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Our Stardeath Drive

A space criminological imagination of Astrothanatos

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Abstract

Despite being a young, emergent field of study, space criminology has become strong at analyzing the possible risks of carrying harmful human behaviors, such as domination, exploitation, and environmental destruction, into outer space, using a prospective space criminological imagination. This article enriches that space criminological imagination by positioning humankind itself as an inherent risk to outer space. Drawing on Freudian psychoanalytic sociology, space expansion and the ambitions behind it will be space criminologically imagined as shaped by our death drive, more precisely our *stardeath* drive: our *Astrothanatos*. This fundamental, all-too-human force drives repetition, domination, and (self-)destructive behavior, which, when combined with technological capacity and interplanetary reach, could scale our destructive patterns far beyond Earth into outer space. This paper will problematize *Astrothanatos* by specifically focusing on its presence within contemporary space expansionist choices that could potentially affect (extraterrestrial) life and the cosmos across millennia. Understanding these dynamics is crucial if we want to avoid extending our destructive tendencies beyond Earth.

Keywords: Astrothanatos, space criminology, Freud, psychoanalysis, human species, astrocide

1. A bleak introduction: “Now I Am Become Death, The Destroyer Of Worlds”¹

While reading that 16 Psyche, the 16th discovered asteroid, which is most likely a massive M-type metal-rich asteroid consisting largely of iron and nickel, and estimated at \$10 quintillion (\$10,000,000,000,000,000,000), could “potentially [be] an exposed iron core from a destroyed planet” (Shattuck, 2025, p. 8), I was driven into skepticism: “Of course it’s a dead star that we, a despicable species, want to monetize on.”

The commodification and subsequent consumption of death, a second nature to humankind, once more reveals itself in our outer space expansionist drive, more precisely, our stardeath drive, or our *Astrothanatos* if it were up to a Freudian psychoanalysis. However, stardeath, literally as well as metaphorically, is not yet part of the public imagination and awe we experience when we stargaze. In fact, quite the opposite seems to be at work. We have long looked at the stars, both as practical guides and as sources of meaning-making. Historically, they provided orientation for maritime navigation and timing, while also inspiring stories, myths, and moral reflection for living a meaningful life here on Earth (Mazur & Taylor, 2023). This engagement continues today but in a transformed way: space symbolizes both the promise and challenge of exploration, reflecting our techno-optimist aspirations to extend human presence beyond Earth (Ganser-Blumenau et al., 2023; Tutton, 2021). In this sense, our attention to the cosmos is simultaneously religious, scientific, cultural, and commercial, and considered a space and place where curiosity, hope, and reflection converge.

However, by wanting to go “up there,” it has been well-established in emerging space criminological literature that the same patterns of consumption, exploitation, and conflict that have marked humankind on *this* planet, risk metastasizing off-Earth (Eski, 2023; Lampkin & McClanahan, 2024; Rothe & Collins, 2025; Takemura, 2019). Meaning, our stargazing is not only religious, scientific, cultural, and aspirational, but can also lead to unethical, harmful, criminal, and downright, intentional, astrocidal behavior (Deudney, 2020; Eski, 2025a; Eski & Ugelvik, 2025). This is where humankind’s *Astrothanatos*, vis-à-vis *our stardeath drive*, looms.

This article argues therefore that the death drive innate to the human species has defined us, our convictions, our behavior, and, essentially, our entire being, since our very first steps on this planet and it is anticipated it will keep on defining us as we step onto other planets and celestial bodies. Herein lies clearly the theoretical premise of *Thanatos*, which Freud considered to be an “instinct [that] would thus seem to express itself – though probably only in part – as an *instinct of destruction* directed against the external world and other organisms” (Freud, 1984, p. 381). The prospective theoretical premise entails that our *Thanatos* will become *Astrothanatos*; a stardeath drive that will manifest not only in our desire to inhabit pristine yet dead places in space but also in the exploitation of their resources to sustain humans to survive in space, and, prospectively, perhaps even in the preparedness to “kill”

¹ On 16 July 1945, J. Robert Oppenheimer, the principal investigator of the Manhattan Project, famously recalled the words “Now I am become Death, the destroyer of Worlds,” referencing Lord Krishna and his ancient Hindu verse from the *Bhagavad Gītā*, after having witnessed the first detonation of a nuclear device in New Mexico (Nedoh, 2020).

planets in the name of survival “for all humankind,” effectively operating against all humankind.

This argument will be made according to the following structure. First, space criminology and its emerging knowledge base will be scaled and synthesized by Freudian thought on Thanatos in order to work toward an Astrothanatos lens. Second, Thanatos will then be explored through its manifestations in the Necrocene, or, indeed, Thanatocene (Clark, 2020), during which the human species has suffered from a thanatogenic condition during its entire existence on Earth. Third, we will gaze upon the cosmos to bring the Astrothanatos lens into focus, extending the space criminological imagination and its diagnosis of the contemporary space expansionist mentality as astrothanatogenic, residing most clearly within astrocide (Deudney, 2020; Eski, 2025a), and more specifically within astrocidal intent (Eski & Ugelvik, 2025). It is there where our stardeath drive is hiding in its most embryotic stage and from where it can metastasize into something cancerous on and between the stars. Finally, the article will conclude on how to consider our stardeath drive in relation to its counterpart, a starlife drive: Astro-Eros.

2. Of stranger things: a psychosociological space criminology

While space criminology struggles for recognition as a serious undertaking within criminology (see the editorial to this special issue; Lampkin & White, 2023; Rothe & Collins, 2023), the space sciences and industry often reject the very notion of “space crime” because it seemingly functions as antithetical to the (politics of) optimism and hope that drive the space sector (Eski, 2023, pp. 71–98). Arguably, space criminology appears to be “strange” to several audiences. It is, however, this “strangeness” that resonates with the psychosociologically informed space criminological imagination here that embraces the uncanny, or, as Freud referred to, *Das Unheimliche* (2021), which is the eerie sensation arising when the familiar becomes unsettling or estranged. This allows us to expose hidden, repressed impulses. In this sense, the stranger things of space criminology aim to make the reader feel Unheimlich, and, as such, this article turns the label of “strangeness” into a strength (Becker, 1963) and generative, as has been done recently regarding the prospective criminalization of astrocide (Eski & Ugelvik, 2025). Because, whereas labelling of groups can be problematic, failing to label atrocious behavior can also be problematic, especially when it concerns intent, and more specifically the nucleus of such intent: an inherent human drive. By embracing and amplifying space criminology’s “strangeness,” this article thus pushes the conceptual boundaries further by asking controversial questions grounded in an even “stranger” space criminological imagination.

But how? By trying to understand space expansionist behavior and mentality psychoanalytically, more specifically through a psychosociology. The space criminological imagination that builds on Mills’ (2000) and Young’s (2011) insights, is extended here based on an analysis of harm and deviance beyond the Earthly sphere into the cosmos by retrospectively considering humanity’s exploitative impact on Earth (Eski, 2023; Lam et al., 2025; van Uhm, 2018). It does so while prospectively finetuning the space criminological imagination to anticipate the replication and amplification of those harms off-planet, this time by using psychosociological theory. In doing so, the analytical foundation of the space criminological imagination here entails its understanding of the relationship between humanity, its survival, and violence (Clarke, 2006; Freud, 1984; Golding, 1982; Walsh, 1984),

particularly its survival as zealously, often unconsciously, *driven by* and *driving* systemic violence (Craig, 2005; Dawson, 2001; Walsh, 1992; Zizek, 2008).

In that sense, we seem to act like an agentic virus. Microbiological research observes that viral entities are not conventionally considered “alive” but could be, as they exhibit highly effective adaptive and survival behaviors, even without consciousness or intentionality (Damasio, 2021; Doceul et al., 2010; Shapiro, 2021; Yolles & Frieden, 2022). By analogy, space expansion often produces systemic, adaptive, and proliferative effects that resemble quasi-viral spread across environments, however; that does not mean space expansionism is unconscious in any literal sense. On the contrary, corporate actors, billionaires, and state actors pursue capital accumulation, technological dominance, and geopolitical leverage with clear strategic intent (Eski, 2025a; Rothe & Collins, 2025b). The point here is not to absolve them, but to suggest that even these conscious pursuits may be structured by a deeper compulsion toward expansion and domination that exceeds individual rationalizations. In that sense, profit, survival, and destiny become narratives through which a more fundamental drive expresses itself; a species-level drive operating with agentic force that could, if technologically enabled, spread across cosmic scales. In this sense, neoliberal capitalism does not replace a species-level death drive; it operationalizes it. *Astrothanatos* then works through conscious actors, not instead of them.

Arguably, space expansionism consists of instrumental exploitation, and rational choice theory could explain such calculated off-Earth capitalist risk-taking (e.g., Eski, 2025b). However, neither explains poised enough why the human species repeatedly pursued and pursues development that undermines ecological and social conditions that are necessary for its own long-term survival (Eski, 2023). Meaning, such persistent catastrophic repetition, ranging from climate collapse to militarized escalation, implies there is a compulsion at work that goes beyond utility. It is something that operates beyond strategic gain; an instinct, a feeling, a force that brings us together, as a species: a *drive*.

Considered from such a perspective, space itself, as well as our projection onto it, confronts us with aspects of the human species that are usually concealed, specifically our *destructive* drives, our repetition compulsion, and our quasi-viral expansion. We do not feel fully at home on Earth, even as it carries us; yet we are compelled to expand. It is something uncanny, something *Unheimlich*, to realize we are a species-level, virally destructive force of nature, in possession of drives both familiar and disquieting. This is where Freud’s proposition of a death drive (*Thanatos*)² serves as one of the main theoretical underpinnings for the space criminological imagination here, as it explains recurring forms of personal aggression, self-

² It is worth noting that Freud’s concept of *Thanatos* was influenced by Sabina Spielrein’s 1912 paper *Destruction as the Cause of Coming Into Being* (Spielrein, 1994[1912]), in which she argued that the drive toward destruction is paradoxically necessary for creation and emergence, by which she focuses on the embedded duality of life and death: within the life-affirming impulse lies potential disruption. This is a tension that resonates with the dynamics of space expansion. Here, in other words, *Astrothanatos* and its expression in cosmic behaviors seem to reflect this interplay, where life-seeking projects contain their (latent/intended) destructive potential.

sabotage, and compulsive harm that cannot be accounted for by a biological imperative to survive in space or by rational choice/capitalist logics alone.

Concisely, for Freud, the human psyche contains a fundamental tendency toward *Entwicklung rückwärts*, translated from German: a “development backwards” toward stasis, or primitiveness, or even to lifelessness or the inorganic (Freud, 1984). Thanatos therefore conceptualizes the drive toward dissolution that can manifest itself socioculturally as domination, destruction, and recurrent cycles of organized (lawful) violence. Yet, Thanatos should be analyzed *in tandem* and *tension with* its opposite, which is, as Freud theorized, *Eros*; the life drive that is responsible for binding relations, procreation, and social cohesion. According to Freud then, civilization emerges from dealing with this antagonism, meaning, aggression is repressed yet simultaneously mobilized for collective projects, including industrialization, territorial expansion, and militarization.

That means that destruction can be a productive force as well, embedded in structures of economic and political infrastructures where exploitation, environmental degradation, and mass extinction are enabled by normative conceptions of progress and development that presuppose the expendability of non-human life (Mbembe, 2020; Moore, 2016). Violence is then not a deviation from human development but actually constitutive of it; where our (evolutionary) adaptation as a species results in us becoming the dominant species that systematically converts environments into resources to sustain its survival (while subordinating and eliminating other species). The death drive is therefore not merely psychological but *species-forming*, because it shapes our institutions, technologies, and global systems at their core, altogether converting mortality of “the other” into (im)material advantage. It is especially industrial societies that under capitalist modernity have perfected forms of thanatopolitics, sustaining human life, the human Self, through the destruction of the non-human Other (Agamben & Heller-Roazen, 1998; Eski, 2023).

It is understanding this structural orientation toward destructive extraction and annihilation guised under progressive-appearing outer-space politics “for all humankind” that entails the analysis of space expansionism as a psychosociological, space criminological category of the death drive. Put differently: the human species’ future beyond Earth is understood as a continuation from entrenched thanatogenic forms of existence. The concept of Astrothanatos aims to capture this extension by describing how the transposition of the death drive into astropolitical relations makes us risk reproducing destructive paradigms at an interplanetary and potentially interstellar scale. Metaphorically speaking, it is the death drive that make us willing to weaponize Earth into an atrocious machine from where the death-driven human species is beamed into outer space like laser. Indeed, we may roam through the galaxy as a Death Star, destroying entire planets and even star systems, *driven by* while *driving* our stardeath. Even early initiatives in asteroid mining and the militarization of orbital assets (Lampkin & McClanahan, 2024; Rothe & Collins, 2023; Takemura, 2019) hint at the ways these death-driven impulses could materialize beyond Earth, a dynamic this article explores more concretely in the discussion of astrocide in section 4.

Yet Astrothanatos does not originate beyond Earth, as its manifestations are extensions of a far older, terrestrial condition. Before humanity can export its stardeath drive into outer space, it is implied we must have already learned how to live through (intended) death on Earth by converting destruction, extinction, and domination into conditions of our own survival. To

grasp Astrothanatos as a meaningful psychosociological, space criminological concept, we therefore return to its cradle: the thanatogenic human species and its necromentality on Earth.

3. In the cradle: the thanatogenic human species and its necromentality

In this section, we trace the human thanatogenic condition, reviewing how death has been instrumentalized across human history and how it shapes contemporary terrestrial civilization. That thanatogenic human condition, as expressed through our search for absolute nihilism on Earth, makes us exploit death to thrive, giving us the capacity to transform death into a resource for our own survival and expansion. It is indicative of the Necrocene, or, as has been referred to, the “Thanatocene”³ (Clark, 2020, p. 10):

This term suggests that Earth’s history has been a struggle between the forces of life, regeneration and creation, or Eros, and those of death, degeneration and domination, or Thanatos. The evolving richness and diversity of life on Earth has expressed the creative and liberatory work of Eros. The disappearance of species, populations, ecosystems, cultures and communities under the exterminist reign of Empire manifests the destructive and dominating work of Thanatos. In a world in which the all dominant political ideologies constitute the Party of Thanatos, ecoanarchism is the Party of Eros.

Humanity destroys and turns life into death, bypassing regulatory signals, proliferating uncontrollably, and consuming our environment that helps sustain us. Social, economic, and technological systems have, particularly at the end of the 20th century, intensified industrial expansion on Earth in scale and reach, noticeable in urbanization and global resource exploitation that have inflicted severe, and perhaps even irreversible, harm onto Earth’s planetary ecosystems, non-human species, and future generations (Cabernard et al., 2024; Theobald et al., 2025). With the rise of space exploration and extraterrestrial resource ambitions, these death-driven and -driving tendencies risk being projected beyond Earth, into the cosmos itself (Eski, 2025a; Rothe & Collins, 2025b).

To emphasize: death is built into the very systems of human civilization, where survival, reproduction, and the pursuit of growth and wealth inevitably produce grave, often lethal harm. From this perspective, human behavior on Earth shows a death drive logic: it is thanatogenic where life is used to sustain more life but, in the process, large areas of ecosystems are destroyed, creating “dead zones,” or *necrotic zones* in medical terms (cf. Mehrabi et al., 2018), even as we continue to thrive. Our Thanatos, the basic drive within life itself toward breakdown and return to an inert state, goes behind human civilization and its presence on Earth: growth, exploitation, and accumulation inevitably lead to death, and, finally, exploiting death. Meaning, we repeatedly *cause, manifest and instrumentalize* death, *ad infinitum*. We are a *Homo necans*, “man, the killer” (Burkert, 1983), who is also inherently thanatogenic, a *necrogenus* species that is necro-minded, living and killing in the Necrocene (Agamben & Heller-Roazen,

³ Necrocene (or Thanatocene) refers to the condition in which human activity accelerates ecological destruction, species extinction, and domination over natural processes, making death a structural/systemic/ instrumental feature of “civilization” (J. Clark, 2020).

1998; Clark, 2019; Mbembe, 2020; Moore, 2016) and wired with a *necrogenius*, vis-à-vis a necromentality.

That necromentality is what seems to make us different from all other life on Earth (and perhaps beyond). All earthly heterotrophic life depends on death, simply, because consumption by one organism requires the termination of other organisms, whether they are carnivores, herbivores, or omnivores. Still, this biological fact does not, in itself, constitute necromentality (Berry & Miller-Pogacar, 1996, p. 190). There is a basic understanding that in agriculture and animal husbandry, death is immediate and terminal rather than accumulated or deferred, and the value extracted lies in the organism's prior living processes, e.g., growth, metabolism, and reproduction, rather than in the corpse as such.

By contrast, and this is where we death-driven species go further, necromentality depends on the temporal separation of death from use, on the accumulation of surplus corpses, and on the productive transformation of decay itself: we do not only kill to live (e.g. eating animals and plants) but also live from what has long been dead. Plants further complicate this distinction, as we can eat fruits and vegetables without requiring their death: they can regrow. Necromentality is, therefore, neither biologically necessary nor is it universal across life on Earth (and perhaps even across the universe, for that matter). It is, as far as can be known, a distinct feature of humankind, because only we and we alone systematically organize, accumulate, and exploit death as a resource.

To illustrate, first, animals have always served as posthumous, colonial as well as industrial subjects. The colonial animal extermination of bison and beaver in the 19th century, was an effect of U.S. expansionism. The mass-extermination of bison herds was undertaken not only to clear land but to also harvest hides and bones, as well as to destroy Indigenous subsistence systems. This was colonialist death-production, next to the slash-and-burn farming that destroyed forests to create fertile soil, exploiting human/other-than-human relationality in genocide and ecocide justified by productivity, with both economic and symbolic dimensions (Woolford & Hounslow, 2020).

Such colonialist exploitation of animal and ecological death continued throughout the industrial revolution until today. We still use tallow (animal fat) for candles, soaps, lubricants, collect whale oil for lamps (quite literally, the light from leviathan corpses), lubricants for machines, ambergris for scent, and baleen for fashion. Other animals are still sacrificed for purposes beyond just nutrition: for fashion (leather), medication (horn and bone), cosmetics, as well as for producing gelatin to be used in food and glue for all kinds of industrial purposes (Clifford, 2021; Deetz, 2014; Faslu Rahman et al., 2022; Newson, 2019; Rae, 2022; Robins, 2018; Waibel, 1943).

Digging further in the dirt, in a literal sense, there is the exploitation of the geological dead, providing fossilized organic matter, or fossil fuels, such as coal, oil, and natural gas; piece by piece, these are ancient corpses. Our entire industrial base literally runs on the burning of the long-dead; we, ironically, are powered by ancient death to sustain modern life. Conceptually, the Anthropocene thus becomes an "economy of resurrection," where we exhume the dead earth and set it ablaze as an ultimate "neco-energetic" regime: the ancient dead as planetary battery, exploiting fossilized energy in colonialist fashion (Demos, 2020; Folkers, 2021; Gonzalez, 2024; Mantz, 2025; Mbembe, 2020). The Industrial Revolution and today's global economy already rests on such deep-time necro-mining of ancient organic death, transforming

it into energy that is then re-released as atmospheric entropy in the form of carbon, heat and climate collapse (Halkort et al., 2022; Lucatello & Carrill, 2023; Peters et al., 2025), also through space exploration, in particular through launching rockets (Rothe & Collins, 2025a).

Human corpses themselves have been industrialized for mass-consumption, when after, initially, the Battle of Waterloo in 1815 and later on also other 19th-century wars as well as slaughterhouses, and even catacombs, human bones of the dead were collected to be grinded into phosphate fertilizer for England and Prussia, porcelain glaze, and for sugar-refining process, which produced the “whiteness” of colonial sugar (Wilkin et al., 2023): a grotesque circular economy of war feeding industrial agriculture. European urban cemeteries were also mined for bones and fat (turned into soap or candles) during the 18th and 19th century, particularly in Paris and London, folding human remains into the industrial metabolism of these global cities (Byard, 2016). Outside Europe, Europeans grinded remains as well, in particular Egyptian mummies, into pigment. This resulted in Mummy Brown, used by European painters (Woodcock, 1996). Altogether it is desecration of human remains to become aesthetic commodities or even for medical “cures,” ingested by elites as *mumia* (Östlund, 2021). Even at microbic levels, in synthetic biology specifically, such necromentality is at work, where “suicide genes” are inserted into microbes so that after producing a desired compound, the organism self-destructs (Portsmouth et al., 2007). It is yet another example of death not being collateral but designed, timed, and valuable, also at microscopic scales. Moreover, and most relevant here, we see necromentality such at work in space expansionism. Scientists have proposed to turn Earth’s Moon into a “satellite graveyard,” where decommissioned spacecraft are deliberately crashed into lunar craters, chosen for their perceived lack of (scientific) value, effectively transforming the Moon into a managed necrotic zone for technological detritus (Sample, 2025).

This kind of necromentality altogether has shaped and fueled agriculture and empire throughout history, from colonialism to industrialization, still fueling today’s global consumerist waste-society. At ecological scale and microscopic scale death is redeployed (sometimes accelerated through war) as productive material. Meaning, the (ancient) animal, including us *Homo sapiens*, the forest, the land, entire ecosystems provide our infrastructure: all of it has been and could always be subjected to our colonialist metabolization of any species’ death. Their decay, our consumption.⁴ These Earth-bound necromentality patterns enclosed in behavior of the human species as a whole, when extended beyond the planet, may have consequences even more profound than we currently realize.

⁴ Symbolic and cultural forms of exploiting the dead have been around for a long time, next to material practices. Ancestor cults and relic economies, for instance, gave human remains value and power. In medieval Christianity, the bones and bodily fragments of saints were commodified and sold, which sustained both devotion and financial markets, including illegal ones. Today, posthumous celebrity continues this pattern through estates, images, intellectual property, NFTs, and AI-mediated representations, reflecting digital necropolitics that archive and/or simulate the dead as data, referred to as “AI ghosts” (see: Bozoky, 2020; Hertz, 2013; Morse, 2024; Savin-Baden & Mason-Robbie, 2020; Stokes, 2021). These practices of representation, however, do not produce atrocious planetary or stellar effects and therefore, for now, fall outside the scope of Astrothanatos.

4. Where evil waits: astrocide, its intent, and their astrothanatogenic channeling

Although human necromentality has been almost entirely terrestrial, today we can see its traces emerging in space exploration agendas, where astrocidal intent is still latent but already actionable. From Earth to the cosmos, the human propensity to instrumentalize death as entrenched in our stardeath-driven necromentality becomes most explicit, and thus theoretically illustrative of Astrothanatos at best, in astrocide: the exploitative, even total annihilation of planets, moons, and other celestial bodies and phenomena, along with potential life and ecosystems, are treated as disposable resources. It is a space criminological theoretical concept that conceptualizes, essentially, cosmic genocide and ecocide that prospectively addresses potential future, atrocious harms from space mining, colonization, and militarization (Deudney, 2020; Eski, 2025a, 2025c; Eski & Ugelvik, 2025).

More importantly, why does astrocide and its intent matter for Astrothanatos? It does so because it makes the otherwise unconscious and imperceptible stardeath drive analytically visible now, ripe for foresight-producing diagnosis, now. Astrothanatos drives us toward repetition, domination, and destructive expansion off-Earth. Without a concept like astrocide, however, stardeath drive remains abstract and also untraceable. By distinguishing between latent astrocide, where harm could occur unintentionally through exploration, resource extraction, or contamination, and (clearer) intentional astrocide, where the drive could be deliberately channeled into structured plans of destruction, the space criminological lens sharpens and we can see how Astrothanatos might manifest in today's real-world trajectories of cosmic harm. Put differently: astrocidal intent operationalizes our stardeath drive, transforming pre-reflective compulsion into both unintended and deliberate, traceable actions. For example, human but also robotic space exploration (e.g. Mars Rover) can carry terrestrial microbes into extraterrestrial environments, potentially altering or annihilating prebiotic chemical conditions or contaminating subsurface ecosystems before their existence is even confirmed (2014 Organic Contamination Panel et al., 2014; Eski, 2025a, pp. 41–42; Glavin et al., 2004; Space Studies Board & National Research Council, 1992).

To understand the role of Astrothanatos in astrocide as a future-oriented, primal force, vis-à-vis a nucleus of astrocidal intent seemingly embryonic in contemporary NewSpace ventures (Eski, 2025a), astrocidal intent ought to be understood as broader than genocidal intent. Unlike law, e.g. the 1948 Genocide Convention, that defines genocidal intent rather narrowly as a conscious, sometimes explicit desire to cause harm (Vest, 2007), *astrocidal* intent entails latent *and* intended structural annihilation (Eski & Ugelvik, 2025). It is important to recognize this range of understanding astrocide as the potential prospective space crime of crimes (cf. Rafter, 2016), rather than merely as an *unintended* outcome of space exploration (id.).

Drawing on genocide studies, particularly Dadrian's genocide typology (1975), astrocide and its intent should not be merely seen as substantiating in blunt declarations of destruction. Actually, genocides throughout history happened because of bureaucratic rationality (Arendt & Kroh, 1964), ideological normalization (Alvarez, 2008), and structural denial (Cohen, 2013) rather than merely due to explicit exterminatory language and action. In this sense, astrocidal intent may already be silently present in contemporary space agendas, even when destruction is framed as collateral, necessary, or morally "justified" in pursuit of survival, progress, or human destiny.

In fact, space expansionism nowadays is inherently exploitative and destructive (Deudney, 2020; Rothe & Collins, 2025b). Asteroids, planets, and moons are considered resources for us to consume (Lampkin & McClanahan, 2024; Takemura, 2019), and only there for us to enable our species' survival (that of the space-enabled few, actually) while letting corporate-state interests prevail over any respect or intrinsic value of extraterrestrial settings (Haramia, 2025). Meaning, celestial bodies are perceived and targeted as exploitable and disposable unless proven otherwise (and even then that does not guarantee being safe from space expansionism), which is exactly where astrocidal intent hides today (Eski, 2025a). Moreover, astrocidal intent does not require certainty about the existence of extraterrestrial life. On the contrary, the will to contaminate, mine, and/or terraform precisely *because* life has not yet been detected, reveals the logic of exploitative annihilation by epistemic limitation, which mirrors historical colonial genocides in which uncertainty about Indigenous humanity was exploited to justify their extermination or displacement. Intent here entails necessarily not just the desire to kill known life but also the normalized acceptance of killing unknown or future life as an acceptable risk (id.).

Specifically *latent astrocide* illustrates this form of intent most clearly, brought up by, for example, planetary defense systems that are capable of deflecting, destroying, or redirecting asteroids. They grant us, a species from one planet, unprecedented power over processes that may seed life on planets elsewhere in the universe (Eski, 2025a, pp. 42–43). So, whereas intended and justified as planetary defense of Earth for self-protection, such logic assumes our primacy over other potential biogenic futures, making the implicit intent not merely defensive but also exclusionary. It prioritizes our terrestrial safety at the cost of possible extraterrestrial abiogenesis, by which it institutionalizes a form of anticipatory astrocidal intent entailing the prevention of life before it begins.

Similarly, and more explicitly, is intent in utilitarian and optimal forms of astrocide. *Utilitarian astrocide*, which is grounded in *extraterra nullius* reasoning (Eski, 2025a, p. 44; Stilwell, 2017, p. 178), reflects the political-economic thinking in colonial genocide and makes astrocidal intent calculative rather than merely expressive. Celestial bodies are not perceived as enemies, like in the case of an incoming asteroid bringing upon an extinction-level event, but as profitable. The destruction of extraterrestrial environments becomes a foreseeable yet accepted consequence of extraction in which space commercial laws are proactively crafted to legitimize resource appropriation in space. It is here where astrocidal intent is embedded not just in practice but also in governance, codified, normalized, and shielded from accountability through legal abstraction (Eski, 2025a, pp. 43–44).

The clearest example of astrocidal intent and thus of our stardeath drive in practice is to be found in *optimal astrocide* where terraforming a planet does not merely risk destruction but actually requires it. We would intend to make a planet “Earth-like” by annihilating its existing state and eradicate its own planetary identity, including any possible microbial life, chemical equilibria, or future evolutionary pathways. SpaceX' Elon Musk proposed nuclear detonation for atmospheric reengineering of Mars, for example, demonstrating clearly his intent to engage in total planetary erasure “for all humankind” (Eski, 2025a, pp. 44–45).

The theoretical relevance of this form of optimal astrocide lies not merely in its scale but also in its logic, because the justification for nuclear terraforming is based on the assumption that Mars is already a dead planet and therefore expendable and/or exploitable (Haramia, 2025; Lampkin & McClanahan, 2024). Yet even if such lifelessness were conclusively

established, the stardeath drive that is channeled through our astrocidal will still compel us to reengineer violently and existentially the “Red Planet,” revealing that exploitable death alone is insufficient. A planet can very well be inert and yet intolerable to us unless it is converted, i.e.: making Mars livable for humans does not necessarily mean making Mars livable *overall*. Astrothanatos thus exceeds the destruction of life for the sake of exploitation by us, as it targets planetary alterity itself, regardless of whether the planet is (perceived as) “dead” or “alive.” Although Mars still has its own geological history and autonomy, pristine and untouched by humankind until the Soviet *Mars 2* lander crash-landed on Mars November 27, 1971, and has prebiotic potential even in the absence of terrestrial biology, erasing the Martian surface in order to impose human habitability is not a survival necessity. Instead, it is an optimal expression of astrocidal intent where the human species seeks to eliminate not only existing or potential (prebiotic) life, but the very possibility of non-human planetary being.

Such an astrocidal act is both reflective of and intensified by an epistemic failure of identity (Bilgrami, 1998, pp. 114–115). Whereas the human species (and merely a small portion of it) is only starting to recognize Earth as a planet with an identity of its own (cf. Pedersen et al., 2024), other celestial bodies are, with a few exceptions (Eski, 2025b, p. 7), almost entirely and fundamentally othered as dead. They are not considered as entities in and of themselves but either as objects to be used for science, as new reservoirs of natural resources, or as potential off-Earth habitats. Planetary victimization thus becomes possible exactly *because* destruction and erasure of planetary identity are not framed as such but as necessary, rational, and even benevolent, done “for all humankind.” This is one of the most dangerous manifestations of astrocidal intent, and thus of our stardeath drive.

In sum, astrocidal intent is spread out, structural, and forward-enabling of its outcome, which is astrocide. Recognizing Astrothanatos in these practices allows us to anticipate and potentially intervene in destructive expansion, rather than merely describing outcomes.⁵ It is also traceable in contemporary plans, technological visions, laws, and cultural narratives regarding space exploration. However, if ignored, remaining in a state of (criminological) denial (Cohen, 2013), our stardeath drive could metastasize beyond Earth, shaping a future in which cosmic expansion mirrors the destructiveness historically exhibited on our home planet.

5. To leave the cradle: metastasizing into *Homo Galactica Tumoralis*

The astrocidal intent and embryonic Astrothanatos outlined in the above sections, theoretically imply that humanity’s stardeath drive is already extending beyond Earth. Initially, it manifests on individual celestial bodies such as the Moon, Mars, or resource-rich asteroids, but its trajectory reveals a broader pattern: humans as a metastatic, cancerous species (Huxley, 1957; Weigel, 1995). Weigel observes that Earth, “an exceptional and remarkable planet, an island of life within a barren universe, [has] cancer” (1995, p. 14). Like cancerous cells, we multiply without restraint, consuming resources, and overwhelming the systems that sustain

⁵ For further discussion of astrocide/astrocidal intent as operationalized Astrothanatos, see Eski (Eski, 2025a; Eski & Ugelvik, 2025), providing more detailed examples of latent, utilitarian, optimal, and biocultural astrocide, as reflected in, i.e., astromining and terraforming proposals, but also in the structural embedding of astrocidal intent in governance and law.

human and non-human life alike; a type of destructiveness that arises not merely from intent but also from structural imbalance that could extend into space.

Rather than constraining thanatogenic tendencies, we project ourselves outward where we treat celestial as resources or potential habitats rather than autonomous worlds, victimizing them through industrial and extractive logic, as we repeat our patterns of the Necrocene. In that sense, us leaving Earth does not mean we leave the Necrocene behind. Instead, we export it off this planet and in doing so, we evolve from biotic actants (Shearing, 2015) to cosmic actants (Eski, 2023). We could become, metaphorically, a metastatic cancer across worlds, changing any celestial body or system into necro-industrial substrates by feeding off of their energy, matter, and life, echoing terrestrial necromortality. For instance, proposed lunar mining operations, as well as Moon and Mars colonization plans, already envisage the removal of large amounts of regolith, extraction of water ice and helium 3, and modification of landscapes, effectively transforming these bodies into industrial sites for human survival rather than autonomous worlds (Eski, 2025b; Lampkin & McClanahan, 2024).

Advancement along the Kardashev scale (cf. Takemura, 2022), but now considered as a measure of astrothanatogenic capacity, reflects not progress but expansion of harm: as a Type I civilization consuming Earth we would evolve into a Type II subjugating its star and a Type III industrializing entire star systems. Meaning, not just planets and stars, but entire stellar systems and space nebulae (e.g., where the Pillars of Creation reside as famously captured by the James Webb Space Telescope) could become necro-industrial substrates; even lightyears-large black holes, such as TON 618, the largest known, could be exploited for energy, isotopes, or structural purposes, if we were to follow Kardashev's predictions. We may risk transforming the cosmos itself into a theater of productive death while inflicting unfathomable harms, for example by making black holes "leak" that could rupture the very spacetime fabric of the known universe itself (Eski, 2025c).

In aiming for such galactic civilization types, we evolve into an incarnated cancerous form of the *Homo Galactica*; an highly racist idea of humankind, brought forward by supremacist thinking about space, slithering in NewSpace techno-utopias (Davis, 2023; Gardell, 2003; Goodrick-Clarke, 2022; Shah et al., 2026; Spigel & Curtin, 1997; Stesner, 2022). However, whereas that racialized "supreme" white spacekind is considered a "perfected," "ultimate form" of humankind, it is anything but that. It is rather the *Homo Galactica Tumoralis* that may go up there to thrive through stardeath, metastasizing – spreading like a cancer – across planets and stars, while possibly reinforcing a racialized necromortality at cosmic scales.

This metastasis could be seen as *thanatospermia*: humanity exporting annihilation rather than life, sterilizing and restructuring worlds as it spreads its cancerous settler space colonialism. In outer space, our stardeath as both logic and strategy then flourishes purposelessly in a universe that is inherently meaningless (Camus, 2012). The cosmic joke would be that actually, when spreading as purposeless surplus life trying to find meaning, we turn things dead, constituting a post-Camusian absurdity where we could be the very thing that makes the universe meaningless in an autotelic manner. Concrete examples, next to the ones given previously, include NASA's Europa Clipper mission to Jupiter's ice moon Europa (NASA, 2017a), which could introduce terrestrial microbes and permanently disrupt local environments, or proposals for large-scale stellar engineering, such as Dyson swarm construction or star-lifting concepts, converting entire stellar systems into energy-harvesting infrastructures, transforming stars themselves into necro-industrial substrates (Takemura,

2022). In both cases, whether it is currently happening or aimed for in the deep future, human activity in space alters autonomous celestial sites into functional appendages of human survival. “For all humankind” is then about “being in humankind,” resembling how cancer is not a being-for-itself but a being-in-itself (Heinämaa, 2018; Sartre, 1943): a closed, self-referential form of aimless vitality and surplus life that is severed from any planetary or larger-scale, cosmic responsibility.

In conclusion, if unchecked, our course to the stars is not about spreading life but about destroying it. Space exploration will then not liberate us but universalize a cosmic cancer, and from its malignant ashes, we, the *Homo Galactica Tumoralis*, will rise and impose structural harms across planetary, stellar, and perhaps even galactic scales.

6. Becoming stardeath and the need for a starlife drive: a conclusion

The moment between breaths is the balance of the Force. Between life and death. Rest and action. Serenity and passion. Hope and despair (Nartun Trecim in Rucka, 2017, p. 97).

This article’s psychosociological, space criminological imagination of Astrothanatos traces how our drive to find meaning in an indifferent universe (Camus, 2012), coupled with the unconditional survival as a species, collides with our stardeath drive, projecting our perceived destructive tendencies outward into space. That is to say, in projecting our perceived purpose outward, we mistake our space expansion for necessity and our off-Earth movement for survival. This should not be critically understood merely in politico-economically capitalist or biologically survivalist terms, as space criminology has done so far (Eski, 2023; Lampkin & White, 2023; Rothe & Collins, 2025; Takemura, 2019); space expansionism should also be psychosociologically understood by space criminology, in this case, as being stardeath-driven and -driving with at its core our desire to not only expand but also *extend* human life at all costs, even when that extension means annihilation. It is in these dynamics where our space exploration becomes metastatic through destruction justified as survival or destiny; a logic already rehearsed in our terrestrial history.

Much like Thanatos on Earth, there are ways, however, to bind Astrothanatos but only imperfectly so, through, e.g., (stricter) space law, off-Earth attachment and labor, celestial restraint, and starcare. Still, currently we seem to be unhinged in our will (even if only embryonically so) to unleash stardeath, treating celestial bodies as mere future substrates for extraction, experimentation, and annihilation. Resembling a virus, we spread with quasi-autonomous force, exploiting environments to propagate without realizing or attending to the harm left in our wake. Our stardeath drive is therefore making us intelligent yet pre-reflective in execution and outcomes, while it makes us almost always non-conscious about its annihilative effects that are systemic, adaptive, and potentially catastrophic. Celestial bodies across scales are increasingly framed as mere substrates for human space expansion rather than as worlds with identities of their own. Although we are not there yet, we risk becoming stardeath, destroyers of the cosmos. In fact, it is currently more realistic to anticipate unbridled Astrothanatos as the self-reinforcing circuit of ultimate destruction extended to cosmic scale where death feeds our motion and our motion justifies death, *ad astra et ad infinitum*, than it is to expect its opposite: Astro-Eros, vis-à-vis starlife drive.

However, the stars *are* alive. They have their own identity and ought to be considered as living bodies, breathing even. At the YOU:MATTER exhibition (Marshmallow Laser Feast, 2025), visitors can imagine one of the most important celestial bodies as living: our Earth. Using satellite data that tracks photosynthesis through solar-induced chlorophyll fluorescence, the exhibition makes our Earth's living systems pulse rhythmically visible. Earth is not inert but a metabolizing, interconnected planetary body. At galactic scales, there are similar structural dynamics at work, as captured by the GLEAM-X radio survey that maps regions of stellar formation and remnants of stellar death; a map that indicates a systemic rhythm of emergence and transformation across the Milky Way, and even beyond our galaxy (Hurley-Walker et al., 2022; McGellin, 2025). Recognizing celestial bodies and galactic ecosystems are "alive" pleads for a starlife-driven care, not stardeath-driven exploitation.

This realization matters, because the very satellite technologies that are often driven by and drive astrothanatogenic logics of space expansion, can simultaneously be instruments of such Astro-Eros, of starlife and starcare. To use them in starcaring manner, a reorientation is required in how we perceive celestial bodies themselves. As with rivers, forests, and ecosystems on Earth that have increasingly been recognized as entities that depend on representation and protection by humankind (Biermann & Kalfagianni, 2020; den Outer, 2026; O'Donnell, 2020; Pedersen et al., 2024), cosmic environments must no longer be framed as inert, dead matter awaiting instrumentalization (Haramia, 2025). They too possess celestial histories, trajectories, and identities/agency of their own. They have a celestial Self, and because like non-human animals or plants they cannot speak on their own behalf, we must do so.

Such starcare should not be undertaken to eventually serve human survival, expansion, or destiny, but actually in spite of it. Hence, Astro-Eros entails a somewhat counter-intuitive care, a commitment to cosmic alterity that resists domination, extraction, and erasure, and affirms interconnectedness and restraint rather than utility, thereby offering ways for constraining unbridled stardeath. Argued in a Freudian manner, humankind succeeds off-Earth when Astro-Eros is balanced with Astrothanatos, enabling a tension between stardeath *and* starlife. Such an Astrosublimation then involves repression of both astrothanatogenic and astro-erotic urges, directing them to new ones (Freud, 1905/2024, p. 26).

Currently though, space expansionism, like terrestrial techno-capitalist and -political capacity on Earth (Clarke, 2006; Craig, 2005; Freud, 1984; Golding, 1982; Zizek, 2008), amplifies almost only our destructive impulses beyond the capacity for containing them. So, as sentimental starlife may sound, it is a call for reattachment of humanity to the planetary vessel that already carries us and its movement along the stars: our planet Earth. Following Freudian theory once more here (Freud, 1984), Astro-Eros could prospectively operate as the counterforce to an astrothanatogenic future, upholding starlife-driven space exploration not *from* Earth but *on* Earth, binding, connecting, and sustaining complexity. It is neither about rushing into leaving our "cradle," nor surpassing it as if it has a passive origin and is simply an idle object without an identity. As a matter of fact, Earth functions as a self-contained spacecraft in motion, orbiting a star, our Sun, while carrying life through the cosmos with its natural systems, e.g., an atmosphere, oceans, soils, and the biosphere, that sustain its passengers much like engineered vessels, having evolved over billions of years. Such a whole-system-approach at planetary level (cf. Scheffran, 2025) has revealed itself on various occasions in the overview effect, during which astronauts, including late Dutch astronaut Wubbo Ockels, experience Earth as a fragile, "blue marble" that leaves us behind in awe, unity,

humility, and a sense of planetary stewardship (MMatter, 2022; Yaden et al., 2016). Our Earth cannot be seen in isolation from but as a part of the inherently dynamically coherent inner solar system. For instance, Earth's gravity, orbital resonances, and position help shape structures in the interplanetary dust cloud and echoing features that have an effect on Venus and Mars, while other planets' combined gravity also feeds back into our orbital cycles and climate forcing (e.g. Milankovitch cycles) within the broader heliocentric gravitational network (Bennett, 1990; Jackson & Zook, 1989; Sommer et al., 2020; Spiegel et al., 2010). Moreover, spaceship Earth's voyage takes place within larger cosmic movements, as the solar system orbits the Milky Way at ~220–240 km/s, while the galaxy itself moves at ~600 km/s within clusters (Bland-Hawthorn & Gerhard, 2016; NASA, 2017b; Reid et al., 2014; Tully et al., 2014).

Starlife-thinking and -doing would imply framing humankind like a fortunate enough small crew aboard a vessel that is traveling with a vast spacefleet through a galaxy, moving in larger cosmic currents. This suggests that our survival does not depend on separating ourselves from Earth but that it is inseparable from the movement of this planetary vessel. While our technological capacity accelerates rapidly, our capacity for reflective consciousness lags, which raises the risk that Astrothanatos manifests before ethical awareness can intervene; an idea that is resonant with Spielrein's insight into creation via destruction (Spielrein, 1994). It is, however, our compulsive outward projection, our stardeath drive, that mistakes exiting Earth for necessity. Instead of abandoning ship, Astro-Eros insists instead that we recognize our dependence on what already carries us, that we nurture here rather than usurp elsewhere off-Earth, maintain this planetary ship rather than hijack others, and control Astrothanatos now before it fully ignites. However, also in such starlife-driven care, the duality of destruction and creation still exists, and in fact, underscores a Heideggerian insight (Heidegger, 1996), entailing that both stardeath *and* starlife both reveal *and* conceal. This means that even life-affirming starlife impulses may simultaneously contain the potential for stardeath, hidden and unhidden.

Hence, in many ways, there is something rather Unheimlich about the stardeath-driven and/or starlife-driven trajectory of the human species into outer space, specifically that the cosmos mirrors aspects of ourselves we rarely acknowledge, in particular, our repetition compulsion, our quasi-viral, cancerous expansion, and the latent (sometimes intended) destructiveness of the stardeath drive: our place in the universe is both. At the existential level, this means that the universe's indifference is not the threat but it is our response to it (Camus, 2012), which should not be merely astrothanatogenic but also astro-erotic, allowing starlife and -death to interact with another in tandem, like a double helix. So, no, Astro-Eros does not offer ultimate redemption, moral absolution, or metaphysical salvation, but it does offer, now, a needed countering of our nascent stardeath drive.

It is about trying to become and behave like a *Homo Galactica Aequilibrialis*, where we are driven by attachment over conquest, maintenance over domination, and reflection over compulsion; a cosmic species that takes realistically into account its Astrothanatos but in tension with Astro-Eros, creating a balanced space in which humanity can travel meaningfully among the stars. And we see examples of such balance all around us, in particular in “[m]ycorrhizal fungi [that] form nutritional symbioses with >80% of plant species and build extensive underground hyphal networks that can constitute >30% of the living microbial biomass of soils,” where they seem to function as ecosystem engineers that regulate biogeochemical cycles, sustaining almost all terrestrial plant life through distributed, reciprocal exchange (Van Nuland et al., 2025, p. 414). Plants allocate billions of tons of carbon annually

to mycorrhizal networks, embedding themselves within a relational metabolic web rather than dominating it. These fungi are not morally harmonious, yet our planetary stability depends on these distributed relational infrastructures. A cosmic ethics grounded in Aequilibris would, therefore, prioritize systemic embeddedness and metabolic reciprocity over territorial conversion and resource monopolization; it is about being aware of and relate to a relational metabolic web rather than dominating it, showing us that our survival and planetary resilience emerge from distributed reciprocity rather than centralized control. This means that, just as mycorrhizal networks integrate rather than dominate, we are space wanderers aboard a planetary vessel whose survival depends on nurturing its internal metabolic and ecological systems onboard. It is then, perhaps just simply, about becoming aware we are already voyaging as uncanny astronauts on Spaceship Earth, and that how we travel matters.

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