece, giving it a verbal dimension, as well. Skriabin's comments do not simply rehash the correspondences between lights, colors, and music keys along the circle of fifths, also sketched on the score; instead, they elaborate on the intensification of light, abstract moods, and natural scenes in "Prometheus": "moon color," "flashes," and "thunderbolts"; "lunnyi" tsvet, "bleski," and "molnii." The last page of the score describes a veritable Apocalypse: "conflagration engulfs the world; a cataclysm; all in fire"; "pozhar obnimaet mir; kataklizm; vse v ogne." In this way, Skriabin's synaesthetic ideas seem to be triply articulated: first musically, then visually in the *Luce* part, and, finally, verbally.

Images of fire, light, and thunderbolts mediate among sounds, words, and visions in "Prometheus." Yet, the conflation of music, light, and words is anything but synthetic; an aesthetic synthesis would bring about the end of history and the apocalyptic transfiguration of reality. By contrast, in its interartistic impulses, "Prometheus" shows a certain penchant for transformation over time—for what I will term the synaesthetic anticipation of synthesis. Fire and light promised transfiguration in Skriabin's work but, ultimately, dwelt in the space of intense anticipation of transcendence, as all great art should, according to Solov'ev. This synaesthetic state of approximation haunted Skriabin's late work, starting with "Prometheus" (1909-1915). According to Skriabin, "Prometheus" already came close to "The Mysterium." Similarly, "The Mysterium" was later to be preceded by a preliminary opus for the final apocalyptic work of art: "The Preparatory Act," *Predvaritel noe deistvie*, which left only musical and poetic fragments behind. Both "The Preparatory Act" and "The Mysterium"

were argued to be impossible.<sup>xii</sup> All of Skriabin's late work, including "Prometheus," strove to approximate the condition of the impossible "Mysterium." Skriabin's late work created an artistic and mystical utopia, which also looked forward to a technological future in its interartistic and synaesthetic aspirations.

Aleksandr Mozer, one of Skriabin's closest friends, built a twelve-lamp light-and-color electric organ for "Prometheus," which is preserved in the Skriabin State Museum in Moscow. Mozer, a chemist by education, was a professor of electrical engineering in Moscow, attuned to incoming electrical innovations. Fascinated with Skriabin's ideas of music with lights, the scientist Mozer took it upon himself to build an instrument of colorful electrical lights that would fulfill Skriabin's dreams that "light fill up the whole space and pierce the air down to its atoms." Skriabin respected his friend Mozer and valued him as a representative of the positivist sciences, with which Skriabin tried to reconcile his mystical philosophy. Mozer's instrument of lights provided Skriabin with his only chance to experience, albeit in chamber settings, the illuminated "Poem of Fire," which he played on the piano for his close friends at home, accompanied by his wife on Mozer's electric instrument.

Mozer's keyboard of lights bridges spiritual light and artificial lighting, Skriabin's mysticism and Mozer's science. Thus, Skriabin's use of images of fire, light, and the sun invite interpretations crossing from the Russian Symbolist arts into the realm of science and technology. This way, Skriabin's "Prometheus" opens up new possibilities for understanding Symbolist interartistic light imagery, as it adopted the structure of electricity and light as turn-of-the-century scientific concepts.

This article traces the mystical-scientific discourse on electricity and the material culture of electric lighting, accessible to Skriabin and his close associates in the 1910s. It examines Symbolist poetry informed by fire and electricity along with Skriabin's electrically synaesthetic "Prometheus." I have two further goals: first, to complement the idea of Symbolist synthesis with the idea of anticipation of merger, as we see it in Solov'ev's concept of art, Skriabin's impossible, anticipatory late music, and the Symbolist figure of synaesthesia as presentiment of synthesis. Second, I challenge the common view that Symbolist images of light and apocalyptic fire were simply appropriated and transposed onto the post-revolutionary discourse on electricity in the twenties. xvii For the Russian Symbolists, electric light was never simply demonic; they did not merely glorify natural light and lament the disenchantment of the sun in urban electric lighting, as is often suggested. xviii In contrast, more than a decade before the Revolution, the Russian Symbolists were already working out ideas of electricity in mystical and scientific terms, creating a discourse that precedes that of "the little light bulbs of Il'ich," "lampochki Il'icha." The myth of fire as embodied in Skriabin's "Prometheus" was reinterpreted as symbolizing the October Revolution, and the symphonic poem was played with electric lights at the revolution's first anniversary in 1918, along with the International. The idea of electric lights fit nicely with the grand scheme of the Symbolist old world overthrown by and transfigured into a new red order where "Electrification plus Soviet power equals Communism," as Lenin would have it. After all, the Symbolists were also waiting for a transfiguration of the world. Imbued with mystical electricity, Skriabin's *Luce*-illuminated "Prometheus" provided the technological link between the Russian Symbolists and the Soviet cult of the electric bulbs.

In its simultaneously magical and everyday incarnations, electric lighting arrived in Moscow in 1883 when the square near the Cathedral of Christ the Savior was illuminated to coincide with Alexander the Third's coronation. On May 15, 1883, the bell tower of Ivan the Great was suddenly immersed in light by thousands of electric flames. Prince Konstantin Nikolaevich, an eye-witness of the event, wrote: "The electric illumination of Ivan the Great created a simply magical effect which has never before been seen - anywhere. 3,500 small Edison lamps traced all the architectural lines, both the domes and the crosses." Electric light enhanced the religious and architectural symbols of Moscow, reinforcing the new tsar's imperial power. The magic of the event fascinated Muscovites, many of whom petitioned to have electric lights installed in their homes. While the city government preferred the less expensive kerosene and gas lamps for street lighting, up until 1910 electric arc lights lit some bridges and squares. By the beginning of 1913, 440 arc lamps and 1,297 of the new filament lamps illuminated Moscow, and most of the central streets and squares had electric lighting."

Pavel Jablochkov, a Russian inventor who made a name for himself in Europe, patented the arc light in Paris in 1876. Soon, Jablochkov's incandescent lights lit the streets and public gardens of Paris and London. In Jablochkov's electric arc lights, known popularly as "Jablochkov's candles," electric current passes between two carbon rods, one negative and one positive, separated by an insulating layer of kaolin china while the carbon electrodes are heated to incandescent white light. The carbon electrodes burn, producing brilliant, intense light best suited for outdoor lighting, a location also appropriate because of the noise the arc light produced. Accounts from the nineteenth century compare arc lighting to a "mysterious new sun." The principle of the arc light also follows that of the formation of the lightning

in nature, where an electric discharge passes through the ionized air forming an electric arc, combining both light and sound (thunder or noise, in this case). Thus, electricity was intimately connected to fire and the sun at the turn of the century. Electric lighting was figured as natural and was reminiscent of the thunderbolt. As the historian of artificial lighting in the nineteenth century Wolfgang Schivelbusch maintains, "Fire is the origin of artificial light."

The immediate presence of electric light in the material culture of the turn of the century was amplified by mystical interpretations of electricity. Skriabin was keenly interested in theosophy, and Madame Helena P. Blavatsky's occult writings were often seen on his desk, ready for perusal. xxv Blavatsky's Secret Doctrine, the foundational text of theosophy, characterized as a synthesis of religion, science, and philosophy in the subtitle, often explains esoteric ideas through the prism of modern science. In an explication of a sacred verse from "The Book of Dzyan," Blavatsky interprets the following images of light and fire. "STANZA III... 9. LIGHT IS COLD FLAME, AND FLAME IS FIRE, AND THE FIRE PRODUCES HEAT, WHICH YIELDS WATER, THE WATER OF LIFE IN THE GREAT MOTHER (Chaos) (a)... All these – "Light," "Flame," "Hot," "Cold," "Fire," "Heat," "Water," and the "water of life" are all, on our plane, the progeny; or as a modern physicist would say, the correlations of ELECTRICITY. Mighty word, and a still mightier symbol! Sacred generator of a no less sacred progeny; of fire — the creator, the preserver and the destroyer; of light the essence of our divine ancestors; of flame — the Soul of things. Electricity, the ONE Life at the upper rung of Being."xxvi In her scientifically inflected interpretation of fire, Blavatsky conjoins electricity, fire, and life. The all-capitalized electricity is a mighty symbol that organizes reality.

In his positivist mysticism, the Russian philosopher Vladimir Solov'ev describes electricity as a manifestation of the material world's permeability by spiritual energy. In his essay "The Meaning of Love" (1892-1894), he claims that natural light and its related physical phenomena of electricity, magnetism, and heat in the world body (*mirovoe telo*) manifest the synthetic and spiritual power of love as all-unity (*vseedinstvo*).

Сверх силы всемирного тяготения идеальное всеединство осуществляется духовно-телесным образом в мировом теле посредством света и других сродных явлений (электричество, магнетизм, теплота), которых характер находится в таком явном контрасте со свойствами непроницаемого и косного вещества, что и материалистическая наука принуждена очевидностью признать здесь особого рода полувещественную субстанцию, которая она называет эфиром. Это есть материя невесомая, всепроницаемая и всепроницающая – одним словом, вещество невещественное. \*\*xxviii\*\*

Besides the power of universal gravity, ideal all-unity realizes itself in a bodily-spiritual way in the world body through light, as well as other related phenomena (electricity, magnetism, heat); their character contrasts so manifestly with the qualities of impermeable and inert matter that even materialist science has been compelled to admit the self-evident existence of a peculiar type of semi-material substance that science calls ether. This is weightless matter, all-permeable and all-penetrating—in other words, it is *insubstantial substance*. \*\*xxix\*\*

Solov'ev contrasts the impervious, impenetrable medium of matter with the porous, permeable mediums of ether and light. By suffusing and pervading the material world, ether, light, and electricity can penetrate and be penetrated to achieve union in the act of spiritual love. As "insubstantial substance," ether incarnates the idea of all-unity in the material world. The idea of Symbolist synthesis then appears not merely as metaphysical fusion but also as gradual interpenetration of matter and spiritual light leading to their complete scientifically motivated integration.\*\*

We can trace back the idea of the interpenetrating matter and light to Russian *fin-de-siècle* understanding of ether as a scientific concept.

The notion of ether, also called luminiferous ether, was scientifically accepted and still viable in the early twentieth century, though it has since been discredited. Interestingly, it seems to structure the Russian mystical-scientific discourse at the turn of the century, as we see in Solov'ev's ideas of interpenetration of matter and spirit (non-material substances). According to Brockhaus and Efron's authoritative Encyclopaedic Dictionary (XLI, from 1904), despite the fluctuating opinions on ether in the nineteenth century, recent theories and experiments had proved that the phenomena of light, electricity, and magnetism were in their essence various manifestations of one and the same all-penetrating medium, Ether, and that light is an electro-magnetic phenomenon. This definition unified the notions of electricity, light, and ether both in scientific and, as we will see, in Symbolist terms. The semi-material ether seemed to support religious and philosophical intuitions about the existence of ethereal, spiritual forms beyond matter.

Working within the mystical-scientific discourse, the Symbolist journal <u>Libra</u>, *Vesy* reviewed an article on electric light and radioactivity by the distinguished Russian physicist Professor Nikolai Umov. \*\*xxxii\*\* *Vesy*'s review "The Evolution of the Atom" from 1905 codifies the relation between Symbolism and Science, spiritual and electric light. \*\*xxxiii\*\* *Vesy*'s review shows how science can corroborate and illuminate the main Symbolist concerns with spirituality and transfiguration. Umov's early account of electric light and radioactive phenomena is radically decontextualized and introduced into its new literary context and into a new Symbolist idiom. The notions of light, electricity, and the electron as the building blocks of matter allow for this exchange between science and literary spirituality.

The article starts out by recounting two nineteenth-century experiments with electric light. In 1859 the German physicist Julius Plücker observed the glow of "pale violet rays"

(fluorescent glow, phosphorescence), as electric discharge passed through a vacuum glass tube. In 1879 the English physicist and chemist Sir William Crookes proposed that these cathode rays of light are currents of minute particles. He suggested that these tiny particles were the atoms of primal matter or "ether" in the scientific vocabulary of the *fin de siècle*. Crookes entitled his 1879 speech "Radiant Matter and the Fourth State," *Luchistaia materiia i chetvertoe sostoianie*, a title which must have titillated the Russian Symbolist imagination in its concern with light and transfiguration: xxxxiv

...катодные лучи суть потоки мельчайших телец,—атомов первичной материи "протила". Здесь, говорит он [Крукс]—мы достигли предела, на котором материя и сила переходят друг в друга; той таинственной грани, которая отделяет известное от неизвестого. Я думаю,—заключает он,—что на этих пределах будут разрешены величайшие научные задачи будущего". \*\*\*\*\*

...cathode rays are currents of miniscule particles—the atoms of primal matter, protyle. "Here," he [Crookes] says, "we have reached the limit at which matter and energy (power) pass into each other, that mysterious border that separates the known from the unknown." "I believe," he concludes, "that the greatest scientific problems of the future will be resolved while exploring these limits." "xxxvi"

Crookes's concern with light and the new fourth state beyond the known solid, liquid, and gaseous states emerges as strikingly Symbolist. XXXXVIII Given the Symbolists' preoccupation with light, fire, and the Sun and their aspirations to transfigure the world, science seems to reinforce the beliefs that lie at the heart of the Symbolist quest. If electrons, as these minute particles were to be called later, build up the world, are light, and fulfill the potential "by which matter and power transform into each other," then they respond to the Symbolist celebration of light and epistemological endeavors to transfigure the world through light. While the Symbolists attempt to achieve knowledge of the luminous divine world through art, that is, through irrational means, physicists rely on the scientific method to study light

and electro-magnetic processes. In this way, artistic and scientific goals converge and reinforce each other.

Reviving the long rejected Newtonian notion of protyle, or primal matter, as consisting of tiny particles (electrons), Crookes's idea was ridiculed in his time. The beginning of the twentieth century, however, confirmed his idea of the minute particles constituting the cathode rays of light by even measuring their weight, the weight of electrons. Electrons as principal carriers of electric charge were also called atoms of electricity (their subatomic nature was not clear at the time):

Hence the hypothesis arose that all material atoms, like houses made of bricks, consist of this type of particles to be named "electrons." Further, atoms of various chemical elements are to be distinguished based simply on the number of electrons that constitute them (from 700 to 160,000) and on the configuration of their movements. The enormous complexity of atomic composition is likewise evidenced by the spectrum of hot water vapors. The variety of colored spectral lines of burning hot steam shows us that luminiferous (light) ether is propelled into wave-like motion not by a single instrument but, as though, by a whole orchestra. But while in this case the particles of the heated gas set the ether into vibration, vibrating electrical charges can, too, set the ether into motion.

The electrons build up the objective world in the configurations of their motions. The synaesthetic metaphor embedded in the discussion of electrons poetically conjoins the vapor drops that set luminiferous ether into motion and the electrons that can similarly trigger ethereal vibrations. All these infinitesimal particles synaesthetically enliven dead matter. In

the metaphorical language of the review, light and the scorching fire of steam, color and music are tied together in a knot. The burning hot steam shimmers with the whole spectrum of colors and shows us that the ether consists of particles, reminiscent of the foundational electrons and figured as musical instruments. The whole gamut of colors animated by shooting photons, similar to the electrons, corresponds to the sound not of a single instrument but of all the instruments in an orchestra. Thus, a synaesthetic metaphor captures the relation among colors, instruments, light-bearing particles, and electrons. \*\*Example 1.5\*\*

We can infer from *Vesy*'s review of "The Evolution of the Atom" that the electrons as the instruments in an orchestra and their electric activity lay the foundations for this world:

Но, что такое—сами основные камни мироздания, — электроны? ... Несомненно одно, что электрон имеет интимную связь с мировым эфиром. Быть-может, электроны представляют части эфира, охваченные вихревым или коловратным движением и потому выделящияся от остальных, носящия образ индивидуальности. Быть-может, материя есть только собрание особых форм движения или состояний эфира, — род узлов в эфире, тогда вся природа была бы построенной из эфира. Так старинный дуализм материи и эфира исчезает перед светочем науки. \*1

But how is it possible—are the electrons the basic building stones of the universe? ... What is beyond doubt is that the electron has an intimate connection to the world's ether. It is possible that electrons are parts of the ether, caught up in a vortical or gyrating motion and, therefore, stand out possessing a certain individual personality. It is also possible that matter is just a collection of peculiar forms of motion or states of the ether, like knots in the ether of sorts; then all nature would be made out of ether. In this way, the age-old dualism between matter and ether vanishes in the light [lamps] of science.

Matter and ether straddle the age-old distinction between body and soul, the division between material and spiritual world, as we also saw in Solov'ev's writings. Only the light-giving, foundational electron can bring them together thanks to the conjecture that matter and solid inert objects are simply whirlwinds of electrons while ether itself is made up of

electrons.<sup>xli</sup> The material world thus becomes defined not by still matter but by motion, whereas electrons mediate between and unite ether and matter. Symptomatically, we see here again the prevalence of spiritual ether and its manifestations in light and electricity over matter. According to this Symbolist review, the material world is fundamentally ethereal or spiritual.

Finally, Umov's paper draws attention to radioactive phenomena, and the review in Vesy emphasizes both their radiant nature: "radioactive," "luchedeiatel'nye," and the transfiguring function of radioactive decay. The review stresses the ability of radioactive elements to transform during the process of radioactive decay. Chemical elements therefore "live" a life; some are short-lived while others are alive for a longer period of time. Umov conjectures that perhaps even the unchangeable materials around us may be undergoing a slow but relentless process of change and transformation. Different elements and states appear to be simply stages in the evolution of the atom. For instance, radium may well be a stage in the evolution of uranium as the most durable of the radioactive elements. In contrast, the most evanescent of stages in radioactive decay endure for a few seconds only; others appear as an alluring "emanation" in a gas-like state. Again, luminous emanation participates in the transformation of matter. Finally, the Darwinian concept of evolution seems to appeal both to scholars and artists of the *fin de siècle*, as we see in Umov's evolution of the atom and in Solov'ev's idea of the transfiguration or evolution of matter by illumination. xlii While apparently reminiscent of the decadent language of disintegration, the radioactive decay of elements curiously promises evolution, transformation, and transfiguration through light in Symbolist terms.

Fire and Electricity in Russian Symbolism

Electricity illuminates the Russian Symbolist quest in two ways. Its light-giving electrons are interspersed in matter despite its rigidity or constitute the material world; they vivify and spiritually permeate matter. This electric permeation of matter is figured as synaesthetic dispersion of light, as we saw in the Symbolist review of "The Evolution of the Atom." Additionally, electricity is the synthesis of the negative and positive poles in the arc light or the thunderbolt; it is thus a merger of contradictions. So, as a natural phenomenon, electricity moves beyond reason and gives scientific proof for intuitive knowledge and irrationality.

Zinaida Gippius's poem "Electricity," *Elektrichestvo* (1901) is the most famous Russian Symbolist celebration of electric light. It shows us how science and mysticism merge, as do the negative and positive poles of two wires:

Две нити вместе свиты, Концы обнажены. То "да" и "нет" не слиты, Не слиты — сплетены. Их темное сплетенье И тесно, и мертво, Но ждет их воскресенье, И ждут они его. Концов концы коснутся — Другие "да" и "нет" И "да" и "нет" проснутся, Сплетенные сольются, И смерть их будет — Свет. xliii

Two wires are wound together With their loose endings bare. One yes, one no—not soldered, Not melted but spliced there. And their dark interlacing Is narrow, dead, and yet They wait for resurrection And are expecting it. End will touch end—the right Yes-no this yes-no waking... Those spliced, a fusion making And their death will be—Light. xliv

Gippius's "Electricity" delineates the electrical dynamics between the positive and negative poles of two wires, linguistically represented as "yes" and "no," as they revive from death or sleep into life in their electric union. The typical Symbolist heightened "moment" of time, "mig," coincides with the flow of the electric current. The resurrection of the metal

15

threads culminates in light, and Gippius's language suggests this light is divine. The electrical resurrection of light also coincides with the end of the poem. The closure manifests itself in the final, impassive, capitalized "Light," "Svet," which is set apart from the rest of the text by a teleological dash. Thus, the end of the poem, pointing at the loaded concept of "the end," "konets" enacts an Apocalypse that features a transfiguration from death to light. I note that death in the last line of the poem is ambiguous. We know the metal wires await their resurrection and are dead throughout the poem, but we also sense that their light also brings their death: "And their death will be—Light," "I smert' ikh budet — Svet." This implies the self-annihilation in the transfiguration of the two poles, linguistic, propositional, and electrical. This union does away with their oppositional identities and is thus also death.

The propositional binary of "yes" and "no" preoccupied Konstantin Bal'mont as early as 1899 in the cycle "Yes and No," *I da i net* and possibly influenced Gippius's "Electricity" directly. Bal'mont's poetry collection "Let Us Be Like the Sun," *Budem kak Solntse* continues to play with the opposition of "yes and no" while, at the same time, the poet extols and privileges the element of fire and the Sun over water, wind, and earth. Interestingly, a critic of Bal'mont's "Let Us Be Like the Sun" directly associates Bal'mont's Sun with electricity: "'The first unhealthy current of urban influence was introduced into Russian poetry by Konstantin Balmont'... 'We shall be like the Sun!' Balmont announced. Alas, his sun proved nothing more than a vast electric lamp, hanging over an outdoor restaurant on the city outskirts." Bal'mont's poem "Bonfires," *Kostry*, associates the electric dynamic of "yes and no" with the element of fire, as its flames sing: xivi

Мы меняемся всегда. Нынче "нет", а завтра "да". Нынче я, а завтра ты. Все во имя красоты. xlvii We are always changing.

Now we are "no," tomorrow—"yes."

Now it's I, tomorrow You.

All in the name of beauty.

Bal'mont's "Bonfires" and "Hymn to Fire," Gimn ogniu establish the changeability of fire and its fluctuation between the extremes of "yes" and "no"; of active burning and passive consummation by fire: "Burn me and be burned," "Zhgi menia – i bud' sozhzhen"; of living and dead fire, which extinguishes a moment after it has been ablaze; and, finally, of intersubjective transformation of the lyric I into the lyric You. All these transformations by fire are reminiscent of Gippius's transformation by electric light. Similarly, in Bal'mont's poetry, the element of fire and the sun also bring about revelation and transformation, as the closing lines of "Hymn to Fire" intone: xlviii

Засветилась мне – смерть! (7)

Я хочу, чтобы белым немеркнущим светом I want, that with a white undarkening light, Death lights up in me!

Chiasmically resembling the ending of "Electricity," the final lines of "Hymn to Fire" enact the transfiguration of the lyric I through burning light and death. \*\*The identification between fire as the eulogized You and the lyric I becomes finalized in the momentary blazing of fire and the consummation of the lyric I where both fire and the lyric I vanish in an instant: "In a moment you'll die, but you are still living," "Cherez mig ty umresh', / no poka ty zhivesh'" (3). Bal'mont plays with the possibility of intersubjective transformation form "you" to "I" and their ultimate fusion throughout the poem where "Tv," You, prevails in the first three sections of the hymn while the emphasis gradually shifts through the middle sections of the poem: "I am the same as you," "Ia takoi zhe, kak ty" (5) until section six and seven where "Ia," the lyric I, takes over:

Огонь очистительный, Огонь роковой, Красивый, властительный. Блестящий, живой! (1)

Purifying fire, Fateful fire, Beautiful, powerful. Dazzling, living! (1) 

Ты – повсюду другой.
Ты красный и дымный В клокотаньи костра. (3)
......
Ты являешься в быстром сияньи зарниц.
Ты, застывши, горишь в грозовых облаках – Фиолетовых, аспидно-синих.
Ты средь шума громов и напева дождей Возникаешь неверностью молний... (3)
......
О, ты светишь, ты греешь, ты жжешь,
Ты живешь, ты живешь! (5)

Ты блестишь – как двенадцатицветный алмаз. (5)

Ты меняешься вечно,

You always change, You are always different. You are red and full of smoke In the rustle of flames. (3)

You appear in the quick flash of the lightning. You, stilled, burn in the stormy clouds – Violet, bluish-gray. You, in the midst of loud thunders and rain songs, Originate by the treachery of the thunderbolts. (3)

.....

O, you shine, you warm, you burn, You live, you live! (5)

.....

You glitter like a twelve-colored diamond.

Bal'mont's hymn places an anaphoric and exclamatory emphasis on fire, as we see in the recurrence of You, "Ty," and the exclamatory "O"s that are interwoven in the very word "ogon'," fire, and sound eight times in the first two line. Similarly, "ia," the lyric I, appears subliminally interspersed in the opening sections to counterbalance the hymnic You and prepare the full-fledged emergence of the I: for instance, "blestiashchii," "meniaesh'sia," "yavliaesh'sia," and "siian'i"; "shining," "changing," "manifesting," and "glow."

However, the binary model of transformation and synthesis in the image of fire and electric light—I and You, Yes and No, assertion and negation, agency and passivity—becomes unsettled by Bal'mont's persistent use of synaesthesia in "Hymn to Fire." Synaesthetic metaphors associating fire with the twelve-colored diamond, the noise of the thunder, the song of the rain, the "rustle of flames," and the red, violet, and bluish-gray colors of the lightning enhance the image of the living fire. They function differently from the lyric I's synthetic striving toward white light and union with and death by fire. Synaesthetic light and electricity in nature, as seen in the thunderbolt, exist on the plane of constant change and transformation, which is also the plane of poetic flow and the life of fire.

This is the moment before the blazing instant, "mig" elapses and the transfiguring death of the apocalyptic end ensues. In fact, synthesis and death can only bring a closure to the Symbolist text, as we saw in Gippius's and Bal'mont's poems. The Symbolist poems, however, inhabit the synaesthetic region of constant transformation and anticipation, the realm of the living fire and electricity. In this sense, the plane of the ever-changing, living, synaesthetic, intersubjective fire and the electric flow provides us with an alternative to the purely synthetic understanding of light, death, and knowledge in the Russian Symbolist practice.

Bal'mont's reading of Skriabin's "Prometheus" in his essay "Light-Sound in Nature and Skriabin's Symphony of Lights," Svetozvuk v prirode i svetovaia simfoniia Skriabina metaphorically emphasizes the importance of the synaesthetic electric current in Skriabin's "Poem of Fire," as well. Written in 1917 after the first Russian performance of Skriabin's "Prometheus" with *Luce*, the essay underscores the synaesthetic potential of "fire," in its relation to electricity and the sciences. Composed of a prose text with interspersed poems, Bal'mont's essay includes two sonnets on the synaesthetic relations in nature and music. The sonnets and Bal'mont's poem on Skriabin "Elf," El'f (1916) all use the term "tok": "flow," "current," or possibly "electric current," to describe Skriabin's music and emphasize its musical and synaesthetic connotations. In "Light—Sound in Nature," Bal'mont captures the moment of the ensuing sunrise with an electrical metaphor: "The whole world is tense strings. / Hurry. Hurry. We'll be young again. / And the current of fires struck the strings"; "Ves' mir zemnoi natianutye struny. / Skorei. Skorei. My snova budem iuny. / I tok ognei udaril po strunam." The strings of the world metaphorically transmit the electric current of fires or the fire as electric current. In this way, Bal'mont conflates electricity, fire, and music

in one synaesthetic figure of the Sun and the sunrise as visually and musically informed. Bal'mont moves his poetic gaze from the natural scene of the first sonnet to the concert hall in the second sonnet where "light-sound [also] transforms passive slumber into the yarn of the waking mind." This transformation from sleep to higher consciousness is again predicated on the electric flow of fire: "the current of streams," "tok ruch'ev"; "the run of fires," "probeg ognei." The "jubilating river" of the electric current and the musical flow intertwine in Bal'mont's notion of light—sound, and Skriabin is the one who rules over them:

И светлый Эльф, созвучностей король, Ваял из звуков тонкие камеи.

Завихрил лики в токе звуковом...

... И был певучим гром. И человеку бог был двойником. Так Скрябина я видел за роялью. liii

And the luminous Elf, king of harmonies, Shaped fine cameos out of sounds.

He whirled images in the current of sounds...

... And the thunder was singing. And man was god's double. So did I see Skriabin at the piano.

Written in 1916, a year after Skriabin's death, Bal'mont's sonnet "Elf' fuses the visual and musical aspects of his impressions of Skriabin, the performer. The sounds and thunder of his music fashion faces (images) and cameos. This electric current of sounds is also divine; it brings together God and man, nature and technology, religious and mythical past (*Bog* and *El'f*) and technological future (electricity).

Finally, the mystical and divine qualities of light and the electric current, its synaesthetic prevalence in nature and music, urge Bal'mont to inquire into the scientific realm in his essay on Skriabin. After having seen and heard the first Russian light-sound performance of "Prometheus," he discusses the modern advances in the art of musical-visual or pyrotechnical instruments that use both the color and sound of fire. Physical experiments with the chemical harmonium, the hydrogen flame, and the singing vibration of flames seem

to be just discovered by scientists, whereas poets have always known of the synaesthetics of fire, Bal'mont announces proudly.

The Electric Interpenetration of Sound and Light in Skriabin's "Prometheus"

The Russian religious philosopher Aleksei Losev (1893-1988) also draws a parallel between fire and electricity in Skriabin's synaesthetic symphony. He contends that Skriabin's "Prometheus" is not so much "a poem of fire" as it is "a poem of electricity." Losev suggests that utmost irrationality and ecstasy in "Prometheus" are interwoven with a maximum of calculating rationality and intellectualism. To underscore this immersion, Losev uses the metaphor of interpenetration, of piercing through and through: "proizvedenie... naskvoz' pronizano." Electricity here means the permeability of intuition and reason, of melody and harmony in Skriabin's symphonic poem. Still, the interpenetration of harmony and melody is not complete. In my terms, this incompleteness demarcates the territory of anticipation just before the transfiguration. Still, how does Skriabin capture the world of incomplete musical and spiritual-material interpenetration in his "Prometheus"?

My following analysis of Skriabin's "Poem of Fire: Prometheus" interprets the Promethean music through the lens of light, fire, and electricity, as we saw them conceptualized in Russian Symbolist poetry and mystical philosophy. My discussion inflects the musicological discourse about the ambiguous function and structure of the Mystic hexachord, the all-pervasive sonority that informs Skriabin's symphony. Thus, I construe the paradoxically fluctuating perception and understanding of the Mystic chord as both dissonant and changeable, and consonant and static, by using as an interpretative prism the idea of the incomplete electrical interpenetration of matter and light.

Richard Taruskin suggests that Skriabin's Mystic or Promethean chord, which pervades "The Poem of Fire," embodies the higher divine realm of *realiora*, "the more real," in the Russian Symbolist vocabulary. It thus enacts the eternal union and revelation Skriabin wanted to achieve in his music. <sup>lvi</sup> Taruskin's analysis shows how the Mystic chord abolishes both musical and mystical desire in its "wholly static and quiescent" structure, which makes ego identification with the music impossible. Poised between two static pitch collections, the whole-tone scale and the octatonic scale, the harmonically mystical "Prometheus" is now emptied of the tension of diatonic functionality of Western classical music where dominant harmony always desires to return to and find resolution in the tonic. <sup>lvii</sup> The ecstatic self transcends its boundaries, as musical desire extinguishes.

Skriabin's synthetic or Mystic chord uses two tritones. The tritone is considered the most dissonant interval, but it is also invariant and symmetric. In its inversions, that is, when flipped, the tritone remains the same. It also splits the pure and most consonant interval, the octave, precisely in half, but, in contrast, it carries demonic connotations because of its jarring and harsh dissonant sound. (See and listen to examples 1,2, and 3 on the interactive on-line music handout. Compare the experiential consonance and / or dissonance of the octave (1), the tritone (2), and the 6-34 Mystic chord tone collection and sonority (3).) The Promethean conflation of symmetry and dissonance, of consonance, as Skriabin insisted, and dissonance, as our ears may tell us, is best suited to representing spiritual interpenetration in anticipation of the merger in Skriabin's work and of divine harmony. While the Mystic chord has lost its dominant (desiring) function by becoming invariant and stable throughout, it conjures up a world of anticipation of the merger on another spiritual level. Lix

Still, apart from invariant harmonic figures and fanfare sounds of the apocalypse, apart from Skriabin's vertical and horizontal, harmonic and melodic, interpenetration of the Promethean sonorities, "The Poem of Fire" remains temporal. For one, it uses the sonata form of exposition, development, and recapitulation with a coda. It relies on nineteenth-century conventions of the tonic as a point of departure and return. Here, however, the mildly dissonant Promethean chord is treated as a consonance, as stable and tonic, but in another mystic realm.

In Skriabin's words, "Prometheus" delineates the journey of the spirit from its syncretic origins to its material condition. The spiritual and the material are embodied by the diametrically opposed and most remote tonal regions, removed by a tritone from each other. The spirit then returns triumphantly. The initial spirituality, marked by the Mystic chord on F#, informs the exposition section of the sonata form. The development section encompasses the material world, in Promethean C, while the recapitulation section returns, as it should, to the spiritual F#. In fact, "The Poem of Fire" ends with an unexpected triad on F#, not with the Mystic hexachord. In its musical drive from the beginning to the end, from the spiritual F# through C back to F# notated both in the music and, unequivocally, in the *Luce* part, from the spiritual Blue to the material Red back to the spiritual Blue, Skriabin's synaesthetic symphonic poem describes the spiritual-historical trajectory leading to the Apocalypse, to the point of unison. Yet, the end of history is never realized in "Prometheus." Its apocalyptic ambitions render it untenable. The cessation of time can happen only when music stops, in the aftermath of music. Thus, Skriabin's music synaesthetically anticipates its artistic and spiritual fulfillment in the future.

Albeit temporal, Skriabin's work looks forward to the merger by expanding the tonic triad into a hexachord, transporting it to a new mystically suffused level. 1x The Mystic chord uses six higher, ethereal partials of the harmonic series. lxi By departing from the crude fundamental sound, it seeks sound vibrations and frequencies that define tone color, or timbre. Thus, the Mystic chord captures dispersed spiritual light: "luchezarnost'," or "effulgence." In this dispersion of sound into partials or into their constitutive tone color, we see the typically Russian Symbolist synaesthetic effect. Aesthetically, sound and color coexist. This infinite dispersion pervaded Russian Symbolism with its diverse metaphors of refraction, dispersion of light, and now chords composed of partials of the overtone series. While the material fundamental sound is rejected in Skriabin's music, its six partials still await, anticipate their unison in a dematerialized, spiritual one sound, diametrically opposed to the crude fundamental. Like Bal'mont's synaesthetic fire and thunderbolts and the scintillating electrons, the Mystic chord is poised not in synthesis but in anticipation and constant motion. It is both a temporal harmony, relying on departure and return, and an invariant sonority.

The process of gradual ethereal and electric interpenetration of matter and light that would lead to a merger takes place in the harmonic overlaps that Skriabin's music performs. In fact, in his atonal analysis of "Prometheus," James Baker admits that, although "there are eighteen discernible motives" in the "Poem of Fire," they are "so closely interrelated that their labels are somewhat arbitrary." When following Skriabin's instructions on his autographed score, we notice the occasional ray of light and thunderbolt blazing at pivotal moments in the music. The opening bars of "Prometheus" introduce the Mystic chord on A sustained in the woodwinds and in the strings in tremolo to create the nebulous, chaotic

atmosphere before the creation. The main theme of the poem (the theme of Prometheus) is presented in the portentous entrance of the horns on the spiritual F# and is crowned with an apocalyptic fanfare-like flourish. Then, the darkness, "mrak" of the pre-creation and the primordial chaos is penetrated by what is commonly called "the theme of the creative will" in the trumpets in bars 21-23. Skriabin writes in the score: "chistyi sine-fiol<etovyi> luch pronizyvaet mrak," "a pure blue-violet ray of light pierces the dark," over bar 22, further punctuating the musically undifferentiated invariant mass. (See and listen to the on-line music handout, example 4.)

The jarring harsh sound of the repeated pair of root-position perfect-fourth chords results not only from the shrill, piercing timbre of the trumpets but also from the movement of the first chord down by a tritone and then, starting over, up by a tritone. The second chord is an equivalent transposition of the first by a tritone (the pitch class set of the chords is 3-9). We clearly see Skriabin's methodical work with invariance. Still, the difference between the actual pitches of the two chords is maintained: G C F and C# F# B. Despite its symmetry, the creative will is rooted in difference. The gradual interpenetration of the chords has commenced in the symmetry of their tritone transpositions (T6), but is not complete, yet.

Still, if we examine the jarring chords along with the underlying harmony in the strings, we see how the ray of light indicated by Skriabin on the score has far reaching consequences; it enacts harmonically the idea of interpenetration, as the accompanying strings hover in tremolo at the overlap, sustaining the same pitches. The two vertical pitch collections of the moving chords together with the sustained harmony form tritone transpositions of the Mystic chord, 6-34; that is, the Mystic chord appears first at transposition 0 (T0) and then, immediately, at transposition 6 (T6) —at the pitch level of D#

and A, respectively. While the chords in the trumpets urgently leap down and then up by a tritone, insisting on their difference, their Mystic basis contains four static invariant pitches at their tritone transposition, T6, the maximum possible by transposing the 6-34 pitch-class set. Thus, the harmony does not change despite its transposition; one chord is sustained in the strings while the top moves. This sameness of the harmony, along with the tritone movement in the trumpets, indicates that the partial interpenetration has happened. The Mystic chord allows for both sameness and difference in its transpositions and ethereal interpenetration.

Bracketed by the two chords leaping by a triton but rooted in their immutable Mystic basis (T0 to T6), the second trumpet call in bar 22 delineates the exalting upward movement of the creative-will theme, as a "pure blue-violet ray of light pierces the dark." At the outset, this melodic motif wavers in its triplet movement between Bb and C; it rests on C by tying two Cs together, returns to Bb, and then starts over, as the creative will gathers and gains momentum. After this initial hesitation, the motif impetuously soars upward, leaping by greater intervals in its ascent to the striving C in the first beat of measure 23: a minor third, another second, and two major thirds in succession. (Listen to example 4 on the on-line music handout; pay attention to the middle bar 22.) The melodic theme consists of a five-tone group that pervades "Prometheus": the pitch-class set 5-30. When examining Skriabin's autographed score, we notice a high correlation between the tone collection 5-30 and Skriabin's indications of rays of light and thunderbolts in the *Luce* part. The five-tone group 5-30 resembles the Mystic six-tone collection 6-34 in its conflation of the whole-tone and octatonic (tone-semitone) collections, the two invariant tone collections characteristic of "Prometheus." (Listen to example 5 on the on-line music handout.) The pitches of the Mystic chord 6-34 (0, 1, 3, 5, 7, 9) overlap in their belonging to both the whole-tone and the

octatonic scale with the exception of 0 and 5, which, respectively, belong only to the octatonic scale or the whole-tone scale. The pitch collection 5-30 (0, 1, 4, 6, 8) similarly represents an interpretation of the whole-tone and the octatonic collections. The intersection of the two invariant collections occurs in the pitches (0, 4, 6). On the other hand, 1 belongs only to the octatonic collection while 8 belongs only to the whole-tone collection. In "Prometheus," these two invariant tone collections partially overlap, awaiting their complete future unison.

After its first presentation in the trumpet call in measure 22, the theme of the creative will, featuring 5-30, appears in measures 30-32 with the triumphant entrance of the piano, marked *imperieux*: pressing, urgent, and imperious. Harkening back to the theme of the creative will in the trumpets, the upward flourish of the piano ascends again in triplets, initially lingering on the repeated A# and B#, separated by two quarter rests. Interestingly, the piano entrance respells enharmonically the trumpet call. That is, the trumpet moves from Bb to C while the piano rises from A# to B#, reduplicating the same note values in a different spelling. (The actual pitches are the same, but their spelling is different.) The sameness and difference of the two presentations of the motif of the creative will emerge both in the enharmonic respelling of the theme and in the slight variations in their rhythmic organization. Furthermore, the piano entrance brings out the underlying relationship between the invariant tone collection 6-34 and 5-30, as the piano opens the phrase with an F# in the bass. F# does not belong to the creative-will tone collection at T0 that presents itself in the piano here and in the trumpets earlier. Yet, the addition of F# in the bass grounds the motif in the Promethean tonality of F#, the Skriabinian tonic of the exposition, which starts in measure

26. The spiritual, blue-violet F# tonality surfaces as the tonic in both the bass line and the *Luce* line, as well as in Skriabin's program notes to "Prometheus."

Additionally, F# completes the pitch-set collection 5-30, by turning it into a 6-34, the tone collection of the Mystic chord. Indeed, the initial F# in the row of A#, B#, D#, E, G# belongs to both the whole-tone scale and the octatonic scale and produces the Mystic chord sonority. This reliance on the Mystic harmony in the melody of "Prometheus" further manifests itself in the accumulation of 5-30 pitches that have already sounded in the melody as underlying harmonic basis for the ascending melodic line. (See and listen to example 6 on the on-line music handout). Finally, the F# sounding and tremolos in the double basses and cellos in measures 26 through 32 define the Promethean tonality and surface as the fundamental frequency in the initial bars of the exposition. This fundamental vibration thus disperses into its Mystic high partials of the natural harmonic series of F# in the higher voices of the upper strings and the piano's 5-30 melody, the complement to F# in its construction of 6-34. The imperious, striving, urgent entrance of the piano with its gradual supplementation and accumulation of melody by and as harmony performs the interpenetration that Skriabin aims to achieve in "Prometheus." At the same time, Skriabin insists on the incompleteness of this interpenetration, as he withholds the fundamental F# from the 5-30 motif, underscores the enharmonic difference of the motif, and incompletely joins together the invariant octatonic and whole-tone pitch collections in the 5-30 creative will theme and the 6-34 Mystic sonority.

After the piano's impetuous entrance with the 5-30 theme at transposition 0 (T0), the piano arpeggiates the 5-30 line (this disguised or incomplete Mystic 6-34 motif, lacking its Mystic basis) in measures 33-34 at transposition 3 (T3) where transposition 0 (T0) and T3

share one common tone—C, the maximum possible. Thus, the two transpositions at which the creative-will motif presents itself intersect or interpenetrate at C. The overlap of Cs enacts another incomplete interpenetration between the two transpositions of 5-30 in the creative-will motif and the related arpeggiation. Furthermore, the fundamental Mystic pitch completing the 5-30 creative-will motif in T3 as 6-34 acts as a common tone between T0 and T3 (D# and Eb), enabling the transposition between T0 in F# and T3 in Eb. So, if 5-30 at T0 and T3 share only one tone, C, the complete 6-34 shares two tones, C and Eb / D#, enacting a greater interpenetration thanks to the Mystic basis of the harmony.

The creative-will theme comes back also in transposition 3 in measures 38-40. This time a thunderbolt, "molniia," sketched in the score, accompanies the transposed tumultuous piano entrance. The arpeggiation also recurs, but at transposition 0. What seems to be a motivic repetition of the two related themes emerges also as a mirroring and a return to the initial transposition: T0-T3-T3-T0. Interestingly, the thunderbolt splits symmetrically the transpositional scheme at the second piano entrance in bar 38-40, instead of announcing the piano's first imperious attack in bars 30-32. That is, the thunderbolt strikes, as the motifs and the transpositions cross over chiasmically. lxiv In this sense, the lightning bolt reveals the significance of the transpositions and transformations of the 5-30 material and of their motivic resemblance and the tonal overlap (C in the melody and the enharmonically equivalent D# and Eb in the bass). As with the ray of light that pierces the darkness in measures 21-23, where Skriabin explores the invariance potential of the pitch-class sets 3-9 and 6-34, Skriabin emphasizes the overlap and chiasmus of the 5-30 transpositions in bars 30-42. Thus, I suggest that the Mystic sameness and difference of the individualistic creative will theme enact the incomplete interpenetration of light and sound, anticipating their future

unison. In this sense, the Mystic intersection of transpositions inform the electric piercing and interpenetration of light and sound, indicated by Skriabin on the score, whereas the dispersion of light and sound not only exhibits individualistic differentiation but also awaits a union or return to sameness on another ethereal and spiritual level, diametrically opposed to that of the crude fundamental sound.

At a pivotal climatic moment in the score in bars 139 and 142, two thunderbolts blaze, as Skriabin's inscriptions dictate. (See and listen to example 7 on the on-line music handout.) With a fast quintuplet run ascending in the woodwinds in the final eighth of measure 139 and the second eighth of measure 142, the familiar 5-30 tone collection resurfaces melodically in transposition 0 (T0), paired with a lightning (molniia). The top run in the piccolo contains the same pitches we saw in bars 22 and 31-32, whereas the underlying double basses sustain an F#, which completes the Mystic chord on F#, that is, in T0. The woodwinds present the 5-30 line in simultaneous reduplication on E and A# in the clarinets, the oboes, the flutes, and, finally, the piercing piccolo at forte, the piccolo starting its mounting exultation on high A#. Earlier in the section of emotion and rapture (avec émotion et ravissement), which starts in measure 115 at rehearsal mark 7, the quintuplets gradually start punctuating the musical texture in the lower register: in the clarinets and the piano. The 5-30 quintuplet motif presents itself in various transpositions until it reaches its climactic highest pitch, performed by the piccolo in the spiritual tonality of F# against an F# Mystic hexachord in measures 139 and 142.

The expression mark "avec enthousiasme" over bar 139 describes the intensity of the illuminated culmination, recalling the etymology of 'enthusiasm' as supernatural, frenzied inspiration and possession by a god. The bedazzling sound-light climax signals revelation,

and this epiphany is harmonic and melodic, rooted in the spiritual Mystic F# tonality and featuring the Mystic hexachord. The melodic pitch arrangement of the creative-will theme is infinitely compressed in the fast quintuplets that ultimately dissolve into the awe-inspiring blur of the lightning. While the fundamental sound of F# resonates in the bases, the higher partials of its overtone series (the 5-30 tone collection in the quintuplets), defining the timbre or tone color of F#, condense, anticipating fusion, into the ethereal sound flurry of the blazing white light. The ecstatic flourishes in measures 139-142 are crowned with jubilant trills, performing similarly this blur or interpenetration of tone colors, while the section of emotion and rapture rarefies turning into a pellucid *limpide* in measure 145. The texture becomes transparent, with the vanishing of the piano and the slow composed trills and tremolos at pianissimo in the strings. The union of tone colors then leads to spiritual vanishing or nothingness. I suggest that the section of rapturous emotion in the exposition (measures 115-145) communicates the presentiment of the final climax of "Prometheus" in the coda, where, similarly, we can follow the movement from accumulation of sounds and colors to dematerialization, vanishing of the individualistic piano, and rarefaction, as the Mystic hexachord on F# unifies into a glorious F# triad. The unison in "Prometheus" is that of clustering of sounds and colors that would lead to glaring divine white light—Skriabin demands a "sun" at the end, "solntse"—and then disappearance with the closure of the piece.

After considering the melodic blurring or compression of tones into trills, tremolos, or resonating higher partials of the F# harmonic series in the fast quintuplet runs, we should take a step back to examine the harmonic preparation of the climactic moment in measures 138-142. The piano's magnificent taking up and reworking of the theme of Prometheus in measures 131-138 (*thème large majesteux*) builds up harmonically to the climax unfurling in

measures 139-142. (See and listen to example 7 on the on-line music handout). For the first time, the piano conflates its individualistic creative-will tendencies with the Promethean theme. While, in the beginning of "The Poem of Fire," the Promethean theme is harmonized with a Mystic A, static throughout the opening in measures 5-12, here the piano constantly transforms the Mystic harmonization of the theme, producing an accelerated harmonic rhythm—a chord per bar. The constantly moving, wave-like triplet pattern against an arpeggiating bass, which underlies the Promethean theme in the piano's right hand, brings out the mutability of the Mystic harmony in the piano and also in the strings. The piano's ability to transform harmonically and motivically the piece (for instance, in the measures of the supple, dynamic, glittering 5-30 theme of motion, très animé, étincelant, rehearsal mark 3+3—4: 69-86) manifests itself in the piano's sequencing of the Promethean theme starting on B in bar 131 against a Mystic D and then up a fourth to its transformation starting on E against a Mystic G. In each moving harmonization of the Promethean theme (131-134; 135-138), the piano walks along a circle of minor thirds, the four pitches of which provide the roots for the Mystic chords, as the double basses arpeggiate a diminished seventh chord, that is, the circle of minor thirds, which features two tritones a minor third apart: D-Ab (tritone interval), F-B (tritone interval) (131-134); G-Db (tritone interval), Bb-E (tritone interval) (135-138). Let us mention that there are only three circles of minor thirds that would then define three distinct Mystic tonal areas in "Prometheus." The harmonization of the four-bar Promethean theme in the piano reveals the underlying pattern of closely related Mystic tonal areas—the three circles of four closely-related Mystic tonalities: 1) D-F-Ab-B; 2) G-Bb-Db-E; and 3) C-D#-F#-G#. lxv Thus, the piano's refashioning of the Promethean theme encapsulates in a most succinct and economical way the modulatory scheme of

"Prometheus," producing a sense of harmonic condensation similar to the melodic condensation we saw in the blurring thunderbolt effect of the fast quintuplets in the woodwinds.

After the first statement of the Promethean theme in the piano, the harmony sequences down a fifth (reminiscent of the circle of fifths sequencing in tonal harmony, as can be seen in my detailing of the three circles of minor thirds above, beginning, respectively, on D, on G, and on a prepared but unrealized C). Perhaps, here Skriabin shows us the Symbolist "more real" (*realiora*), or the Mystic tonal organization behind the real: behind the nineteenth-century Western music tonal harmony that adheres to the circle of fifths. The Mystic harmonic transpositions or modulations between the closely related Mystic areas D (T8), Ab (T2), F (T11), B (T5) govern measures 131-134. In the third beat of measure 134, a quasi-Mystic passing or linear chord on Bb (T4) anticipates (as it belongs to the second circle of minor thirds) and realizes through a chromatic descent by semitone the sequencing of the Promethean theme up a fourth and the modulation to the new Mystic area of G (T1) and its related Db (T7), Bb (T4), and E (T10), defining the second circle of minor thirds in measures 135-138.

The previous sequencing of the Promethean theme attunes us to expect a presentation of the theme on high A and a modulation to the Mystic C of the third Mystic tonal area in measures 139-142, following the Mystic D in 130 and the Mystic G in 135. Seemingly preparing another sequencing down the circle of fifths, the harmony, as if by chance, arrives at or discovers the F# Mystic chord and dwells on it in an elating, jubilant climax. The modulation to the spiritual F#, the most important Mystic chord and Mystic territory in "Prometheus," soars into the third Mystic tonal area, that defined by F#-A-C-Eb. Skriabin

evokes the sense of ecstatic arrival to the spiritual Mystic F# when he breaks out of the previous sequencing of the harmonized Promethean theme by means of a defective Mystic chord, half-stepwise ascent in the right-hand inner voice of the piano (F,G->G#), and dwelling on the Mystic F# for four measures. A chord based on the whole-tone collection, what I called a defective Mystic chord, replaces the Mystic chord to harmonize the final measure of the Promethean theme in 138, as the important sustained C in the melody does not belong to the Mystic E harmony. In measure 134, we briefly flit by this whole-tone harmonization (G in the melody) just so that in the third beat of the measure we move to the linear or passing Bb Mystic chord that smoothly prepares and anticipates the modulation to the Mystic G area, as Bb Mystic belongs to the G Mystic area. In contrast, the sustained defective Mystic chord of the whole-tone harmonization in measure 138 creates a greater sense of Mystic harmonic difference because of its whole-tone sonority, as well as of its resolution to the Mystic F# in 138-139. In fact, the modulation between the whole-tone Ebased chord and the Mystic F# is achieved simply by leaving out the D in measure 138. The chord that forms in the piano and the strings is an F# 9<sup>th</sup> chord (with a diminished fifth spelt as an augmented fourth) of only five whole-tone pitches that turns into a full-fledged Mystic chord with a D# only in measure 140. Still, the tumultuous thunderbolts in the fast woodwind runs in measure 139 supply D#, the one purely octatonic tone in Mystic F# missing in the piano and the strings, thus completing the Mystic tonality.

The serendipitous and felicitous climactic moment in 138-142 provides us with an inkling of the final climax in the coda where the spiritual F# is discovered and maintained, a climax pervaded by trills, tremolos, abbreviated motifs, and a final Mystic F# hexachord condensed into an F# triad. In the finale, this dazzling and blurring compression, melodic and

harmonic condensation, and horizontal and vertical overlap and interpenetration manifest themselves as a blue-violet conflagration that intensifies in a crescendo to a blinding, blazing flame at rehearsal mark 63, bar 590, where tremolos and trills overtake "The Poem of Fire," and become the synaesthetic fire. Skriabin wrote over the *Luce* line, "Ogromnoe plamia, sine-lilovoe, ognenoe (an impressive crescendo mark) stanovitsia oslepitel'noe, pylaet"; "An enormous flame, blue-violet, fiery (an impressive crescendo mark), becomes dazzling; all is ablaze."

The idea of melodic and harmonic, horizontal and vertical interpenetration characteristic of the musical language of "Prometheus" has existed in the critical discourse on Skriabin's late symphonic work since its inception. What I offer in my analysis is a semiotic conceptualization of this interpenetration in view of the Russian fin-de-siècle cluster of notions of electricity, light, and fire that would fine-tune current critical perception of Russian Symbolist music and literature. I examine the questions: what does it mean for light and matter to interpenetrate on the way to merger; for electricity and fire to be synaestheticlly informed; for melody and harmony and sound and color to blend together on the way to a unison? I see the elaboration of harmony as melody and the accumulation of melodic tones as harmony in Skriabin's "Prometheus" not merely as a synthesis manifested in the invariance potential of the Mystic harmony but as an incomplete interpenetration of a synthesis to come, as a synaesthetic anticipation of merger. In this way, the Mystic chord epitomizes this almost fulfilled, joyfully foreseen synthesis as an interpenetration of the whole-tone and octatonic tone collection, of the dominant and tonic functions, as seen in the diametrically opposite critical interpretations of the Mystic chord's functional significance, and the static invariance and symmetry of the chord along with its mutability. The Mystic hexachord readily flows

into or modulates both to closely-related and to distant Mystic tonalities thanks to the partial tonal overlaps (shared common tones) in all Mystic chords and tonalities derived thereof.

Thus, the Mystic chord remains the same while always changing and anticipating its higher union.

Thus, "Prometheus" vacillates between mystically poised synthetic invariance and temporal progression; it anticipates the Apocalypse, in its synaesthetic interpenetration of sound and light, as scripted in the score. When pierced by light and electric lightning bolts, the harmonic groupings and melodic figures in "Prometheus" overlap while remaining different (for instance, the Mystic C chord and the Mystic F# chord share four common tones out of six). Triggered by flashes of lightning and the electric colors of Skriabin's keyboard of lights, Promethean harmony and melody enact the Solov'evian incomplete interpenetration of music and light, and capture Bal'mont's synaesthetic flow of fire and the electric current.

In conclusion, "Prometheus" straddles the invariant and the immutable while remaining in the material world of mutability. It experiments with invariance and unresolved dissonance, while it also uses a tonal bass progression and crowns the piece with a surprising F# major triad. It inhabits the Symbolist realm of incomplete interpenetration of light and matter—poetic and musical, and of anticipation halfway between mutability and invariance, between dispersion and synthetic fusion. This is the realm of synaesthetic fire and electricity.

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On Russian Modernist Apocalyptic thought as informed by Nietzsche and Solov'ev, see Avril Pyman, *A History of Russian Symbolism* (Cambridge: Cambridge UP, 1994) 226-42. On the Russian decadent views of decline and the end of history, which were to ensue any moment in the condensing of history, see Olga Matich, *Erotic Utopia: The Decadent Imagination in Russia's Fin de Siècle* (Madison: U of Wisconsin P, 2005) 9-10. On the peculiar admixture of positivism and mysticism in the Russian religious philosophy of Vladimir Solov'ev and Nikolai Fedorov and their influence on Russian Symbolism, see Irina Paperno, "Introduction" and "The Meaning of Art: Symbolist Theories," *Creating Life: The Aesthetic Utopia of Russian Symbolism*, eds. Irina Paperno and Joan Grossman (Stanford: Stanford UP, 1994) 1-23. On the transfiguration and transformation of reality not merely as mystical renewal but also as social change, see James West, <u>Russian Symbolists</u>. *A Study of Viacheslav Ivanov and of the Russian Symbolist Aesthetic* (London: Methuen, 1970) 170-80, and Paperno, op. cit. On the salvation myth, the overcoming of death, and the immortality that were to be achieved in Symbolism, see Irene Masing-Delic, *Abolishing Death: A Salvation Myth of Russian Twentieth-Century Literature* (Stanford: Stanford UP, 1992).

- <sup>ii</sup> Vladimir S. Solov'ev, "Obshchii smysl iskusstva," *Sochineniia v dvukh tomakh*, red. A. Losev, tom 2 (Moskva, "Mysl'," 1988) 398.
- Faubion Bowers, Skriabin: A Biography, Vol. II (Mineola, New York: Dover, 1996) 185.
- Wagnerian concept of *Gesamtkunstwerk*, the total artwork, in both its French and Russian Symbolist appropriations, respectively, as a synaesthetic work and as a mystical act. On Wagnerism in Europe and on Wagner's reception in Russia see Erwin Koppen, "Wagnerism as Concept and Phenomenon," *Wagner Handbook* (Cambridge, MA: Harvard UP, 1992) 342-53 and Rosamund Bartlett, *Wagner and Russia* (Cambridge: Cambridge UP, 1995) 59-217.
- <sup>v</sup> To be sure, Skriabin had previously written poetry in the early 1900s, notably, the poetic text to the chorus of "The Divine Symphony" (1900), a libretto for an unwritten opera (1900-1903), possibly also looking forward to "The Mysterium," and the poetic program accompanying Skriabin's symphonic "Poem of Ecstasy" (1906). See Aleksandr Skriabin, "Zapisi A. N. Skriabina," *Russkie Propilei*, tom 6, red. M. Gershenzon (Moskva: Izdanie M. i S. Sabashnikovykh, 1919)122-201. Still, in the 1910s, Skriabin took his poetic work much more seriously by studying versification, reading Russian Symbolist poetry, and seeking Ivanov's help when writing the verses for his apocalyptic project.
- vi Skriabin met V. Ivanov in January 1909. Ivanov presented him with *Po zvezdam*, a book of essays, including his essays on Wagner and Nietzsche. K. Bal'mont's poetic cycle "Let Us Be Like the Sun," *Budem kak solntse* was a favorite of Skriabin's, much read and marked up in pencil by the composer, even before Skriabin and Bal'mont met in 1913. See Ol'ga Tompakova, *Skriabin i poety Serebrianogo veka: Konstantin Bal'mont* (Moskva: GMS, 1995) 6.
- vii Bowers 200.
- viii Bowers 187-88, 206-07. You can see Delville's illustration for "Prometheus" on the title page of this essay. Framed by a lyre and illuminated by the sun, the image of Prometheus's face is pierced by the lyre's strings and by rays of light, bespeaking the interpenetration of matter, light, music, and poetry I will discuss in this paper. ix Even in the final draft of "Prometheus," the light organ part was appended later to the score. Galeev i Vanechkina, *Poema ognia* (Kazan': Izdatel'stvo kazan'skogo universiteta, 1981) 61-62.
- <sup>x</sup> The quotes reflect Skriabin's autographs on Leonid L. Sabaneev's score of "Prometheus," now held in The Paris National Library. I made my acquaintance with Skriabin's notes on the score at The Skriabin State Museum, Moscow. Throughout my musicological analysis of "Prometheus" later in this article, I rely on my archival work with Skriabin's pithy hand-written explanations of the score. See also O. Tompakova's article on the score. Olga Tompakova, "O vnov' naidennoi partitury "Prometeia: Poemy ognia," *Uchenye zapiski*, Vypusk 3 (Moskva: Memorial'nyi Muzei Skriabina, 1993-2005) 43-51.
- xi Leonid Sabaneev, *Vospominaniia o Skriabine* (Moskva: Muzsektor Gosizdata, 1925) 81. See also Sabaneev 65, where Skriabin imagines the choir in "Prometheus" all dressed in white to convey the sense of the coming "Mysterium."
- xii On their impossibility, see Simon Morrison, "Skryabin and the Impossible," *Journal of the American Musicological Society*, Vol. 51, N. 2 (Summer, 1998) 283-330.
- xiii See the brief biographical blurb about Mozer in Aleksandr Skriabin, *Pis'ma*, ed. Kashperov (Moscow: "Muzyka," 2003). Bowers discusses Mozer's belonging to Skriabin's most intimate circle of friends who would visit the composer every evening. Bowers 238.
- xiv Sabaneev 59. All translations from Sabaneev's *Reminiscences of Skriabin* are mine.

xv Sabaneev 52.

everyday uses of electric light in the twenties, see Julia Bekman Chadaga, "Light in Captivity: Spectacular Glass and Soviet Power in the 1920s and 1930s," *Slavic Review*, Vol. 66, N. 1 (Spring, 2007) 82-83. \*\*viii In his article on urban lighting in Russian Symbolism, Andrei Toporkov traces the Symbolist mythology of electric light as a merely negative, demonic, ghostly, and artificial double of natural light. Andrei L. Toporkov, "Iz mifologii russkogo simvolizma: Gorodskoe osveshchenie," *Blokovskii Sbornik: Uchenye Zapiski*, v. 657 (Tartu, 1985) 101-12.

xix On the early Soviet cult of the electric bulb and electric light, see Chadaga 82-105. Chadaga shows how Lenin's little lamps, "lampochki Il'icha" become a part of the cult of Lenin; he is a god and a source of light. In the literature of the twenties, the electric bulb reveals the time's poverty, arouses fear of burning and fire, or suggests the dying out of the old pre-1917 world in the burning out of the electric bulb while playing with the idea that the electric bulb actually symbolizes the new epoch. I see the mixing up of old and new world, of cold safe light and burning dangerous fire as pointing back to the Symbolist uses of sun, fire, and electricity as doubles. Of course, in its Soviet appropriation, electricity is emptied of its spiritual potential.

xx Quoted in Natalya Potapova. See Potapova's account of electric street lighting of Moscow in Natalya Potapova, "Moscow lights," *Russian Life*, Vol. 40, N. 8 (August, 1997): 28 (3), Expanded Academic ASAP. Gale. UC Berkeley. 17 Nov. 2007. Gale Document Number: A20226733.

<a href="http://find.galegroup.com/itx/infomark.do?contentSet=IAC-">http://find.galegroup.com/itx/infomark.do?contentSet=IAC-</a>

Documents&docType=IAC&type=retrieve&tabID=T003&prodId=EAIM&docId=A20226733&userGroupName=ucberkeley&version=1.0&searchType=BasicSearchForm&source=gale>.

xxi My account of the electric street lighting of Moscow follows Potapova's "Moscow Lights." In my examination of electrical light in *fin-de-siècle* Russia, I depart from Anidita Banerjee's view that electricity at the time belonged to the sphere of fiction and mass media accounts of electrical miracles rather than immediate experience. The protagonists in this article, however, were closer to a center of electric light than most people of the time in Russia, who are the majority that Banerjee considers. In Banerjee's argument, the removal of electricity from real-life experience paved the way to the formation of science fiction as a genre in Russian literature positioned between high and low, literary and extra-literary culture. See Anidita Banerjee, *The Genesis and Evolution of Science Fiction in Fin de Siècle Russia, 1880—1921*, Ph.D. Dissertation (University of California, Los Angeles, 2000) 5-6. Accessed on June 28, 2008, Dissertations & Theses at University of California Database; and Anidita Banerjee, "Electricity: Science Fiction and Modernity in Early Twentieth-Century Russia," *Science Fiction Studies*, Vol. 30 (2003) 49-71. In Potapova's historical account, Muscovites envisioned and soon experienced, especially in wealthier households, the domestication of electric light.

xxii J. Lacassagne and R. Thiers, Nouveau système d'éclairage électrique (Paris and Lyon, 1857) 25. Quoted in Wolfgang Schivelbusch, *Disenchanted Night: The Industrialization of Light in the Nineteenth Century*, trans. Angela Davis (Berkeley: UC Press, 1988) 55.

xxiii Interestingly, the Russian word for the electro-atmospheric phenomenon of the lightning bolt, *molniia*, fuses semantically the sound and light of thunder and lightning. Later on in this article, we will see both Skriabin and the Russian Symbolist poet Konstantin Bal'mont creatively use the synaesthetic *molniia* to evoke the anticipation of the approaching transfiguration of reality.

xxiv Schivelbusch 4.

xxv Sabaneev 54 and 61. Along with theosophical books, elementary textbooks on philosophy and psychology, Skriabin's rather sparse bookshelf contained popular books on physics, showing his curiosity toward science, and Russian Symbolist verse, Sabaneev 55.

xxvi Helena P. Blavatsky, *The Secret Doctrine*, Vol. 1, 82. <a href="http://www.theosociety.org/pasadena/sd/sd1-1-04.htm">http://www.theosociety.org/pasadena/sd/sd1-1-04.htm</a>. Solov'ev also perceives free theosophy in its organic synthesis of theology, philosophy, and experimental science as the only true source of holistic knowledge. Solov'ev 175 and 177-78.

xxvii Skriabin's friend Viacheslav Ivanov admired Solov'ev's work and personally knew Solov'ev. Skriabin remained distant to Solov'ev's thought because of its all-pervasive Orthodoxy. Still, he could have been familiar with Solov'ev's ideas of unity (*vseedinstvo*) in his early conversations with his close friend Prince Trubetskoi, a student and follower of Solov'ev. Later on, Skriabin looked back at Solov'ev's work and

xvi By contrast, for an alternative view on the conceptual basis for Bal'mont's and Skriabin's thought and a purely literary reading of Bal'mont's imagery of fire and the Sun as drawing on Nietzschean metaphors, see Ann M. Lane, "Bal'mont and Skriabin: The Artist as Superman," *Nietzsche in Russia*, ed. Bernice Glatzer Rosenthal (Princeton: Princeton UP, 1986) 195-218.

acknowledges his interest in Solov'ev's notion of the end of the world. On the possible influences of Solov'ev's thought on Skriabin's aesthetics, see Natal'ia Andreeva, "A.N. Skriabin i XX vek," *Uchenye zapiski*, Vypusk 5 (Moskva: Memorial'neyi Muzei Skriabina, 2005), 48-53.

xxviii Solov'ev 542. The italics is Solov'ev's.

- xxx Solov'ev's idea of syzygy, which he defines as conjunction (*sochetanie*) further exemplifies his idea of interpenetration of matter and spirit. Solov'ev 245. According to the OED, "syzygy" means the astronomical conjunction or opposition of heavenly bodies, or the biological "conjunction of two organisms without the loss of identity."
- xxxi Prof. D. Gol'dgammer, "Efir," in Brockhaus and Efron, *Entsiklopedicheskii Slovar'*, Vol. XLI, 1904, 222-23
- xxxii "The Evolution of the Atom," *Evoliutsiia atoma*, anonymous review, *Vesy*, March 1905, 83-85. Umov's speech was initially published in the annual report of Moscow University and then re-printed in *Vestnik znaniia*, N.1.
- xxxiii In *Vesy*'s statement of purpose in its first issue of 1904, the editorial board describes the journal as a critical publication focusing on the art, the sciences, and literature; the periodical calls itself a critical, scholarly (scientific), literary, and critico-bibliographic monthly journal, "nauchno-literaturnyi i kritiko-bibliograficheskii ezhemesiachnik." Usually, in each volume of *Vesy*, we encounter one review or article on astronomy, mathematics, or physics. Although the journal focuses on literature and the arts, it also discusses the sciences in their relevance to the arts. Both Konstantin Bal'mont and Viacheslav Ivanov, who were to become two of the closest artistic friends of Skriabin's in the 1910s, were on *Vesy*'s editorial board.
- xxxiv In addition to his scientific studies, Crookes was also interested in spiritualism since 1870, that is, before he formulated his views on radiant matter as the fourth state.
- "The Evolution of the Atom," Vesy, March 1905, 83.
- xxxvi All translations from the review "The Evolution of the Atom" are mine.
- xxxvii The idea of the fourth state was suggested to Crookes by Faraday, who in 1819 proposed that it was probable that a fourth radiant as-of-yet unproved state existed.
- <sup>xxxviii</sup> Ibid. 84. It is not clear whether the metaphor was first used by *Vesy*'s reviewer or whether it appeared initially in Umov's article.
- xxxix We should distinguish between photons, as the light-bearing particles causing spectral lines were later to be called, and electrons. Although related by analogy to the action of electrons, the described spectral lines observed in heated H<sub>2</sub>0 vapors result from the action of photons on hot steam. In 1905, Einstein first proposed that light was made out of discrete particles or 'light quanta,' to be called 'photons' in 1926. In this way, the predominant wave theory of light was shaken. Photons are the elementary particles carrying electromagnetic radiation (in this case, visible light) and are characterized by the wave—particle duality that describes the infinitesimal and indivisible quanta in general (and, as quantum mechanics shows, also all macroscopic objects). In this sense, physical light behaves both as a wave and as a stream of infinitesimal particles; it is both continuous (a wave) and discontinuous (made out of particles). Unlike electrons, photons have zero rest (invariable) mass and do not have an electric charge. Still, photons indeed interact with electrons to produce spectral lines, as the ones described in "The Evolution of the Atom." Spectral lines appear when photons are absorbed or emitted by a system, let's say by an atom, and change the system's energy state by affecting the energy level of an electron.
- xl "The Evolution of the Atom," Vesy, March, 1905, 85.
- xli It is worth noting that Gol'dgammer's article on Ether in Brockhaus and Efron, *Entsiklopedicheskii Slovar'*, Vol. XLI, 1904, 223, which I cited earlier, refers to the electrons as the mediating element between molecules (matter) and ether. It seems that "The Evolution of the Atom" amplifies the significance of the light-giving electrons even further, as here they constitute both matter and ether.
- xlii Solov'ev was also interested in the evolution of elements, for instance, in the transfiguration of coal into diamond. Skriabin, too, showed a theosophical interest in the evolution of the races and the spirit.
- xliii Z. N. Gippius, "Elektrichestvo," *Stikhotvorenia* (Sankt-Peterburg: Gumanitarnoe agentstvo "Akademicheskii proekt," 1999) 111.
- xliv Zinaida Gippius, "Electricity," *Modern Russian Poetry: An Anthology with Verse Translations*. Ed. and with intro. by Vladimir Markov and Merrill Sparks (London: MacGibbon and Kee Ltd., 1966) 65.

xxix The translation is mine.

- liv Aleksei Losev, "Prometei Skriabina i Viach. Ivanova," *Viacheslav Ivanov: Arkhivnye materialy i issledovaniia* (Moskva: Russkie slovari, 1999) 155. Made in 1976, Losev's pronouncement on Prometheus dates back to a fictional work from his labor camp years in the thirties. Again calling "Prometheus" a poem of electricity, Losev's character refers to an even earlier mention, which I have not been able to find.
- <sup>Iv</sup> According to James M. Baker, the Promethean tone collection (6-34) of the all-pervasive Mystic chord in Skriabin's "Poem of Fire" never appears simply as a melodic motive; rather, it only appears in the combination, that is, the interpenetration, of harmony and melody. See James M. Baker, *The Music of Alexander Scriabin* (New Haven: Yale UP, 1986) 237.
- Princeton UP, 1997) 308-59. See 340-43. The Mystic chord enacts the extinguishing of the desiring subject, which moves from tonic to dominant back to tonic. The desire for resolution has vanished, as "the sense of harmonic direction and potential closure has been weakened to the point of virtual extinction," 343. Ivii Taruskin 343-44.
- lviii The interactive on-line music handout is meant primarily for scholars in the humanities who are not musicologists. The examples appear also at the end of this article. To access and play the on-line music handout that accompanies this article, go to <a href="http://www.sibeliuseducation.com/index.php?ses=worksheets.scorch">http://www.sibeliuseducation.com/index.php?ses=worksheets.scorch</a>. Next, search for "Skriabin" to retrieve the worksheet. To listen to the handout, you will need to download the free plug-in SibeliusScorch. After downloading Scorch, click on the worksheet "Skriabin's "Prometheus": Sound and Light" to open the file. You can now play and listen to the seven examples to which I refer in this article. All examples are presented on the same handout, but you can pause, fast-forward, or rewind the worksheet to find the relevant example. A thin blue line follows the music, as it plays, and indicates visually on the score which example is being played. All examples are clearly marked by a number 1-7, and each has an accompanying text, summarizing or clarifying ideas I discuss here.
- lix The three conflicting views of the Mystic chord as an altered dominant chord desiring resolution; as a stable tonic chord to Skriabin's mind; and as an invariant sonority, defying the flow of music and changeability, inform the critical perception of "Prometheus," as well as the listener's experience of Skriabin's multifarious harmonic realm of anticipation.
- In Skriabin's discussions with Sabaneev, the composer proclaims that in his "Mysterium" he will deploy nineor even ten-tone chords as stable consonances. Sabaneev 46. The extant sketches from Skriabin's "Preparatory Act" reveal twelve-tone chords, first discovered and reported by Kelkel. Comprising the whole chromatic scale, these twelve-tone chords are composed of two French sixths with a diminished seventh chord on top. As a reminder, both the French sixth and the diminished seventh chords are made out of two tritones, respectively, a whole tone and a minor third apart. Taruskin 346-48.

xlv Quoted in Andrei Toporkov, "The devil's candle? Street lighting," *History Today*. Vol. 46, N. 11 (Nov., 1996): 34 (3). Trans. John Crowfoot, Expanded Academic ASAP. Gale. UC Berkeley. 17 Nov. 2007. Gale Documber: A18850040. Toporkov refers to B. A. Sadovskoi's criticism of Bal'mont in "Futurism i Rus" (1913). Toporkov also gives an insight into the Russian term "electric suns," which dates back to the early 1850s "when electric lighting was frequently used for night-work and celebrations. By the early twentieth century the expression was already felt to be a worn-out metaphor." The fluctuation between the Sun and electric lighting as electric sun was inevitable in the poetic and cultural experience of the Russian Symbolist generation.

generation. xlvi Symptomatically, "Moscow Fires," *Ogni Moskvy* is the name of the museum of artificial lighting in Moscow since 1980. The exhibit follows the development and continuity of the artificial lighting in Moscow from the kerosene lights to the arc lights and electric lighting.

xlvii Konstantin Bal'mont, Kostry, Liturgiia krasoty (Moskva: Folio, 2005) 165-66.

xlviii Konstantin Bal'mont, *Gimn ogniu*, *Izbrannoe* (Moskva: Khudozhestvennaia Literatura, 1980) 122-25. xlix I should note that, although "Let Us Be Like the Sun" was published as a cycle in 1903, "Hymn to Fire" was written in 1900, and, most probably, the ending of Bal'mont's poem influenced Gippius's "Electricity," 1901. L.D. Bal'mont, *Svetozvuk v prirode i svetovaia simfoniia Skriabina*. Moskva: IRIS—PRESS, 1996. Moskva: Rossiikoe Muz. Izd., 1917. Reprint. Spelling modernizations introduced.

li Bal'mont, Svetozvuk v prirode, 10.

lii Bal'mont, Svetozvuk v prirode, 10. My translation.

liii K.D. Bal'mont, *Stikhotvoreniia*, ed. Vl. Orlov (Leningrad, Leningradskoe otdelenie, 1969) 422. The translation is mine.

lxii I rely on Baker's atonal analysis for my description of the pitch-class sets in "Prometheus." Without subscribing to Allen Forte's pitch-class-set theory, I will use a few of his numerical representations of tone collections (6-34 for the Mystic chord and 5-30 for light imagery) as shorthand that will render my argument logically intelligible to non-musicologists. Musicologists can consult my music handout.

Taruskin discusses "Prometheus" as staging a conflict between the invariant whole-tone and octatonic scales, the tension between which replaces the functional progression of diatonic music. Taruskin suggests that the octatonic scale ultimately prevails in its greater non-progressive potential. Taruskin 342-44.

lxiv I use the term chiasmus in the literary and rhetorical sense of inverted parallelism of meaning, usually represented by ABBA, where the two As, while semantically related, are structurally or syntactically tied to B, as A and B cross over.

lxv See Galeev and Vanechkina for a review of the musicological literature on the Mystic chord and its varying interpretations (tonic, dominant, natural harmonic series). Galeev i Vanechkina 84-104. They also suggest that the three areas defined by the three circles of minor thirds can be viewed as closely related and that each appearance of a new Mystic chord can be considered a modulation. Galeev and Vanechkina claim to have examined the score in great detail, but, in the Russian critical tradition, they give hardly any examples except about the grand scheme of development of "Prometheus." In view of Galeev and Vanechkina's argument and our local observations, I see the chords harmonizing the Prometheus theme as enacting modulations between closely related Mystic tonal areas, whereas the harmonic transitions from the first to the second presentation of the Prometheus theme in 131-134 and 135-138 can be thought of as modulations between distant Mystic areas. lxvi See Baker on "Prometheus" as transitioning from tonality to atonality. See also his analysis of the bass progression. Baker 235-67. While Taruskin bases his analysis of the opening of "Prometheus" on the conflict between two static, non-progressive pitch collections: the whole-tone scale and the octatonic scale, a Russian favorite, much used by the Rimsky-Korsakov school, Baker affords a complete and exhaustive atonal analysis of "Prometheus." While Taruskin insists on A as the T0 tonality of Prometheus, based on a derivations of the Mystic chord in A from the Extase chord form the "Poem of Ecstasy," as well as on the striking F# major triad, representing the top three tones of the opening Promethean hexachord, Baker analyzes F# as the T0 tonality of the piece, which agrees with Skriabin's conception of the piece as moving from the spiritual, primordial F# to the material C back to F#.

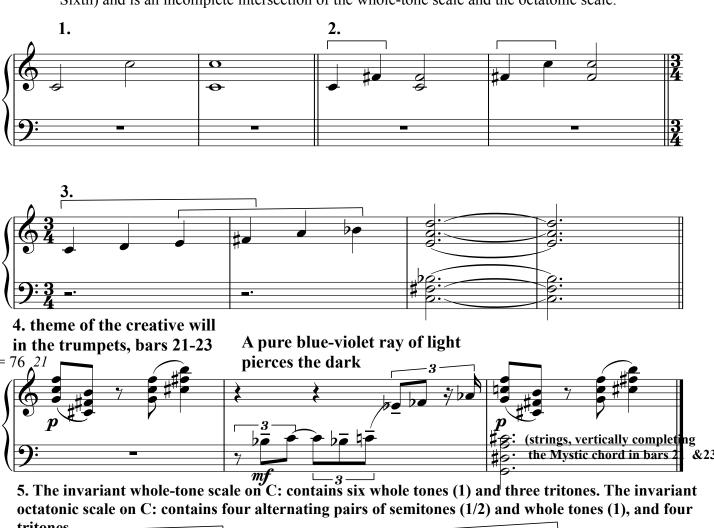
bii Boris de Schloezer, *Skriabin: Artist and Mystic*, trans. by Nicolas Slonimsky (Berkeley and Los Angeles: UC Press, 1987) 331. "The harmonic foundation of Prométhée is based on a mode of six notes: C, F-sharp, B-flat, E, A, and D. This mode represents a transposition, necessarily approximative, of the upper partials of the natural harmonic series. It is simultaneously a chord and a tone color, a timbre."

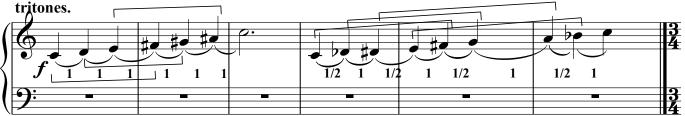
#### The Poet of Fire:

# Aleksandr Skriabin's Synaesthetic Symphony "Prometheus" and the Russian Symbolist Poetics of Light (Polina Dimova, Department of Comparative Literature, UC Berkeley)

Music Examples 1-7: Listen for the consonance and dissonance in the examples below and try experientially to determine the consonance or dissonance of A. Skriabin's Mystic chord. This handout is meant to familiarize non-musicologists with Skriabin's late-period harmony, as well as suggest ways in which light, harmonic invariance, and symmetry are interrelated in Skriabin's "Prometheus." It accompanies Dimova's essay on Skriabin.

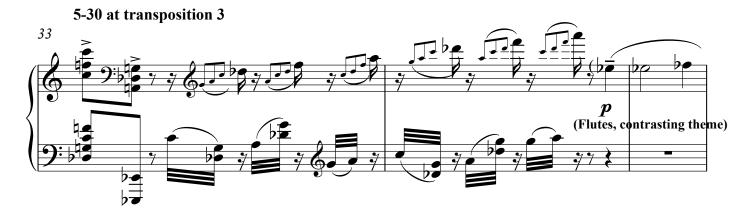
- 1. Two measures of octaves on C. The octave contains six whole tones and is consonant.
- 2. Two measures of tritones on C and on F#. The tritone, represented here by \_\_\_\_\_\_, contains three whole tones. The tritone splits the octave in two symmetrical halves and is dissonant.
- 3. Mystic chord on C, pitch collection 6-34. The Mystic chord contains two tritones (those of the French Sixth) and is an incomplete intersection of the whole-tone scale and the octatonic scale.

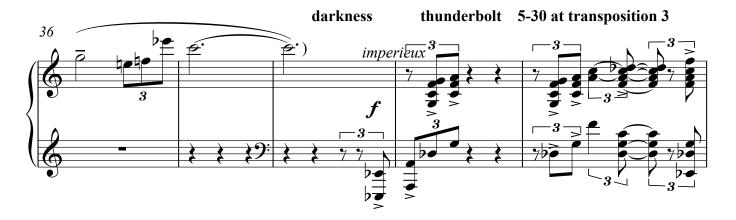


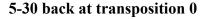


# 6. The theme of the creative will First piano entrance reminiscent 5-30 at transposition 0











6. Skriabin's use of the pitch class set 5-30 and its relation to his imagery of light and thunderbolts. Note the repetition of the theme of the creative will in bars 22 and 30 at transposition 0 (T0) and transposition 3 (T3) and its repeated arpeggiation conversely at T3 and T0. All indications of light imagery are Skriabin's.

7. Theme of Promethus in the piano against a moving harmonization. Right hand of the piano preserved as written in the score; the left hand is a block chord reduction of the piano left hand and the strings.

