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THE ENCHANTED BIOPOLITICS OF DARK COSMISM

Taylor R. Genovese

Dark cosmism. An intriguing phrase. One that may inspire images of wizards or science fiction religions. Yet, this word, "cosmism," has not been invented for the sake of this chapter. In actuality, it is a philosophical tendency that is fairly well-known in Russia. Yet, only a handful of scholars study this political theology in the West. Its "founding father," the Muscovite librarian Nikolai Fyodorov,[1] may not at first seem as if he would be important for understanding the worldbuilding projects of American reactionaries. Yet, what I hope to do in this chapter is to provide the philosophical and ideological context that shows that his cosmist ideas motivate much of our techno-capitalist present. I also wish to disclose that although the title may at first suggest it, I am not succumbing to the academic endemic of neologiphilia by suggesting that the term "dark cosmism" is a novel philosophical analytic, but rather, as I hope to make clear in this chapter, I am merely giving name—and bearing witness—to a fractal of occluded cosmist thought that has been in existence ever since Fyodorov first gave his huddled lectures in that library in Moscow. Those very lectures spun outward through time, like a web, to inspire a variety of futurist political and economic programs, including those of the contemporary American communities that seem to wield so much decision-making power over how our world is constructed: Western economic interests and techno-libertarians.

ENGINEERS OF HUMAN SOULS

Starting in the 1970s, these two broad groups began to establish partnerships that eventually ended in the construction of a constellation of (mostly) computer corporations. These micro-computing companies rapidly accumulated massive amounts of capital—mostly through governmental

defense partnerships—that, in turn, allowed Silicon Valley to become the premier site for techno-utopian visions for the next forty-plus years. However, due to the bursting of the dot-com bubble, the proliferation of gig work, intensifying natural disasters from anthropogenic climate change, and the COVID-19 pandemic, waves of political crises have begun to crash upon the valley—crises that have likewise profoundly shaken the spiritual core of the apostles of a unique brand of American cosmism.

Vladimir Lenin once wrote: "Every political crisis, whatever its outcome, is useful in that it brings to light things that have been hidden, reveals the forces operating in politics, exposes deception and self-deception, catchphrases and fictions, and affords striking demonstration of '*things as they are*,' by forcibly driving them home" (1977, 274). And indeed, these present crises have dredged some of the hidden histories of popular cosmist projects, even if they are only popular within small circles of Silicon Valley technologists. In particular, the overwhelming solution proposed by billionaire technologists—the American cosmists who have the enormous amounts of capital required to force their techno-utopian ideas into existence—has been to develop private, individualistic outer space(s) in order to retreat from human society at large. These escape strategies have varied wildly. For example, some billionaire technologists hope to construct permanent offshore dwellings outside the reach of governments (e.g., "seasteading"). Others construct luxury bunkers on large estates in New Zealand in order to survive catastrophic climate change or pandemics. Still others develop their own private outer space corporations in the hopes that they will be able to leave the entire planet behind (Rushkoff 2022).

Many of the biggest names in Silicon Valley are engaged in these escapist American cosmist projects—people such as Peter Thiel, Elon Musk, and Jeff Bezos. Thiel, for example, has backed The Seasteading Institute—an organization that can be traced back to Discordianism cofounder Kerry Thornley, who hosted discussions of the practice in his late-1960s libertarian zine, *The Innovator*.[2] Thiel has also invested in a company called Ambrosia, which began experiments very similar to Aleksandr Bogdanov's, a Russian cosmist whom I will talk about further in this chapter, in that they began testing the benefits of exchanging blood from the young to the old (Genovese 2019). However, instead of Bogdanov's "comradely exchange," they have opted to invert Bogdanov's vision by focusing on bringing capitalist ideology into the physiological, charging between eight and twelve

thousand dollars for "young blood infusions." It is rumored that Thiel is already privately undergoing regular young blood infusions, despite the US Food and Drug Administration calling for a halt on the practice, a story that has been spoofed in the HBO series *Silicon Valley*, which portrays a Thiel-like CEO who hires daily "blood boys."

Elon Musk has also visibly pursued several cosmist goals. In 2016, he founded the company Neuralink, with the ultimate goal being the transfer of human consciousness into machines, which would achieve a level of cyber-immortality. He and Jeff Bezos have also been locked in a privatized version of a space race between his SpaceX and Bezos's Blue Origin. Both billionaires claim that the goals of their space programs are to make humanity a "multi-planetary species." Yet, they have not been able to address the fact that the parts of humanity that are able to afford their proposed ticket prices are infinitesimally smaller than 1 percent of the global population—not to mention they have yet to overcome the enormously complex engineering challenges to accomplish such a feat. The farthest either of them has been able to send humans is low-Earth orbit, a task accomplished by the Soviet Union in 1961. However, it is important to note that these cosmist goals *are* being pursued—and quite seriously. Enormous amounts of capital are being sunk into these ambitions, and it is perhaps the first time since the Soviet space program that Fyodorov's dreams—no matter the interpretation—have been pragmatically pursued beyond hushed lectures in a Russian library.

Even though I will not be claiming a direct connection between Fyodorov and American capitalists, we should still resist the immediate impulse to scoff at these Americanist reactionary worldbuilding projects. That said, we should also not ignore the fact that part of the justification by techno-capitalists such as Peter Thiel and Elon Musk to build outer space(s) external to government influence is to accelerate the development of techno-immortality technologies without interference from labor and/or ethics regulation. Yet, if we reach beyond the economic pragmatics of their motivations—and stand back sufficiently so as to glimpse their internal logics—the affective ontologies of Thiel, Musk, Bezos, and their ilk is that the essence of the universe is *informational*, and the teleological, intrinsic value of that base information will always naturally organize itself into *intelligence*. Biology (human or otherwise) is merely the current platform—the background technology—of that intelligence (Farman

2012). This ontological framework is how it becomes theoretically feasible to transfer human consciousness into machines. What Thiel, Musk, and other technologists are doing is merely purposeful acceleration—or, dare I say, an undertaking of active evolution, a philosophy that will be elucidated below—of the natural processes of an enchanted universe that will always organize information into intelligence.

These contemporary groups striving for human immortality and cosmic migration do indeed seem to perceive the universe as an enchanted place—one that is not cold and meaningless but instead intentional and profound (Farman 2012). One can find enchanted logics within Elon Musk's frequent diatribes about our universe being a simulation inside an alien supercomputer (Wall 2018). When the metaphysical, discursive boundaries of what is considered "scientific" and what is considered "religious" are transgressed and restructured, these two categories begin to collapse under the weight of their own constructed cosmologies. As Barbrook and Cameron (1995) argued, the Californian Ideology is not only about libertarian capitalist logics but also deeply infused with New Age spirituality.

Particularly within the discourse of Silicon Valley, the techno-meliorist line of capitalist progress has been taken as divine gospel—innovation is good, more is always better, and the exponential power of computing cannot be stopped. But, as Gaymon Bennett (2019) has suggested, this "secularized spirituality of Big Tech" is one of "faith that admits no darkness"—all light, no shadow. Here, Bennett is referring to the Jungian interpretation of "shadows" as the unconscious aspects of the human personality—one's repressed id. This eschewing of the shadow, according to Bennett, creates a dual deficiency of moral realism: (1) it generates unrestrained power, and (2) it blocks and justifies the lack of soul-searching (or facing the shadow) as an "opportunity cost." In these times of Anthropocenic crises, at least prior to the pandemic, techno-utopian capitalists seem to subscribe to the lure that life can be all light and no shadow; to them, and to many of their users, that is, in fact, the point of computing technology. However, as Fyodorov's theology also makes clear, that denial of the shadow—that inability to tackle, reshape, and transmute the evil that is inherent in all human creation(s)—is one of the chief reasons why technologists, who are craving a connected world, feel so unfulfilled.

For example, an historical analogy to this articulation of spiritual focus is told by Soviet writer Korneli Zelinsky, who, in 1932, attended a meeting

at Maxim Gorky's house between an array of Soviet writers and Joseph Stalin. While there, Stalin expressed to the writers their purpose in this new Soviet society: "[Humankind] is being remade by life. But you also help to remake [their] soul. This is an important manufacture—human souls. *You are engineers of human souls*" (Joravsky 1989, 127; emphasis added). The subsequent effects of Stalin's dialectic between spirit and matter hardly needs to be explained. But in the present, it seems that technologists in Silicon Valley also see themselves as engineers of human souls, not only in the explicit transhumanist sense but also in the Stalinist sense—by facilitating a more "connected world." They are "remaking the soul" in a project of technological subjectivation that, according to Bennett (2019) and others, has begun to rebound due to an inadequate relationship with the generated shadows of their own creations.

(NEO-)EURASIANISM, (NEO-)REACTIONARY PHILOSOPHY, AND AMERICAN COSMISM

Eurasian philosophies have long been exchanged with the West, most prominently during the Soviet–American Exchange Program hosted by the Esalen Institute in Big Sur, California. Yet, although the "hot tub diplomacy" of Esalen swapped imaginaries of cosmic immortality, adjacent cosmist philosophies were also being discussed—in particular, a doctrine called "Eurasianism," a right-wing occult theory espousing that certain cosmic events will dictate the strengths and weaknesses of different races. One of the most prominent adherents of this school of thought is a man who has been referred to as "Putin's brain" due to his close ties to the Russian leader: Alexander Dugin. Dugin's political activities—which center on esoteric, nationalistic fascism—spread from Russia to Europe following the collapse of the Soviet Union and have most recently been fervently consumed by alt-right ideologues in the United States. However, Dugin's reactionary ideas emerged directly from philosophers connected to cosmist ideas. One of Dugin's chief ideological influences was historian and self-ascribed "Eurasianist" Lev Gumilyov, who likewise based his work upon the research of cosmists Alexander Chizhevsky and Vladimir Vernadsky, discussed below. Despite the fact that Chizhevsky and Vernadsky's ideas were developed as universal, holistic pursuits, Gumilyov and Dugin's appropriation of them were built to serve rather nationalist ends.

Gumilyov adopted Chizhevsky and Vernadsky's ideas and superimposed them over his pseudo-anthropological study of "ethnic history." As a point of departure, he took Vernadsky's insistence on the inseparability of humankind and nature in order to argue that ethnic categories emerged not from social or political institutions but rather from the environments in which they lived. Gumilyov asserted that geological environments alone shaped and molded ethnic behaviors, physical characteristics, attitudes, cosmologies, and so forth. This line of thinking led to many reductions reminiscent of Spencerian social theory, as well as typically fascist beliefs, such as Gumilyov's insistence that Jews did not constitute an ethnos because they were primarily a parasitic, international, diasporic, urban mercantile class that operated outside of nature.

He then syncretized the ideas of Vernadsky and Chizhevsky to propose that cosmic or solar emissions—which he called "passionarity" (*passionarnost'*)—created embodied micromutations within certain leaders of ethnic groups, resulting in their drive toward political domination and conquest (Bassin 2016). Unsurprisingly, Gumilyov saw Russians and other ethnic communities from the Eurasian steppe as "super-ethnos," capable of, and indeed destined to, conquer and rule those deemed to have weaker ethnos or those who possessed "subpassionarity."

These latter ideas of Gumilyov's greatly inspired Alexander Dugin's philosophy of neo-Eurasianism (*neoyevraziystvo*) and motivated his involvement in the founding of the political movement of National Bolshevism (*natsional-bol'shevizm*). His tutelage under Gumilyov led to the development of what Dugin calls his "fourth political theory," which he claims supersedes the failings of Western liberalism and democracy by centering politics not on individuals, class, or nations but instead on a kind of Heideggerian *Dasein* (Dugin 2012).[3] Dugin frames the manifestation of his philosophy as mirroring a mystical-cosmic battle between the forces of Light and those of the Antichrist (Heiser 2014). In particular, he premises this belief on the existence of the mythical, now submerged, polar continent of Hyperborea. Sharing similarities with National Socialist Aryan myths, Hyperboreans (coded as ancient Russians) were supposedly "white teachers" at the peak of human evolution. It was not until miscegenation with "more primitive and earth-bound dark-skinned peoples of the tropical south" that we began to see the emergence of the supposed inferior racial stock of the West: the "Atlanticists" (Shenfield 2001, 196–197).

Dugin's neofascist theorizations have been highly influential to a range of politicians and their advisers—from Vladimir Putin to Steve Bannon (Barbashin and Thoburn 2014; Hawk 2019). In fact, Bannon and Dugin famously met in 2018 and have since initiated many collaborations, attempting to find ways of reinvigorating fascist ideals under the guise of "traditionalism" (Teitelbaum 2021).

Duginist-cosmist affinities continue beyond the likes of Bannon if we begin to look at their ideological relationship to Western accelerationism and neo-reactionary (NRx) philosophy, particularly that of Nick Land. Land's (2012) theory of "dark enlightenment" similarly rejects Western liberalism and democracy but professes a need for capitalist acceleration to the point that corporate power becomes the only form of agentive power. Societies and nations, according to Land, should fracture into smaller communities, each governed by a tyrannical CEO who would subsequently enable the advancement of computing technologies until humans are able to merge with machines and become cybernetic *Übermenschen*. Of course, this privilege would not be extended to everyone; Land also advocates his belief that capitalist elites should have the ability to "enhance their IQs" through eugenics programs in which they would only need to associate with other elites. This viewpoint is similar to the arguments made by Tsiolkovsky, which I will discuss further below, as well as positions currently pushed by Elon Musk. It perhaps comes as no surprise that these schemes have resonated with the likes of Steve Bannon, Richard Spencer, and especially with many technologists in Silicon Valley, namely venture capitalist Peter Thiel (Goldhill 2017).

In fact, Thiel has long been in close personal contact with an associate of Land's: computer scientist and tech entrepreneur Curtis Yarvin, perhaps better known by his far-right blogging alias Mencius Moldbug. Yarvin and Land worked together closely for years, jointly developing the philosophies and concepts that eventually became *The Dark Enlightenment*. These ideas attracted the attention of Steve Bannon—who admitted to being a long-time reader of Yarvin's blog—and while he was the White House chief strategist, he "opened up a line to the White House," allowing Yarvin to bend the ears of Bannon and his aides (Johnson and Stokols 2017). Thiel, meanwhile, funded several of Yarvin's start-ups, and in return, Yarvin has been "coaching Thiel" in his and Land's political beliefs (Tait 2019, 200). This fascist triangle between Yarvin/Land, Bannon, and Thiel may explain the reason why Thiel was one of the first people appointed to President

Trump's transition team in 2016. The far-right influence of Land and Yarvin has likewise had a cascading effect within the exclusive corporatocracy of Silicon Valley. Thiel is a major funder in many of Silicon Valley's successful businesses, influencing the normative ethical and political order of its cultural and technological landscape.

In fact, as Tara Isabella Burton (2023) has shown, these connections have been decades in the making, with initial relationships being formed primarily through online rationality communities that emerged out of several blogs in the early 2000s, most prominently the site Overcoming Bias, founded by economics professor Robin Hanson and self-taught AI researcher Eliezer Yudkowsky. Yudkowsky is also known as the spiritual founder of the "effective altruism" movement, a kind of secular prosperity gospel espousing that the way to save the world is to make a lot of money and then donate it to worthy causes (usually to Global South health-care initiatives founded by their friends, which may or may not materially support the manufacture of vaccines, mosquito nets, etc.). Important connections and fallouts were made during this period. For example, Yarvin began his online persona, Mencius Moldbug, in the comments section of Yudkowsky's blog, LessWrong; Elon Musk and his now ex, Grimes, met bonding over a rationalist meme on Twitter; Peter Thiel gave Yudkowsky's Machine Intelligence Research Institute more than one million dollars in angel investing and was introduced to Yarvin through that deal; and, more recently, effective altruist megastar Sam Bankman-Fried was arrested and charged with fraud and conspiracy over his cryptocurrency exchange (Burton 2023).

An important shift was made in the 2010s, however—a shift that Burton (2023) has called the "postrationalist turn"—in which many of the formerly rationalist-obsessed minds of Silicon Valley came to the conclusion that effective altruism and individual optimization was too emotionally and spiritually taxing. It seemed that when their lives were being run with the soulless bureaucratic efficiency usually reserved for their companies, it had left them feeling hallowed out and empty. This is the crisis that Gaymon Bennett (2019) discusses in his work and the beginning of many American cosmists reaching for a more Fyodorovian solution—that is, a syncretic spiritual one. For example, there has been a sharp rise in influential pseudo-intellectual neo-Jungian charlatans such as Jordan Peterson, who point toward engagement with mysticism as a solution to postmodernist alienation. However, this swing toward the woo has also opened up

new possibilities for alliances that would have previously been unthinkable. More specifically, today we are beginning to see a diversity of relationships between alt-right fascists who are drawn to Nazi occult myths; right-libertarian survivalists and preppers; NRx philosophers such as Yarvin and Land; artificial intelligence and longevity advocates; Catholic sedevacantists; and, importantly, the traditionalist movement, for which Steve Bannon and Alexander Dugin are the most outspoken.

An alliance between a Hyperborean and an Atlanticist may at first seem to be unlikely and confusing. Yet, when one looks at the convergences of ideas between American and Russo-Soviet publics, these logics begin to make a lot of sense. Thanks, in part, to Gorbachev's policies relaxing communication restrictions between the two superpowers, right-wing Americans and right-wing Soviet citizens were able to collaborate and bond over conservative nationalism, which both groups saw as a counter-position to Soviet internationalism and a way to garner support for their shared goals. By 1990, these right-wing alliances were able to form institutions such as the American University in Moscow, the Center for Democracy, and the Krieble Institution (von Eschen 2022). Although these institutions may sound innocuous, they were/are bastions of rightist propaganda, instrumental in materially and ideologically supporting Boris Yeltsin during his reactionary coup against Gorbachev.[4]

This is not to say that all Silicon Valley technologists, reactionary Russian Fyodorovians, and alt-right political personalities are reading Alexander Dugin and Nick Land (although many definitely are!) but rather that the dialectics between Land's dystopian corporate feudalism and Dugin's nostalgic nationalist conservatism are the ether within which American cosmist techno-utopianism is steeped. As Harrison Fluss and Landon Frim (2017) have remarked, "It is an ideology torn between technophilic Futurism and neo-Orthodox Traditionalism." Both philosophies rupture the dualism between the worldly and the transcendent: Land through his "bionic horizon" and Dugin through his mythical Eurasian utopia. Both theorists attempt to cleave away from, and ultimately reject, modernity in favor of an enchanted esotericism. In places that face existential and economic crises, such as Silicon Valley and Moscow—which have been rocked by rapid infusions of capital, entrepreneurial ontologies, and neoliberal economics for at least the past thirty years—these philosophies provide reactionary techno-utopian visions for those who may be seeking alternatives to the

modernist project but still subscribe to Spencerian social theories. Yet, they did not burst forth in isolation. To understand these projects—which seem to contradict themselves, deploying visions that oscillate between utopia and dystopia—we must work genealogically into the past so as to fully analyze their techno-utopian visions in a dialectical fashion. To begin to understand what is going on in Silicon Valley today, we must first investigate what was going on in Russia in the mid-nineteenth century.

COSMIST BEGINNINGS

What is now labeled as "Russian cosmism" originated from a set of ideas that formed a political theology developed by Nikolai Fyodorovich Fyodorov (1829–1903). Fyodorov was born the illegitimate son of Prince Pavel Ivanovich Gagarin, the black sheep of one of Russia's oldest noble families, and Elizaveta Ivanova, the daughter of a minor official. As an adolescent—thanks to the interest of his princely uncle—he studied at the prestigious Richelieu Lyceum in Odessa, although he never graduated due to his insubordinate temperament. His outspoken disgust with the notions of property, individualism, and material excess led to his expulsion from the school and remained constant convictions throughout his life. Despite the fact that his communal propensities were also shared by many of the burgeoning radical social movements in Russia at the time, Fyodorov also held deeply conservative and patriarchal views.[5] It is important not to integrate Fyodorov into the same revolutionary milieus of his contemporaries, such as that of his unacknowledged second cousin, the famous anarchist Pyotr Kropotkin (Young 2012).

After just over a decade of working as a teacher in rural villages, Fyodorov joined the staff of the Rumyantsev Museum in Moscow as a librarian, where he remained for the rest of his life. It was here that he began to form the constellation of ideas that, in the 1970s, would be retroactively constructed and named "Russian cosmism" (*Russkii kosmizm*), subsequently leading to the branding of Fyodorov as the *Moskovskii Sokrat* (Moscow Socrates; Gacheva and Panfilov 2018).

Although there is some debate over whether cosmism can even be labeled a homogenous philosophical school, there remains one common thread binding all cosmist philosophies: that of active evolution (Bernstein 2019; Hagemeister 1997). Instead of living life passively, cosmism evokes a

holistic, anthropocentric, and teleologically determined effort to expand humankind's potential from a people anchored on Earth to the recognition that we are agentive cosmic citizens (Hagemeister 1997; Semenova and Gacheva 1993; Young 2012). Although this is often conflated as a humanist philosophy, philosopher Nikolai Berdyaev—an admirer of Fyodorov—argued that humanism was a uniquely European phenomenon and did not apply to the "Russian soul," which he argued often confused humanism for humanitarianism: "Humanism in the European sense of the word formed no part of the experience of Russia. There was no Renaissance among us, but we did experience, and it may be with some particular sharpness, the crisis of humanism, and its inner dialectic was disclosed" (1948, 86). This crisis of humanism, according to Berdyaev, was the contrast between the indigenous Russian concept of "humaneness" (*chelovechnost'*)—exemplified, according to Berdyaev, by the charitable values of the Orthodox Church—and the colonial ideals of European humanism (*gumanizm*), which the Russian imperial state attempted to mimic but, due to its exotic origin, was only expressed as cruelty and violence (McQuillen and Vaingurt 2018).

For Berdyaev, the concept at the heart of European humanism was rational self-interest, which expressed itself in society through the elevation and adoration of the individual. This individualism was antithetical to "Russianness." For Berdyaev, the Russian Idea, after which he also named his book, was "that individual salvation is impossible, that salvation is corporate,[6] that all are answerable for all" (1948, 200). Berdyaev then argued that the philosopher who exemplified the Russian Idea above all others was Fyodorov and, more specifically, Fyodorov's paramount project for humanity, which he christened the "common cause" (*obshchee delo*). For Fyodorov, all human beings—even dire political enemies—shared one universal, common enemy: death (Young 2012). The most important—and ultimately unifying—duty for humanity was to collectively create the technological, social, and political conditions under which it would be possible to resurrect and make immortal every human being who has ever lived (Groys 2018). Fyodorov believed that humankind's creative potential was unlimited, and therefore, he argued that his project was not a utopian fantasy. Rather, it could be imminently accomplished if humanity's intentions were turned from warfare and hatred to resurrection and universal "kinship" (*rodstvo*).

For Fyodorov, *rodstvo* is quite literally what materially binds us to everything in the universe. He professed that every particle of matter in the

cosmos may contain the dispersed "dust" of one or more of our ancestors (Young 2012). The true nature of this ancestral dust would be revealed through an embodied sonic shimmer as it was collected by related individuals. Fyodorov elucidates this point in a short essay, "Parents and Resurrectors": "The reverberation and quivering (vibration) of which molecules and the ashes of the dead are capable, and which cannot as yet be picked up by microphones since these are still a crude means of picking up sound, find a corresponding echo in the way in which particles shudder within live beings who are linked by kinship to the dead to whom these particles belonged" (Fedorov 1990, 191).

This reconciliation between spirit and matter is not strictly a Fyodorovian concept. Here, he is drawing from Orthodox Christian theology, particularly the idea that matter can be "spirit-bearing" (*dukhonosnaya*) and is capable of acquiring spiritual characteristics (Bernstein 2019). This is where the cosmic becomes foundational to Fyodorov's philosophy. Humankind must become interplanetary so we might more easily facilitate the collection of our ancestors' "soul stuff"—a necessary component for resurrection and immortality—thereby allowing us to fulfill our duty to our kin and to God. Becoming a cosmic species also necessitated ultimate filial devotion and a forsaking of one's sexual and parental desires. For a patriarchal thinker such as Fyodorov, a son's chief purpose in life must be the material resurrection of their father in a divine path back to Adam. Pursuing the common cause thus perfects a divine dialectic; it guarantees that "the relation between son and father will be perfect, for the son will be as a father to the father, and the father as a son to the son" (Chekrygin 2015, 190).

Although Berdyaev argued that humanist ideas were foreign to the Russian people, he and Fyodorov nevertheless relied on foundational tenants of humanism, such as free will and creative agency. Fyodorov and Berdyaev may have been expressing a primordial Eastern version of "immanentizing the eschaton," but cosmism has always ultimately rested on a belief that humanity creates its own fate: "[Humankind] is not merely a product of the natural world, although [they] live in it and participate in the processes of nature. [They] are dependent upon [their] natural environment and at the same time [they] humanize it and introduce a new principle into it. [Humanity's] creative activity has significance for the whole world and indicates a new stage of cosmic life. [Humankind] is a new departure in nature" (Berdyaev 1960, 46).

These kinds of ideas enticed even the Russian celebrities of Fyodorov's time. For example, they attracted the likes of Fyodor Dostoevsky, who said Fyodorov "aroused my interest more than enough. I am essentially in complete agreement with these ideas, I have accepted them, so to speak, as my own" (quoted in Berdyaev 1948, 209). It has also been insinuated that Fyodorov inspired Dostoevsky to center central cosmist ideas—such as the importance of father–son relationships and the ethics of brotherhood being the foundation of collective responsibility—in his novel *The Brothers Karamazov* (Koutaissoff 1990; Lord 1962). Leo Tolstoy also developed a personal relationship with Fyodorov, Fyodorov being one of the few people who would dare criticize Tolstoy to his face. Despite this—or perhaps because of it—Tolstoy always remained impressed by Fyodorov and his ideas, particularly the fact that he rejected all property and slept on a humpback trunk in a small, barren, one-room apartment for his entire life (Young 2012).

When Fyodorov died of pneumonia in 1903,[7] his unpublished writings were compiled by Nikolai Peterson and Vladimir Kozhevnikov—both of whom were friends and pupils of Fyodorov—and arranged into several volumes titled *The Philosophy of the Common Cause* (*Filosofiya obshchago dela*). Peterson and Kozhevnikov funded the printing of 480 copies of the manuscript to be published without copyright, stamped "Not for Sale," and distributed to libraries, select institutions, and individuals who requested copies (Young 2012). The printing and distributing of Fyodorov's work, which allowed for a broader audience to engage with his philosophies upon the eve of the 1905 Russian Revolution, has been classified by cosmism scholars as the first of three waves of Russian cosmism (Bernstein 2019; Young 2012).

EARLY SOVIET COSMISM

Throughout the revolutionary period in Russia, Fyodorov's ideas were adopted and/or appropriated by Marxist and anarchist revolutionaries. His view of science—as with his view of religion—rested on the tendency to consider every "-ology" an opportunity for an "-urgy." For Fyodorov, and indeed for many Russian intellectual traditions, it was unthinkable to engage in the epistemological *sans* praxis—that is, to ask "What is true?" without also asking "What must we do about it?" (Young 2012). This political model was highly attractive to a range of social revolutionaries and artists who were

actively engaged in overthrowing the Tsar. This infusion of cosmist ideas with political theories being developed during the early years of the Soviet experiment have been classified as the second wave of Russian cosmism.

This second-wave focus on praxis led to many medical and artistic advances within the newly established Soviet Union, exemplified by the work of Aleksandr Bogdanov. Bogdanov was an economist, cultural theorist, science fiction writer, and political revolutionary. He developed an original philosophy called "tektology" (*tektologiia*), which was a forerunner of modern systems theory and cybernetics. He was also one of the founders of the Bolshevik faction of the Russian Social Democratic Labor Party with Vladimir Lenin in 1903, although he soon fell out of favor and was expelled from the party for having numerous political disagreements with Lenin—and because his research methods were deemed to be adversarial to Soviet Marxism (Bogdanov 2022; White 2019).[8]

Bogdanov's ultimate goal was to destroy the bourgeois elements in both science and art and reconstitute them as proletarian endeavors. Building upon his theory of tektology, he argued that a proletarian science must reject specialization and jargon—these being the two pillars of bourgeois science—and every scientific endeavor needed to become generalized, simplified, and universal (Krementsov 2011). As pointed out by Nikolai Krementsov (2011), this was not a particularly revolutionary proposal. In fact, the etymology of the Russian word for "science" (*nauka*), much like the German *Wissenschaft*, means a systematic pursuit of knowledge in any and every possible area. Bogdanov was also one of the cofounders, and leading theoretician, for the proletarian culture (*Proletarskaya kultura*) movement. Known more widely by its portmanteau in Russian (*proletkult*), this organization emphasized the cosmic collective over the individual and stressed the need for an avant-garde revolutionary arts movement built by workers, for workers (Bogdanov 2022; Smith 2014).

In 1908, Bogdanov published a science fiction novel called *Red Star* in which he imagined a communist society on Mars where "mutual" (*vzaimnye*) blood exchanges between the young and the old were practiced as therapeutic rejuvenating procedures that could lead to immortality—or, as he described it, "comradely exchanges of life [that] extend beyond the ideological dimension into the physiological one" (Bogdanov 1984, 86). His novel became wildly popular after the revolution, much to Lenin's chagrin. But his ideas did not remain within the realm of his imagination;

Bogdanov began to personally experiment in blood rejuvenation research. He hoped that his experiments in blood exchange could become a revolutionary shortcut to socialism. The transmission of ideas would no longer be necessary to develop species solidarity if communists could be produced through bodily *action* rather than through intellectual inquiry into communist theory. Sergei Prozorov has succinctly described Bogdanov's intentions as resting on the fact that "the idea of communism would itself be entirely actualised in the materiality of blood transfusion" (2016, 117).

Bogdanov tested his theories largely on himself—participating eleven times in experimental blood transfusions and exchanges by the beginning of 1928—and noted that, following multiple treatments, his eyesight improved, his balding suspended, and friends commented that he looked and acted ten years younger. Following a successful blood exchange with Leonid Krasin, a high-level Bolshevik official, Bogdanov's experiments began to attract the attention of the upper ranks of the Soviet state, many of whom were suffering from an epidemic of poor health (and even sudden death) from what party doctors described as revolutionary "exhaustion and attrition" (*iznoshennost'* or *utomleniye*), which was eventually labeled "Soviet exhaustion" (Davis 2019; Joravsky 1989; Krementsov 2011; Prozorov 2016; Zalkind 1925). After hearing about early successes in curing "exhaustion" with blood rejuvenation, Joseph Stalin tasked Bogdanov with founding the Institute for Hematology and Blood Transfusions in 1926 (Krementsov 2011).

In the spring of 1928, Bogdanov decided to exchange blood with a student who was suffering from malaria and tuberculosis in an attempt to assist with their affliction. Although the student ended up making a full recovery after the transfusion, it has been suspected that Bogdanov suffered a hemolytic transfusion reaction. Two weeks later, he was dead at the age of fifty-four. With Bogdanov's death came the termination of state-sanctioned Soviet rejuvenation experimentation. This period of time also coincided with Stalin's rapid ascendency within the upper strata of the Soviet political system. His leadership initiated widespread political purges, particularly toward individuals and groups engaged in perceived "mysticism." In an additional unfortunate turn of events, many cosmist philosophers and organizations—including the biocosmists—had thrown their support behind Leon Trotsky and his Left Opposition during the post-Lenin power struggles and were viciously persecuted for their choice.

Yet, cosmist engagements did not die with Bogdanov. Aleksei Gastev, an associate of Bogdanov and member of *proletkult*, was one of the pioneering "bioengineers" in the early Soviet Union. By 1920, Gastev was focused on reconstituting Tayloresque labor methods into the socialist project by developing novel instantiations of factory-floor ergonomics (Hellebust 1997). Thanks, in part, to his long-standing close relationship with Lenin, Gastev was able to secure funds to establish a laboratory for his theories: the Central Institute of Labor. While there, Gastev used photography and movie cameras to study the motions of various human movements in an attempt to develop ergonomic solutions that would lessen worker fatigue and increase efficiency. His 1924 book, *Labor Configurations* (*Trudovye ustanovki*), was filled with diagrammatic analyses on ways of cybernetically molding the human body to achieve machine-like efficiency while hopefully still retaining dignity and fostering a desire to build socialism.

Despite drawing inspiration from Frederick Taylor's system of labor, Gastev found that attempting to fuse humans with machines in a socialist context actually required a forsaking of the central tenants of Taylorism. Taylor's principles of motivating workers to be the best among themselves was ultimately predicated on the achievement of monetary gain in the form of bonuses—a unique capitalist system of incentives—whereas Gastev saw the point of socialist labor as being based on workers viewing achievement by becoming the best possible version of themselves across the entire cybernetically connected workforce of the Soviet Union (Velminski 2017). Although this ultimately was a political and an economical undertaking, Gastev also saw it as a project of active evolution: "The whole history of humanity (*Homo sapiens*) is a history of the development of biological adaptation [*sozdaniya biopriposobleny*]. Strictly speaking, all of the latest biological doctrines (Darwinism, conditioned reflexes, rejuvenation) have either studied the spontaneity of biological adaptation (Darwinism) or they created other methods of biological adaptation (conditioned reflexes, rejuvenation, therapy, surgery)" (2011, 185).

ENCHANTED BIOPOLITICS

George M. Young has described cosmism as "occupying a unique borderland, a crossover area between science and magic" (2012, 9). These borderlands are often filled with a yearning for a re-enchanted world, which

can lead to affective ontological engagements by their adherents, particularly in how one formulates life and bodies. However, Fyodorov himself was against all forms of naturalism, which he saw as nothing but Romanticist idealism suited only to the rich and privileged who lived far from the everyday brutality of nature (Prozorov 2016). Those who experience any kind of direct contact with nature, argued Fyodorov, understand that it is a constant struggle between life and death, and so anyone who idolizes nature therefore possesses the worst quality a human can have: a death wish (Young 2012). This ultimately tracks as the fundamental logic within Fyodorov's philosophy, for if death is a natural phenomenon, then the abolition of death is a victory over nature.

Throughout *The Philosophy of the Common Cause*, Fyodorov repeatedly calls nature "our temporary enemy but permanent friend" (*priroda nam vrag vremennyy a drug vechnyy*). According to Fyodorov, because humankind is imbued with reason, we are meant to control and regulate an irrational nature, but we have yet to live up to that destiny. Once we have become nature's master, then we will have recreated paradise, and nature will become our eternal friend—although this itself is a bit of a misnomer, since within Fyodorov's taxonomy, nature would always remain both an object as well as merely a tool for human intervention (Prozorov 2016). Fyodorov's imagined ways of submitting nature to human creativity range from planetary geo-engineering projects, the ability to manipulate weather, and even controlling Earth's magnetic field so that we might literally steer the planet through the cosmos—or, as Fyodorov said, we would succeed as a species only when we finally escaped the "slavish orbiting of the sun" (Young 2012, 79). At the same time, humankind, nature, and nonhuman people are all kindred manifestations of the same living, "spirit-bearing" energy. However, Fyodorov also proposes that following the unification of humanity in the common cause, we will gain the ability to direct the energy that we call "spirit" or "soul." As Vasily Chekrygin—another follower of Fyodorov's—put it, "to study nature thus means seeking a means of stripping the power of thunder, converting it from one that destroys to one that recreates, resurrects" (2015, 184).

In the 1920s, geochemist and cosmist Vladimir Vernadsky theorized that the emergence of a unified cognition among all of humanity (a prerequisite for the common cause) would fundamentally transform the biosphere in a similar way that the biosphere fundamentally transformed the "geosphere,"

a term he used to described the previous phase of planetary development exemplified by a planet consisting of an overwhelming amount of inanimate matter (Samson and Pitt 1999; Vernadsky 1998). According to Vernadsky, when humans begin to realize we owe allegiance to our cosmos and planet over our nations and ethnicity, we will gain the ability to transmute matter and develop into autotrophic beings, with the ability to live off sunlight and air rather than cannibalizing our fellow nonhuman people (plants and animals) for energy. As he wrote in his article "The Autotrophism of Humanity": "As soon as we discover how to synthesize food directly, without the help of organic substances, the future of [humankind] will change in a fundamental way. . . . To a large degree, the future of [humankind] is always made by [humanity themselves]. The creation of a new autotrophic being will give [humanity] opportunities, absent until now, to realize [their] eternal spiritual yearnings; it will effectively open the path to a better life before [them]" (quoted in McQuillen and Vaingurt 2018, 25).

Focusing specifically on earthly interconnections, Vernadsky (1998) essentially outlined a version of the Gaia Hypothesis fifty-three years before James Lovelock released his book on the topic. Vernadsky argued that the assumed opposition between humankind and nature was intrinsically illogical and a false dichotomy. The forces of nature and humankind were fundamentally linked, which, according to Vernadsky, meant that the unique properties of human intellect were becoming a central driving force within the evolution of our entire planetary system, slowly creating a new geological era that he termed "noosphere"—the "sphere of reason."

During the same time period in the 1920s and 1930s, other scientists, such as historian and biologist Aleksandr Chizhevsky, were attempting to illustrate a fundamental link between collective human actions on Earth and events in the cosmos. Chizhevsky argued for a concept he called "heliobiology" (*geliobiologiya*). Using (selective) empirical data from historical incidents of social unrest between primarily the fifteenth and the nineteenth centuries (although he also studied ancient Chinese and Roman sources), Chizhevsky claimed that "the historical distribution of popular mass movements is determined by solar force via its impact on the human neuropsychological apparatus—by increasing excitability and sharpening the people's reflexes" (2018, 17). He asserted that the rise and fall of social movements corresponded to the natural solar cycles of the sun. He divided each of these 11.1-year "world-historical cycles" into four epochs: the

epoch of minimal excitability (lasting three years), mounting excitability (lasting two years), maximal excitability (lasting three years), and diminishing excitability (lasting three years; Chizhevsky 2018, 18).

Chizhevsky was inspired to pursue his line of cosmic reasoning after the success of the 1917 Russian Revolution (which did occur during a period of heightened solar activity). Yet, some of his most interesting conclusions came out of a demonstrated solar correlation not between revolutionary change and status quo but rather between the normalcy of who operated the ruling bourgeois government of the English parliamentary system. In fact, more than a century's worth of solar data can be nearly transposed over whether the English parliament would have a liberal or conservative government. "[Chizhevsky] shows that for a period between 1830 and 1924 the summary activity of the Sun during the rule of liberal governments was 155.6% higher than it was during the rule of conservative governments. Conservative governments never had power when the number of sunspots was over 93" (Groys 2020, 163).

Chizhevsky, and some of his students, including Nikolai Kondratiev, then began to move toward predicting future periods of not only political upheaval and apathy but also world economic cycles. Utilizing his teacher's theories of heliobiology, Kondratiev spookily predicted all economic downturns since the 1930s, including the 2009 crisis (Barnett 1998). In the sphere of global politics, Chizhevsky and Kondratiev expected there to be periods of disruptive global social movements in the years 1968, 1989, and 2010 (Groys 2020). And it is perhaps worth mentioning that in October 2024, the sun reached its solar maximum period, which Chizhevsky may have concluded as correlating with a period of political attentiveness and confrontation.

COSMIST PANSPERMIA

Despite Fyodorov's insistence that his philosophy was not utopian, thus far, the expressions of his ideas by his admirers seem to have remained purely within the realm of the imagination. However, this is not ubiquitous. The most influential interpreters of second-wave cosmism were those who brought about global material changes, and the best example of the materialist cosmists was the early rocket scientist Konstantin Tsiolkovsky. The historical record is somewhat contested on whether Tsiolkovsky had

direct contact with Fyodorov—some historians say he only read Fyodorov's writings, whereas some, such as Young (2012), claim that Tsiolkovsky was directly tutored by the Moscow librarian in the 1870s. Regardless of which narrative is to be believed, Tsiolkovsky's philosophy—and, more importantly, his scientific outputs—radically changed the world and spread a cosmist-inspired gospel well beyond the insular community of the Muscovite intelligentsia.

At the age of sixteen, Tsiolkovsky left his rural village to become a student in Moscow, for there was little that a provincial schoolhouse could provide for a boy who was both extraordinarily gifted and rendered mostly deaf from a bout of scarlet fever (Young 2012). It was during this time that Tsiolkovsky poured over books about mathematics and philosophy. After learning about the common cause from Fyodorov (either directly or indirectly), Tsiolkovsky began to piece together a cosmist philosophy as well as develop some of the earliest examples of rocket science. This latter point is where he differed from many other cosmist dreamers, for not only did he desire a world in which humanity could achieve what Fyodorov referred to as the "'patrification of the heavens' (that is, the transformation of the planets into habitable places for our resurrected fathers)" (Groys 2020, 164), but he also began to develop technical sketches and mathematical formulas in order to pragmatically pursue that goal. And, indeed, Tsiolkovsky's list of scientific accomplishments are staggering, considering that these discoveries were made prior to the actual invention of modern rocketry. As Michael Holquist recounts:

> Tsiolkovsky was the first to do most of the things necessary to make, launch, and sustain life inside rockets as we now know them. The list of his original contributions is overwhelming: he developed aerodynamic test methods for rigid air frames; he solved the problem of rocket flight in a uniform field of gravitation; he calculated the amount of fuel needed to overcome the earth's gravitational pull; he invented gyroscopic stabilization of rocket ships in space; and he discovered a method for cooling the combustion chamber with ingredients of the fuel itself (a method still widely used in most jet engines). (1987, 78).

Tsiolkovsky's discoveries remained largely ignored by the Tsarist regime, mainly due to his humble origins and his lack of concern over appearance and convention—for example, he was widely known as the "Kaluga eccentric" (*Kaluzhkii chudak*) after the small town he lived and worked in

south of Moscow (Young 2012, 145). However, he found enormous success after the revolution, for there was nothing that embodied the proletarian spirit more than a self-taught eccentric peasant who built his own wooden rocket models in a homemade laboratory. Not only were his discoveries potentially useful to a revolution that yearned for scientific and technical achievement, but he also served as "an ideal model of the new Soviet intellectual worker, a democratic rocket scientist, a genius emerged from the proletariat" (Young 2012, 150).

It wasn't just his scientific discoveries that began to disseminate around the newly formed Soviet Union but also his Fyodorovian-inspired philosophy. This included his belief, obviously taken from Fyodorov's professing of the "ancestral dust" that floats through the cosmos and must be captured in order to fulfill resurrection, of the existence of "atom spirit" (*atom-dukh*)—that is, every particle of matter throughout the universe is both alive and interconnected (Young 2012). "I am not only a materialist but also a panpsychist who acknowledges the sensitivity of the entire universe. I consider this property inalienable from matter. Everything is alive, but conventionally we regard as living only what demonstrates a sufficiently intense power of feeling. Since all material, under favorable conditions, can always go into an organic state, theoretically we can say that inorganic matter is potentially alive" (Tsiolkovsky 2018, 136).

What makes Tsiolkovsky's interpretation significant—especially considering that it became one of the more dominant cosmist narratives throughout the Soviet Union and beyond—is his explicit departure from Fyodorov regarding the necessity of *universal* immortality, resurrection, and cosmic travel. Instead, Tsiolkovsky took an exceptionally Spencerian stance on the time to come, espousing that the perfect society of the future must remain highly selective. Our cosmic garden must continue to be, as it always has been, constantly weeded; the weak must be eliminated so that the strong may flourish. "Future technologies will make it possible to overcome Earth's gravity and travel through the entire solar system. All its planets will be visited and researched. Imperfect worlds will be eliminated and replaced with our own population. . . . Billions of billions of beings will grow and evolve around the Sun near the asteroids. A variety of breeds of perfected beings will be produced. . . . When they encounter a desert or immature, ugly world, they will painlessly eliminate it, replace it with their own world" (Tsiolkovsky 2018, 144–145).

The incestual nature of cosmist thought during this time was also abundantly present.[9] Not only do we see Fyodorov's obvious influence on Tsiolkovsky, but there was also inspiration from his cosmist contemporaries, such as Vladimir Vernadsky and his theory of autotrophism: "The most dominant breed, however," Tsiolkovsky asserts, "will be the most perfect type of organism, dwelling in the ether and nourished directly by solar energy like a plant" (2018, 144). With consequences that I have already begun to expand upon in this chapter, Tsiolkovsky's colonial framework being nested inside of a monist understanding about the architecture of the universe led to a kind of gnostic supremacism that found traction in both his own time and culture as well as among the cosmist diaspora, especially as these ideas began to spread abroad.

For Tsiolkovsky, the human brain was a material entity, and being a material entity, it was merely a part of the interconnected atom-spirit lattice of the universe. Therefore, any advancement of human thought represented the natural processes of the universe, which might, for example, subsequently contribute to the construction of Vernadsky's noosphere. For Tsiolkovsky, the will of one human's thought must necessarily represent the will of the universe. As Groys has described it: "If the human brain is a part of Cosmos and transmits Cosmic energies, then human beings become Cosmic. [However,] natural selection must of course decide whose brain best expresses the will of the universe" (2020, 165).

Perhaps unsurprisingly, the manager and designer of the Soviet space program, whose early successes goaded the American government to invest in their fledgling space ambitions, was directly inspired by Tsiolkovsky. Sergei Korolev, originally an aircraft designer, is quoted as saying, "After my acquaintance with Tsiolkovsky's work . . . I started rocket development" (Harford 1997, 14). With the inseparability of Tsiolkovsky's scientific and philosophical work, it could be argued that Fyodorov's theological cosmist ambitions had tacitly smuggled their way into one of the most supreme achievements of the supposedly atheist Soviet Union. And, indeed, this unspoken and infused quality of cosmist transmission was how the ideas of Fyodorov and his admirers tended to spread, including beyond the borders of the so-called Iron Curtain.

The intertwining of religious syncretism with technological innovation is not unique to the Soviet experience. In fact, "hippie spirituality" within the broader American counterculture movement of the 1960s has been

directly traced to the birth of the personal computer industry in the Santa Clara Valley (Markoff 2005; Turner 2008). The birth of micro-computing in the United States, much like the rapid advancement of the Soviet space program, is not often thought as having a religious component, despite the abundant rhizomatic overlaps between technology and spirituality. The Bay Area's recent entrepreneurial computing industry combined elements of radical individualism, right libertarianism, techno-utopianism, and the rising tide of neoliberal economics to form what Richard Barbrook and Andy Cameron (1995) have dubbed the "Californian Ideology."

The Californian Ideology of this rising "digirati," combined with the New Age spirituality prevalent within the Bay Area, gave rise to a uniquely American brand of cosmism (Harrison 2013). However, the emergence of these ideas does not seem to be an instance of multiple discovery. Rather, they seem to be inspired by a kind of cosmist panspermia from the Soviet Union to its capitalist rival. The Californian Ideology is often said to have domestically disseminated primarily from the Esalen Institute in Big Sur, where nouveaux-riches technologists attended retreats with spiritual gurus and researchers in an attempt to seek enlightenment for themselves and their technologies. This retreat center subsequently became the center of the Human Potential Movement during the 1960s and 1970s (Kripal 2007). Most importantly, however, Esalen was the sponsor of the Soviet–American Exchange Program, which was born out of a trip to the Soviet Union in 1971 by several Esalen members, including the institute's cofounder Michael Murphy.

The timing of this exploratory trip was fortuitous, as this was about the period when cosmism was beginning to publicly resurface in the Soviet Union—what cosmism scholars have defined as the third wave of Russian cosmism (Bernstein 2019). While there, Murphy was "deeply moved" by Soviet researchers who described the work of most of the previously described cosmist thinkers. In particular, Murphy was intrigued by the ideas of Vladimir Solovyov—a direct disciple of Fyodorov—who wrote that Christianity was not so much about the immortality of the soul but instead a "resurrection of the flesh" (Kripal 2007, 320). This introduction to cosmist philosophers inspired Murphy to cosponsor a small library of Russian philosophical and theological works with Lindisfarne Press upon his return to the United States (Kripal 2007).

Murphy also found state-funded Soviet research into "hidden human reserves" to be discursively similar to the human potential research he and

his colleagues were engaged with at Esalen (Kripal 2007). Despite the fact that the Soviet rhetoric had to be crafted to align with the dominant hegemony of scientific socialism—much in the same way American research has to be crafted to align with marketability and commerce—Murphy remarked that Soviet research on "maximum performance" resembled American studies of "peak experience"; "bioplasma" and "distant bioinformation interactions" coded to American "energy fields" and "remote viewing"; "physical self-regulation" was similar to "stress management" (Kripal 2007, 331). These Soviet ideas materialized out of the reemergence of both cosmist thought and "God-Building" (*bogostroitel'stvo*)—a philosophy heavily intertwined with *proletkult* and Bogdanov—which called for people to worship not God but rather humanity's own potential to commit to active evolution (Bernstein 2019; White 2019).

By the early 1980s, Esalen had formally established the Soviet–American Exchange Program with tacit permission from the Reagan administration (Kripal 2007). Also known as "hot tub diplomacy," or "track-two diplomacy" (Davidson and Montville 1981), this program facilitated informal conversations and cultural exchanges between Soviet and American scientists, politicians, and spiritual researchers. It is perhaps most famous for the fact that it culminated in Esalen's sponsoring of Boris Yeltsin's fateful 1989 trip to the United States, which subsequently sent him on the trajectory of developing his reactionary campaign to collapse the Soviet Union from within (Kripal 2007). According to Douglas Rushkoff (2017), however, many leading American technologists and venture capitalists attended these exchange gatherings and were inspired by the cosmist philosophies introduced to them by their Soviet colleagues while soaking in the hot springs of Esalen in Big Sur.

Not only do researchers such as Kripal and Rushkoff seem convinced of the exporting of cosmist philosophy to the United States through Esalen's exchange program, but it also lines up with the material evidence of cosmism's resurgence within the Soviet Union itself. For example, in 1982, the Soviet cosmonaut Vitaly Sevastyanov convinced the Institute of Philosophy of the Academy of Sciences of the Soviet Union to publish, for the first time since the revolution, a seven-hundred-page volume of Fyodorov's selected works, which began to circulate widely among Soviet academicians (Koutaissoff 1990). The publication was eventually noticed by party officials—most notably, Mikhail Suslov, the "chief ideologue of the party"

(Medvedev 1982, 56)—and the unsold copies were taken out of circulation for being "untimely" and "misguided" (Koutaissoff 1990, 13). Despite this, Fyodorov's ideas had emerged out of the shadows of history, and they seemed to do so not only right at the peak of the Soviet–American Exchange Program but also during a time in which these cosmist ideas would be most appealing to the types of people Esalen was targeting for their program.

Although a direct, documentable transmission of cosmist ideas from the Soviet Union to the United States may prove impossible to furnish, it is demonstrable that Fyodorov's ghost found in the United States a particularly fertile haunting ground. After Esalen's exchange program, we begin to see an explosion of ideas that construct a constellation of convergences, relations, and elective affinities between cosmist theology and American techno-futurist imaginaries.

Although Stewart Brand's *The Whole Earth Catalog* had been published since 1968, its tone took a marked shift after 1972, when Brand began to belay his insistence on rugged individualism in favor of a species-wide communal approach to the future. This also included a conspicuous emphasis on human expansion into space, particularly in the 1977 and 1980 catalogs. In 1974, Gerard K. O'Neill published his influential article "The Colonization of Space," in which he argues for the immediate pursuit of permanent human migration into the cosmos by constructing enormous space stations. A year later, the L5 Society was founded to lobby for O'Neill's vision, naming themselves after one of his proposed sites for these vast cosmic habitats, the L_5 Lagrange point, a stable gravitational position between Earth and the Moon that allows spacecraft to "park" without expending energy. Also in 1974, the United States established the National Institute on Aging, an agency that perceives aging as an inherent problem to be solved (and deserving of state funding). In 1986, K. Eric Drexler published his book *Engines of Creation*, in which he not only argues for the inevitability of nanotechnology but also advocates for space travel and life extension.

One of the most striking establishments of American cosmism, however, is the techno-utopian pursuit of cryopreservation as a possible program for resurrection and immorality. In 1972, Fred and Linda Chamberlain founded the Alcor Society for Solid State Hypothermia, later changed to the Alcor Life Extension Foundation in 1977. Originally headquartered in Riverside County, California, it was eventually moved to Scottsdale, Arizona, in 1993–1994 in order to avoid risk of natural disasters (particularly

Californian earthquakes). Their concern for natural disaster was greater than the mere destruction of property. Rather, it stemmed from the fact that Alcor, at the time of this writing, stores just over two hundred cryopreserved "patients" in their facility—that is, members of the foundation that had elected to freeze themselves after medical death in the hope that science would advance and allow for their eventual resurrection in the future.

Although Alcor remains at the fringes of broader American society, it has still made a substantial cultural impact. This is primarily due to several celebrity affiliations, including a handful who are active "patients" stored in their facility. These include the Emmy Award–winning sitcom writer and producer Dick Clair, who co-created *The Facts of Life*, and the Hall of Fame baseball star Ted Williams, who elected for "neuropreservation," in which just the member's decapitated head is preserved (Kunen and Moneysmith 1989; Bradlee 2013). With more than 1,400 members signed up to be cryopreserved at the time of this writing, it is also notable that one in five reside in the San Francisco Bay Area (Guynn and Lee 2002).

Soon after establishing themselves, Alcor caught the eye of Timothy Leary, who, following his release from prison in 1976, took a rather sharp turn away from psychedelics and into American cosmism. This can be partially attributed to his reading of Gerard O'Neill while in federal prison in 1975–1976, who Leary described as being "a diamond-clear thinker and writer. A good-looking, graceful man with a good-looking cosmopolitan wife" (1982, 231). In particular, Leary was interested in O'Neill's thoughts on permanent human space habitats, which O'Neill called "mini-Earths." As Leary recounted in one of his memoirs:

> O'Neill's proposal for mini-Earths was obviously the next step in human evolution, the next ecological niche into which DNA would push. From that time I have been an active "booster" of the O'Neill project, serving as traveling advertising agent, alerting millions of young people to the next stage in the higher and faster human voyage. To be candid, I now consider those who fail to understand the liberating inevitability of space migration with the amused curiosity with which we regard members of the Flat Earth Society or, at best, the gentle Amish who serenely turn their back on technological expansion of intelligence. (Leary 1982, 231)

Instead of "turning on, tuning in, and dropping out," Leary began to advocate for what he called "SMI^{2}LE": Space Migration, Intelligence Increase, Life Extension (McCray 2016). This also began Leary's hard swerve into the

world of American right libertarianism, which seems to feature prominently in the American version of cosmist philosophy (Romain 2010). Leary was an unabashed colonialist and anti-communist who said the Russians would "*steal the whole solar system from us*, unless we're alert" and dedicated one of his books to "Christopher Columbus, genius navigator, indefatigable scientist, whose optimism, courage, interpersonal skill and sense of genetic mission produced the New Worlds in which new visions, new cultures, and new intelligence could emerge" (1982, 233).

Leary's pivot to American cosmist goals in the 1970s became a lifelong passion, and he subsequently became involved with Alcor in the 1980s, helping them open a new building in 1987 and signing up for their neuropreservation services himself in 1988 (Darwin 1988).[10] In September 1988, Leary held a fundraiser for the Libertarian Party and its presidential candidate, Ron Paul, acting as an intermediary between those in American politics and the techno-libertarians increasingly filling his social circles. The connections between these two spheres of individuals became integral components in the primordial goo that was, by the end of the 1970s, beginning to ooze silicon in the Santa Clara Valley.

Notes

1. Fyodorov has been transliterated into English in many ways, with the most common being Fedorov. I will be using Fyodorov and Fedorov interchangeably throughout this chapter.

2. For more on this connection, see Davis (2019, 195–199). *The Innovator* is also responsible for fueling the right-libertarian obsession with "survivalism," which grew out of Thornley's belief that true liberty can only be achieved outside of society and the state. The movement, which continues to flourish today, ended up becoming a right-wing reflection of the center-left libertarianism of *The Whole Earth Catalog*.

3. Dugin is part of a long philosophical tradition attempting to develop what scholars of the political right have termed the "Third Position," or what is also sometimes referred to as "red-brown alliances"—attempts at blending far-right and far-left political philosophies, which adherents claim are in opposition to, and transcend, both communism and capitalism (Ross 2017). National Bolshevism (a syncretic politics that draws from far-right ultranationalism and far-left Bolshevism) and Strasserism (an anti-capitalist tendency of the Nazi Party) are the two oldest instantiations of this phenomenon.

4. This practice of creating organizations that sound benign or dull yet serve as insurgent launching pads for right-wing propaganda and corruption continues to this day—see, e.g., the Koch-funded Center for the Study of Economic Liberty at Arizona State University in Tempe.

5. For example, following the emancipation of the serfs in 1861, Fyodorov condemned the Tsar's reforms, suggesting that "instead of freeing the serfs, the Tsar should have enserfed the free" (Young 2012, 59).

6. The word Berdyaev uses here is *kommunotarno*, which is a bit hard to translate—a direct translation cannot be expressed in English without inventing new words (it would read something like "salvation is achieved communatarily"). Ultimately, Berdyaev's argument here is that, for Russians, salvation can *only* be pursued through collective experiences with one's community.

7. Ironically, Fyodorov contracted pneumonia soon after well-meaning friends finally convinced him to wear a winter coat over the light outer rags he wore year-round and to start taking a cab to work instead of walking (Young 2012).

8. For a more comprehensive description of Bogdanov's fascinating life, see my translator's introduction in *Art and the Working Class* (Bogdanov 2022).

9. Perhaps unsurprisingly, Tsiolkovsky personally tutored a seventeen-year-old, Aleksandr Chizhevsky, and almost certainly inspired the development of his theory of heliobiology.

10. Leary eventually changed his mind entirely on the feasibility of cryopreservation. Instead, rather predictably, he opted for something more spectacular. Before dying of prostate cancer in 1996, Leary contracted with Celestis Inc. to have his ashes launched into space. On April 21, 1997, twenty-four small canisters of cremated human remains were strapped to Spain's first satellite and launched into orbit—on board were seven grams of Leary's ashes, along with the ashes of Star Trek creator Gene Roddenberry and twenty-two others (Conners 2010).

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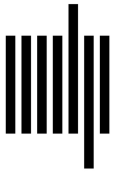

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