Extinction and The Human Consciousness in Adrian Tchaikovsky's *Cage of Souls*

A Thesis

Presented to

the Faculty of the Graduate School

of Millersville University of Pennsylvania

In Partial Fulfillment

of the Requirements for the Degree

of Master of Art in English

By John Leininger

4th August 2025

This Thesis for the Master of Arts Degree by

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ABSTRACT OF THE THESIS

EXTINCTION AND THE HUMAN CONSCIOUSNESS IN ADRIAN TCHAIKOVSKY'S *CAGE OF SOULS*

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Millersville University, 2025

Millersville, Pennsylvania

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An ecocritical reading of Adrian Tchaikovsky's, *Cage of Souls,* a science fiction novel about a dying world, reveals a humanity trapped in its own consciousness. Using the Material Ecocritical (Iovino and Oppermann) and biosemiotics (Wheeler) lenses, this paper explores the dichotomies the human consciousness used to establish a solid identity in an evolving world, and it traces the autopoietic (Bergthaller), and thus evolutionary roots of these dichotomies. In *Cage of Souls,* these dichotomies are shown to be the causes of human extinction, as they cause humanity to remove itself from the life-giving network of the world. In a twist on the typical "dying earth" genre ("Adrian Tchaikovsky…" 0:58), however, they also reveal a critique of the universes' role in human extinction, questioning the balance of culpability between humanity and the universe that birthed it. Viewed from the end of both humanity's and the Earth's lifespan, *Cage of Souls* uses the science fiction genre to question the suitability of humanity for life on Earth, and the culpability for demise of both, presenting a shift in perspective of the human separation from the planet from a blame-based discourse of lost utopia to one of future potential accessible only through transformation of humanity itself.

Signature of Investigator _____ Date _____

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1. Introduction:

The Milky Way Galaxy is over one hundred and twenty thousand light years across and is made up of over one billion stars. Circling one of those stars, a careful observer will find a small, blue planet. This planet is home to a curious, explorative species innately drawn to understand and conquer the unknown. They have discovered fire, metallurgy, chemistry, and a rudimentary understanding of physics. They can piece together a rough estimate of how the universe is structured, and they stare incessantly into the night sky, dreaming of the day when they will discover who and what lies in its depths, dreaming of finding others like themselves. This is a fantasy, however. They will never leave their planet. They have mined and harvested, built and developed, conquered and exploited, covering over the planet and its other creations with their structures and devices, but it is not enough. They are trapped. It is only a matter of time. They will all die there, still staring, into the night.

This is, at least, the vision of humanity presented by Adrian Tchaikovsky in his 2019 novel, *Cage of Souls.* In a long set tradition of post-colonial, ecocritical science fiction, Tchaikovsky explores the potential for human self-extinction[1], commenting, as is expected, on humanity's disconnection from their planet and their destruction of the environment, prognosticating a barren and poisoned world filled with unapologetic victims. There appears, at first, to be little new in this view or approach, but then, in a twist of empathy, Tchaikovsky turns some of the blame on the universe itself, asking why, for the love of life, would it place a species with this much drive for exploration on a planet, and in a universe, that demands instead nothing but slow, steady evolution and no upward glances. Is there any way that these two entities, humanity and the planet it calls home, could ever not have been destined to destroy each other?

In these questions, Adrian Tchaikovsky's novel lifts some of the blame for human behavior from the shoulders of humanity and places it on the universe. This paper will explore the roots and representation of his position, applying ecocritical, post-colonial, and psychological readings to reveal this perspective he brings to the "dying earth" genre ("Adrian Tchaikovsky…" 0:58), and to the understanding of humanity's connection with Earth and an extinction that is the inevitable result of human psychology.

2. Science Fiction: A Definition

On the back cover of *Cage of Souls,* just above the barcode, and next to the blunt "£8.99," lie the two very familiar yet seemingly useless words, "Science Fiction." Of all the terms which this paper will apply to this novel, science fiction may very well be the most broad, and therefore the least helpful. It is, however, this genre that gives Tchaikovsky the power to do what he does: present a reframing of human culpability in their own demise. Thus, it makes sense that some time be taken to define the genre of science fiction and its position within literature.

Octavia Butler, author of numerous science fiction works sums up the dilemma of terminology well in an interview with Joan Fry in 1997, when she was asked for her definition of science fiction, saying only, "Well, it is nice if you use a little science" (Fry 125). Because of these loose criteria, the "science fiction" label has been applied to many books, encompassing many different topics. This point can be quickly proved by a glance at the quick-search results on my local library's online catalog. The first entry for "science fiction" was *Stranger Things: Suspicious Minds,* a prequel to the popular Netflix show in which psychic powers unlock an evil alter ego world called "The Upside Down." Next, the novel *Borne,* by Jeff VanderMeer depicts biotechnical experiments unleashed on a destroyed world. The third entry, *Out of the Dark,* by

David Weber, features a war between the last remnants of humanity and the Shongari alien race that has invaded the planet. Each of these has the same, "Science Fiction," label as *Cage of Souls,* but each for a different reason, and the remaining seven entries continue this trend, containing post-apocalyptic worlds (*Wool* by Hugh Howey), journeys to Mars (*The Martian* by Andy Weir), a robot takeover (*Humans Bow Down* by James Patterson), a terrible epidemic (*Recursion* by Blake Crouch), and even a Star Wars novel, which of course has a mixture of aliens, lasers, space travel, but also a mystical power that pervades the universe and can be harnessed by "chosen" minds. Clearly, to be a reader of science fiction ("SF" from this point onwards) demands a large amount of sifting, because one could easily enjoy reading about the possibilities of AI yet have no interest whatsoever in psychic ability to unlock demon dimensions. This should not be seen as a downside, however, because the key reason for this lack of cohesion is the same factor that gives SF its power: SF pushes boundaries. If there is a wall that other authors are leaning up against, there is a good chance that at some point, an SF author will take a crack at smashing through it. And anything that has the power to smash walls has the power to generate change.

Tchaikovsky, in *Cage of Souls*, is taking aim at many walls, but one in particular – that of humanity's sole responsibility for the destruction of their planet, and for their own extinction, and SF is the tool he chooses to use. *Cage of Souls* follows the "adventures" of Stefan Advani, an unfortunate academic scientist in Earth's remote future, where the sun is slowly expanding and irradiating the planet. This disaster is simply six-of-one, however, as humanity has already poisoned and polluted all the livable space to the brink of uninhabitability. Stefan is a citizen of Shadrapar, Earth's last remaining city, but at the start of the novel, he is on his way to the one other human settlement: the "island." The island is a prison where the criminals of Shadrapar are

sent to whittle away their lives in forced servitude. This journey, to what should be his final home, takes him through the "jungle," a wild, unexplored mass of mutated nature that has been growing in around the poisoned ruins of ancient cities. It is in this jungle that he has a terrible revelation, humanity is not only going extinct, it is being replaced – earth has given up on them.

Tchaikovsky presents the reader with a hopeless future, an inevitable abandonment of humanity by the planet that raised them. And he makes the reader consider this possibility that while extinction as seen in *Cage of Souls* may be far in the future, the severing of ties to the planet that makes it inevitable might be around the next bend. He walks us through the details of this future separation, using SF to its full potential to plead for a reconciliation in the present. He does not, however, as with many SF stories, put all the blame on humanity for this separation, but suggests that reconciliation may involve humanity learning to make up for evolutionary mistakes made by nature which led to unavoidable incongruities between itself, its mother planet, and the universe in which it was created. Nick Hubble, in his introduction to *The Science Fiction Handbook,* describes the unique power of SF to make this type of plea, saying, "Realist fiction sets out to describe the world; science fiction (SF) sets out to change it" (Hubble xii). SF does not, as with historical fiction or romance, tread on paths we have already traveled, but instead looks for new ones, or at least new ways of looking at the old ones. The worlds presented in SF are reimagined, new, and different, but not just for the sake of newness, but for comparison. Sheryl Vint explains it well when she says that SF's "key quality is that the 'science-fictional' world is not only one different in time or place from our own, but one whose chief interest is precisely the difference that such difference makes" (Vint 240). SF asks the reader to consider, "What would/should/could change if…?" Tchaikovsky presents a different world, one which is completely impacted by, and at the same time, completely done with, humanity. While

this difference from the present can be read as pure fantasy, this use of SF seeks to inspire a reader to question whether or not the world of the story is possible, and if the conclusion is "yes," then whether it is a world they truly want and what it might take to change it.

One major benefit of SF which Tchaikovsky uses in this novel is an extensive jump into the future. As Sheryl Vint explains, "The more-than-human time scales that SF embraces allow for a geologic perspective on the evolution of the earth and its life-forms…" (188). Tchaikovsky's future earth has been radically changed by untold centuries of human, evolutionary, and cosmic activity, and is populated with creatures far, far down the evolutionary pathways seen today. Vint continues by explaining that "SF that focuses on periods of time beyond the normal human life-span… can bring geological and human temporalities closer together, enabling a unique perspective on events such as climate change. This approach helps us to imagine our actions in the present as connected to a concrete future" (191). The plausibility of a world in the distant future leaves a reader questioning how and if they will ever see it in person, and, in the case of disaster, if it can be avoided. Istvan Csicsery-Ronay, in *The Seven Beauties of Science Fiction,* says that "Imaginary worlds of sf are pretended resolutions of dilemmas insoluble and often barely perceived in the present" (12), meaning that science fiction is often a prediction of a possible future. Tchaikovsky takes the problems of pollution and destruction of nature far into the future, to reveal a humanity that was not equipped by nature to stop them, and he raises the question of what must change for this fate to be averted. Sheryl Vint adds that "SF is perhaps best described as a literature that responds to how science and technology change human culture" (187). SF merges onto scientific or technological paths that humanity is already on and fast-forwards into the future, just to see where they might lead, because one major limitation to human existence is the fact that only one moment in time can be seen at once. In SF,

the boundaries of time and current perception are broken in an effort to reveal human vulnerability in the grand scheme of time and the universe. Ursula K. Le Guin compares the purpose of SF to that of ancient mythology, which sought to make sense of the natural world through stories. She says that "Science Fiction is the mythology of the modern world" (Le Guin 70), reshaping perceptions of natural phenomena through creative interpretations. Again, the goal is not in the simple representation of a created world, or even immersion in the story, but in the connection found between the created world and reality.

Many times, these connections cut through preexisting perceptions of reality, forcing intersections of previously distinct concepts. In many cases, SF seeks to reveal the arbitrariness of divisions through what Csicsery-Ronay calls, the "Science-fictional grotesque," which "represents the collapse of ontological categories that reason has considered essentially distinct" (16). No category is safe, because, in the SF author's mind, science and time have the potential to renegotiate all of them. In *Cage of Souls* the usual boundaries of human dominance, agency, and intellectual exceptionalism are in the crosshairs, but so are those of human culpability, the perfection of nature, and the solutions to current ecological dilemmas. SF presents worlds where these categories are blurred, "inducing sentiments of awe and dread in response to phenomena either created or revealed by human techniques… accompanied by fascination and horror at the prospect of intimate category-violating phenomena discovered by human science" (16). Csicsery-Ronay considers this facet to be, "one of the most powerfully attractive of the genre," because it, "draws its reason-based irrationality increasingly from actual scientific innovations that combine phenomena previously held to be naturally distinct… and the constant weakening of category boundaries that seems to menace the sense of personal identity" (16). When these

mental boundaries are crossed, a reader is forced to recategorize themselves in light of the new categories, resulting in new perspectives not only of the world but of identity.

For Adrian Tchaikovsky, this identity is the human identity, and this recategorization takes places in the boundaries of biology, evolution, and the human/nature divide. If humanity is not perfect, *Cage of Souls* asks, would that mean that Earth, which raised it, is imperfect as well? And if these boundaries are blurred, where does the responsibility for change lie, and what would it entail? In an interview with Chris Alvarez, discussing *Cage of Souls,* Tchaikovsky explains that one of his main interests in SF is the biological sciences, and in particular behavioral science and especially evolutionary science, which becomes speculative evolution when brought into science fiction, saying that his writing "is very much rooted in the nature world and our relationship to it" (38:00-38:15). It is this relationship, and the role it plays in human consciousness and inevitable extinction, which takes center stage in this paper.

It should be noted that the fantasy genre, closely akin to SF, can do many of these things as well, and that Tchaikovsky has written his share of both, but what sets science fiction apart from this other equally broad genre is plausibility. SF authors present possibilities and predictions, options and paths, based on the here and now. Octavia Butler, in interview with Charles Rowell in 1997 provides the formula for this: "Science fiction uses science, extrapolates from science as we know it to science as it might be to technology as it might be. A science fiction story must have internal consistency and science. Fantasy can make do with internal consistency" (Rowell 85). Readers of SF not only need to feel as if the world they are reading about could function but that it has functional ties to their present. T. A. Shippey, in the introduction to, *A Critical Survey of Science Fiction,* supports this by saying that "Science fiction takes place in a world or setting that its contemporary readers know for certain is not true but that

they are also prepared to accept as not impossible" (xxxi). Tchaikovsky, in his interview with Chris Alvarez, says that his own formula is, "you're allowed one big lie," and then, "you've got to make everything else as true as possible" (18:30-19:10). It is this plausibility that makes the difference, because if the world could look like this in the future, then there are roots of it here in the present, and the reader knows they have the potential to interact with and impact them. This change in perspective is described by Csicsery-Ronay as "novum," the "rationally explicable material phenomenon… whose unexpected appearance elicits a wholesale change in the perception of reality" (14). Just as in any learning, the absorption of new concepts requires the restructuring of previous ones, and science fiction utilizes this function of the brain, making fictional possibilities seem so plausible that the brain is tricked into making space, and therefore reconfiguring, for them. This, of course, requires work on the author's part, as Octavia Butler prescribes, "if you use science, you should use it correctly, and if you use your imagination to extend it beyond what we already know, you should do that intelligently" (Fry 125). Margarette Atwood, in her book, *In Other Worlds,* describes this type of intelligently thought-out content as, "things that really could happen but just hadn't completely happened when the authors wrote the books" (6). For her, the science in "science fiction" is the science of a future world, and "not of this here-and-now earth" (1), but it can still be seen as a believable "there-and-then" earth. If a SF writer wants to make a reader think intelligently about a possible future, then they must do the work of intelligently planning out that possible fictional future, based on the nonfiction of the present. If it rationally makes sense, then it will have the potential to alter perspectives and break down walls.

With this vast range of possibilities outlined, one might ask where *Cage of Souls* lies within the sea of science fiction. Isaac Asimov, in his introduction to the collection, *More Soviet*

Science Fiction, divides science fiction into three stages, with stage one focusing on adventure, stage two focusing on technology, and stage three focusing on sociology (7). *Cage of Souls* would be in stage three, which focuses on future societies that develop as a result of scientific changes. Asimov then proceeds to divide stage three into three more possible guiding questions, which he labels "Stage 3: A, B, and C" (8-12):

- Stage 3 – A: "What if…" which focuses on a completely hypothetical future.
- Stage 3 - B: "If only…" which focuses on the author's ideal society. These often take the form of Utopias.
- Stage 3 – C: "If this goes on…" which extrapolates from current processes, problems, or patterns in society to present a prediction or warning for the future.

It is this last question, "If this goes on," that makes science fiction an incredible partner for the ecocritic whose goal is to raise awareness, as will be discussed later. As will be shown, Tchaikovsky, in *Cage of Souls,* focuses heavily on "C," predicting the future of the planet based on what he has seen in humanity's history and present. He does, however, also bring in his fair share of "A" and "B," often using these as a counterpoint to his rather dismal prognosis of humanity's odds of survival.

The ability of science fiction to change minds and predict the future, cross boundaries and rethink categories, makes it uniquely compatible with many critical theories, which will be explored later. Tchaikovsky's work in *Cage of Souls* takes its place in science fiction as a representation of our own world's bleak distant future, extrapolating from ecological problems he sees in the world around him, and focusing on what this future, and the journey to get to it, can teach about society and humanity as whole. In this case though, this look into the future also demands a look back, into the past, to see where the roots of humanity's inevitable extinction

truly lie and whether they must take sole blame, or if the road forward calls for shared responsibility.

3. Current Scholarship on Tchaikovsky's Science Fiction

Tchaikovsky's work is a relatively new addition to literature, so it has not been the subject of extensive research, and *Cage of Souls* has received none. A small amount of existing criticism, however, focuses on the challenging of boundaries between human and non-human, and has been done through ecocritical and material ecocritical lenses, which will be explored in the next section. For now, a quick review of the research is in order.

Indrajit Patra, who has written two essays on Tchaikovsky's work, has applied many ecocritical concepts to them, primarily Gilles Deleuze and Felix Guattari's "Becoming[2]" and the post-human[3]. He analyzes Tchaikovsky's 2020 book *The Doors of Eden,* a science fiction novel about parallel universes, and his 2016-18 series *Echoes of the Fall,* a fantasy set in a world of shapeshifting creatures which blur the boundaries of the human and animal.

Discussing *Echoes of the Fall,* Patra explains that Tchaikovsky "… employs the philosophy of Deleuze and Guattari to position the interpretation of 'becoming Animal,'" and "illustrates the insights of animal studies researchers, post-humanists and New Materialists" and reveals "new avenues for imagining the intra-activity of animality and humanity" (581). By examining the shapeshifting dynamic in the trilogy, where characters transform between an animal and human form, he reveals how Tchaikovsky paints a picture of animality that preserves human identity. He says that, "Tchaikovsky's trilogy presents animality as the primary force that shapes the world of the novels, with humanity seeming to take a backseat to the power of raw animality since humans are portrayed as highly vulnerable, weak and fragile in the dangerous and largely war-torn environment" (585). The characters, then, face dangers in their stronger

animal forms, though, “when there are no impending threats of war… the most formidable animality warriors spend most of their lives as human beings and are driven by those same forces of passion and emotions that shape and mold the human psyche in normal environments” (585). Ultimately, Patra concludes, Tchaikovsky is advocating for a unity between the human and animal spirit which fuels the post-anthropocentric view of nature and humanity, “placing humans and animals on an equal footing” (596). Tchaikovsky himself, in his interview with Chris Alvarez, says that he has always been fascinated by “the ability to partake of the natural world through transformation” (38:31-38:41), and many of his works, including *Cage of Souls,* deal with this transformation, whether through magic, as in *Echoes of the Fall,* or “speculative evolution” (13:45), as in *Doors of Eden* and *Children of Time,* as well as *Cage of Souls.*

Analyzing *Doors of Eden,* however, Patra switches from the study of animal-human relationships to the concept of post-human worldbuilding, exploring how the parallel universe system can be used to decenter the human, revealing multiple universes where non-human creatures are the dominant species and often outstrip humanity in their understanding of the cosmos. Similarly to his analysis of *Echoes of the Fall* however, Patra reveals a baseline of the positive, where human characters do still contribute, but must work in unison with non-human entities, saying that, “This is quite in keeping with the spirit of the post-anthropocentric framework where the human is not relegated into insignificance but instead placed alongside other entities” (109). His conclusion is that in this novel, Tchaikovsky suggests that “nature will always supersede any amount of technological prowess that a posthuman civilization can ever hope to master” (120). Nature outshines humanity, evolving naturally far beyond what humans could create technologically, but humanity is still allowed their strengths. This aligns with

Tchaikovsky's defense of humanity in *Cage of Souls,* although with a more optimistic final outcome.

In both these analyses, Patra documents Tchaikovsky's engagement with the posthuman, and his advocacy for an increased awareness of, and a shift in perspective in, the relationship between the human and non-human worlds. These depictions are positive though, presenting a humanity with a future and potential that is merely hidden behind a fog of current unawareness. This paper will explore a more pessimistic approach to the post-human in *Cage of Souls,* where humanity is seen more as a failed experiment, missing potential because it was not well equipped for this universe.

The other researcher to explore Tchaikovsky, Mariusz Pisarski, explored the 2015 *Children of Time,* the first novel in a trilogy documenting the story of humanity's remnant traveling space in a quest for survival, and this time there is a decidedly less optimistic tone. He begins his analysis by saying that "The pattern of failure, chance discovery, and narrow survival, originating in personal conflicts and a disorderly fragmentation of societies in the face of disaster… comes to the fore in Adrian Tchaikovsky's *Children of Time"* (11). His analysis focuses on the self-destructive traits inherent in humanity, and the self-extinction that would be the result, which Tchaikovsky remedies in the form of a bioengineered nano-virus which removes the self-destructive tendencies from those who receive it and is ultimately the reason why humanity survives. Without this virus, it is implied, humanity would perish at its own hands. As Pisarski says, "Bruised, battered, and socially downgraded to the level of medieval feudalism, the humans' only chance of survival is a forced pantropy that makes men more empathetic towards other species" (12). In this, Tchaikovsky presents both the reality of human weakness and the necessity of a shift in these weaknesses if extinction is to be avoided, which are themes

also found in *Cage of Souls,* but the responsibility for the weaknesses in *Children of Time* is on humanity. *Children of Time* also returns to optimism in the end; humans and other lifeforms live in harmony in the universe.

These positive outcomes may just be putting a brave face on a bad situation though, as in the same interview mentioned above, Tchaikovsky admits that "I'm very pessimistic unfortunately," and believes that we will eventually get to the point where, "the planet won't survive no matter what we do" (41:20-41:35). Discussing nature and the act of writing about it in SF, he says, "I sometimes feel that I'm writing a requiem…" (38:58-39:02), and he explains that *Cage of Souls* reveals how "screwed up" yet "vital" this world is by presenting an earth "where nature is very much kind of fighting back, attempting to overcome its own sort of demise in the way that the human race isn't" (45:00-45:15). It is this fight, this agency of the planet, which will play a key role in this paper's analysis, as the reader watches humanity being replaced by an active world after humanity's agency has been all but removed from the picture. The question though, asked by *Cage of Souls,* is why was humanity such a disaster in the first place?

Again, in *Doors of Eden* and *Children of Time,* while the posthuman is explored, the solution demanded is a shift in perspective (albeit sometimes a bioengineered one), and ultimate fault for these weaknesses is placed on humanity's shoulders. In all of these analyses, self-destructive human tendencies are explored, boundaries between human and animal are blurred, and extinction looms, but nowhere is the blame for the flaws and danger put anywhere other than on humanity itself, and while boundaries are blurred, it all takes place on other worlds, where the influence of Earth is distant or non-existent. Blame for the behavior of an entire species, however, must be seen as more complex. In fact, Tchaikovsky himself complicates it when, in the interview discussing *Cage of Souls,* says that he sees human behavior as "more nurture than

nature" (14:28-14:36), which has potential to shift some of the blame to the outside influences, such as Earth and evolution, that "nurtured" humanity. He furthers this complexity by adding that, "of course the fact that we are so able to be nurtured is part of our nature because we've grown up as a highly cerebral social species" (14:36-14:45), meaning that human consciousness, the factors that brought it into existence, and the outside influences that interact with it in the present are all implicated in the role they play in the formation of human behavior. This paper will explore *Cage of Souls,* published in 2019, to develop a unique theme in Tchaikovsky's work, that of humanity's victimhood in the universe, incompatibility with Earth, and its forced separation from nature and subsequent inevitable self-extinction that results. In *Cage of Souls*, Tchaikovsky explores how the human consciousness responds to the expanse of the universe and the knowledge of our inevitable erasure, breaking down the boundaries of human culpability in its separation of Earth, and perhaps suggesting that the current discourse of blames is not effective to bring it out of this separation.

4. Ecocriticism – A Definition

4.1 Overview

The previous readings of Tchaikovsky have been done through the ecocritical and material ecocritical lenses, and this paper will continue in this line in order to reveal the power of the change in perspective. The primary theorists for this particular application will be Serenella Iovino and Serpil Oppermann, with the theory of Material Ecocriticism, but a proper understanding of their theory begins with the origins of ecocriticism itself.

As discussed earlier, SF authors often write with the goal of affecting changes in perspective, and one major area of social responsibility that has been targeted in the last century has been that of ecology and the environment. The critic Greg Garrard sets the beginning of this

"environmental writing," as he calls it, which explores the human relationship with nature, in 1962, at the publication of Rachel Carson's, "A Fable of Tomorrow," a short story parable foretelling the dangers of human pollution of the natural environment (Garrard 1-3). This new genre of writing, which addressed environmental issues in hopes of creating change, raised the question of how exactly humanity, literature, and the environment are truly connected, and the literary theory that rose to answer this question has become known as ecocriticism (Garrard 1-3).

4.2 William Rueckert – The Origin

The initial concept was first introduced in 1976, when William Rueckert published "Literature and Ecology: An Experiment in Ecocriticism," in which he unpacked his rationale for the creation of a new, activist literary theory; the "applying of ecological concepts to the study of reading, teaching, and writing about literature" (107). For Rueckert, this was a perfect pairing, the robust yet purely academic field of English studies united with the practical yet often overshadowed field of ecology, to speak for the voiceless planet humanity calls home. Ecocriticism, a term he coined in his title, was his response to his growing concern about the environment as well as two issues he saw in the English academic community: the lack of new frontiers and the loss of relevance.

Similarly to the SF author, who seeks to break down walls, Rueckert was frustrated that literary theory was too internally focused, claiming that much of the current theory was simply the reworking or combining of previous theories, leaving little room "for those whose need and bent is to go where others have not yet been" (106). He was tired of what he called, "the senseless creation of new models just to displace or replace the old ones, or to beat out a competitor in the intellectual marketplace" (106). His goal for ecocriticism was to blaze a new trail. It did this, he claimed, by shifting its academic motivation from "newness, or theoretical

elegance, or even coherence, to a principle of relevance" (107), focusing on engaging current external issues instead of simply internal current thought. He wanted to empower literature to address what he saw as the preeminent issue in the modern world, "keeping the human community from destroying the natural community, and with it the human community" (107), by embracing (through discovery) literature's true place within nature, and consequently its true power to impact the human mind.

His basis for this empowerment was the first law of ecology, that "Everything is connected to everything else," which is a foundational belief in all subsequent forms of ecocriticism. If this is the case, he argues, then there must be a connection between the biosphere and the literature that has arisen within it. He saw literature as a natural phenomenon in nature, akin, he claimed, to the plants and animals whose survival he was championing. Both nature and literature, he explained, had the ability to store energy for unleashing at a later time. He cites Ian McHarg's position that nature is creative – that creativity is the "entrapment" of energy in useful ways (Rueckert 111). Plants were the model, he claimed, storing up energy from the sun to create spectacular structures, and literature followed suit, storing up the energy of the human imagination in ways that could be unleashed in the reading when it was most needed. That time was now, he argued, as the health of the biosphere has been put in jeopardy partially because society lacks awareness of their interconnectedness with it. They do not, he says, realize how connected they are to their environment, and how many similarities they share with their fellow earth dwellers, so they do not see the problem in contaminating and destroying it. This, he says, "is what ecologists like to call the self-destructive or suicidal motive that is inherent in our prevailing and paradoxical attitude toward nature" (107), which is a key part of theories regarding human self-extinction. He blames this attitude on ignorance, claiming, in a post-

colonial vein, that humans, "in partial knowledge or often in total ignorance… are violating the laws of nature" (113), seeing their power over nature as a moral mandate to conquer it, and that, "man's tragic flaw is his anthropocentric (as opposed to biocentric) vision, and his compulsion to conquer, domesticate, violate, and exploit every natural thing" (113). It is this compulsion that is often depicted in SF, the "ecological nightmare… of a monstrously overpopulated, almost completely polluted, all but totally humanized planet" (113). Many authors, including Tchaikovsky have represented this nightmare in their work, and for Tchaikovsky it is especially seen in *Children of Time,* where earth's biosphere is gone, and humanity is judged by other species based on their previous bouts of destruction. The earth's biosphere still exists in *Cage of Souls,* but barely, and it is no longer for humans.

For Rueckert, this nightmare springs from a cognitive disconnect. He says that humans contain the creative potential to save the environment, but that they haven't been pursuing it, instead using the creativity, the entrapment of energy, to fabricate factories, or rockets, or even academic articles, but missing the connection to the biosphere in which they do it. They use their creative potential given to them by nature, storing up energy as they have been taught, but not in aid of nature, "acting in concert with the rest of the biosphere, but not necessarily to the ends of biospheric health" (119). This, he says, "has always been the problem" (119). He warns the academic community that, "If we continue to teach, write, and write about poetry without acknowledging and trying to act upon the fact that… all the oceans of our home are slowly being contaminated by all the pollutants disposed of in modern communities… then we will soon lose the environment in which we write and teach" (112). Humans must realize that, as he says, "All the creative processes of the biosphere, including the human ones, may well come to an end if we cannot find a way to determine the limits of human destruction and intrusion which the

biosphere can tolerate, and learn how to creatively manage the biosphere" (112). His goal then, for ecocriticism, is to "find that ground upon which the two communities – the human, the natural – can coexist, cooperate, and flourish within the biosphere" (107). Many theorists as well as SF authors support this goal, though as we will see, according to Tchaikovsky's *Cage of Souls* this chance for human/nature cooperation was not purely in humanity's hands but hidden behind their evolutionary mandate.

For Rueckert however, this common ground lies in the recognition of our shared creative birthright, the comparison of a poem to a green plant, both of which store up energy that would otherwise be lost and build something with it. Because of this, he claims, "Properly understood, poems can be studied as models for energy flow, community building, and ecosystems" (110). In fact, he claims, literature, and especially poems, actually have a bonus nature does not: they are renewable, "the verbal equivalent of fossil fuels," but unlimitedly reusable (108). This, he says, is the poem's position and power. They act as models that can be viewed, reviewed, taught, and examined. If, he claims, a reader truly recognizes the model of nature presented in poetry, it will change their intrinsic understanding of their own relationship, and common ground, with nature. He suggests that "Reading, teaching, and critical discourse all release the energy and power stored in poetry so that it may flow through the human community" (109). It is time, he insists, that literature leave behind "the concept of the poem… as inert, as a kind of corpse upon which one performs an autopsy, or as an art object one takes possession of, or as an antagonist – a knot of meanings – one must overcome" (110). Literature, in his mind, should be generative, creating and affecting change and discovering "ways of using this renewable energy-source to keep that other ultimate energy-source (upon which all life in the natural biosphere, and human communities, including human life, depends) flowing into the biosphere" (109). SF, as already

seen, takes up this mantel of generating change and exploring new possibilities, and does so by taking in the energy and ideas of the current humanity and releasing them in new ways. Rueckert says that "We need to make some connection between literature and the sun, between teaching literature and the health of the biosphere." (109) And by "make," he means "reveal," because the connection is already there, waiting. Tchaikovsky takes this almost literally when in *Cage of Souls,* the sun, the ultimate giver of life, is dying, and with it everything else. This "everything," Rueckert would tell us, is connected to everything else, and humanity is intertwined whether we accept it or not.

Rueckert's paper ends with a call. He does not provide specific guidelines toward implementation of this goal, even admitting he himself is stopping short of action, "halfway between literature and ecology" (121), but asks the reader how they can, "apply the energy, the creativity, the knowledge, the vision we know to be in literature to the human-made problems ecology tells us are destroying the biosphere which is our home?" (121). Theory must, he demands, like poetry, "generate." The call he gives is to symbiosis, with the hope that, "Perhaps that old pair of antagonists, science and poetry, can be persuaded to lie down together and be generative after all" (107), helping us create a world where we can live in unison, not contention, with nature. If this came about, he says, "It would make the poet and the green plants brothers and sisters; it would charge creative writing and literature with ecological purpose." (120). SF has many times charged itself with such a purpose, revealing the responsibility of humanity towards its planet. In *Cage of Souls,* however, humanity has lost its chance to be "brothers and sisters" with the green plants, but they have to watch as the Earth finds new siblings for its more peaceful creations. Rueckert's call, in Tchaikovsky's world, goes unheeded, at least where it

could have made a difference, and Tchaikovsky asks the reader to consider why, and if this is an inevitable attribute of human existence.

In the present world though, in the years that have followed Rueckert's publication, many theorists have answered this call. Rueckert's paper ignited what would become many approaches to the combination of science and literature, to the point where, in 2021, the editors of the journal "Contemporary French and Francophone Studies" declared that "…ecocriticism is, arguably, less a field than a confederation of subfields, less a methodology implicating a set of corpus than a web of disparate concerns that inflect diverse styles of reading, writing, and thinking" (Hollister 3). There have been many revisitings, redefinitions, and intersections by other theories and schools of thought, with many various goals in mind. All those who "work towards this non-hierarchical way of thinking" (Hollister 7) can find common ground with ecocriticism. Rueckert's ideas attracted the attention of many other theories, such as feminism and postcolonialism, that saw common goals, making the editors explain that "Ecocriticism is not a method; it is instead closer to a principle of non-organization, a coexistence which coheres due to a recognition of the dynamic interconnectedness of concerns" (Hollister 5). In at least one sense then, Rueckert's theory has revealed interconnection, whether or not a connection to Earth will be found in time to avoid Tchaikovsky's predicted future.

4.3 Greg Garrard – Political Implications

Greg Garrard explains that because of this interconnectivity, ecocriticism has become a highly political theory. It has potential to directly impact society by uniting people around common goals, so most participants engage in the discourse from various political points of view, and with various political aims (19). Garrard's own definition paints ecocriticism broadly as "The study of the relationship between the human and the nonhuman throughout human

cultural history" (5), with the goal to "define, explore, and resolve ecological problems" (6). This study is necessary because, as he puts it, "Environmental problems require analysis in cultural as well as scientific terms" (16), and he hopes that this analysis will reveal, "'culture' and 'nature' not as distinct domains in a hierarchical relationship, but as pervisional fictions that are thoroughly interwoven" (17). This breaking down of hierarchies, and revealing how they are fictionally constructed, can serve many political aims, ranging from denial that humans can have any major impact on nature to lobbying for the erasure of humanity as a species (Garrard 6), and it is also an integral element of many SF works, including Tchaikovsky's, where political systems, such as utopias or dystopias, set arbitrary hierarchies or perfect visions of natural unity, all of which makes science fiction an excellent pairing with ecocriticism.

4.4 Wendy Wheeler and Biosemiotics

Rueckert's work is the base on which many have built. One key addition to the theory of ecocriticism, which is of importance in this paper, comes in the form of Biosemiotics, the theory that instills all life, not just human life, with the communicative ability to generate information and meaning. According to Wendy Wheeler, in her article "The Biosemiotics Turn: Abduction, or the Nature of Creative Reason in Nature and Culture," human culture is not a creation purely of humanity but of the natural environment intra-acting with and within it. The biosemiotics turn, Wheeler states, is this realization that nothing is random; everything comes from a series of meaning making events. It is, in her words, "The observation that *all* life – from the cell all the way up to us – is characterized by communication, or semiosis" (Wheeler 270). Wheeler argues that all meaning or understanding that we have, currently, as individuals or cultures, comes from interpretations of these communicative events. She says that "What goes on *inside* an organism, and *between* an organism and its environment (the two processes being intimately connected),

always involves what, for lack of a better word, we must call interpretations – however minimal" (Wheeler 271). Therefore, the information, knowledge, and knowing that exist in human culture is but a representation of human interpretation of the information created by the living world around them, with which they are in constant, if unknowing, interaction.

This "turn" has, Wheeler says, "led subsequently to the observation that the biosphere is also the semiosphere. What a creature (as instance of a species) recognizes, or knows (and compares), are the signs in its environment which are necessary to its survival (and, thus, to its species' survival)" (Wheeler 272). According to this theory, information and meaning are essential to survival, and all living creatures, plants and animals, create, interpret, and use this information. This implies that the human ability and propensity to seek meaning and generate information is just an unusual intensification of a very natural tendency. This demands the realization of the world as "alive," creating and interpreting meaning in a constant web of action, and when we see this life, we have no choice but to recognize the mind and agency of all that surrounds us. This, she claims, is a major shift in perspective, "Encountering ourselves as semiotic animals, more susceptible than we know to a world perfused with signs, we encounter mind in all its reverberations in the world" (Wheeler 277). This encounter with "mind" brings with it a requirement for a "non-naïve responsiveness to the world" (Wheeler 277), when humanity can no longer pretend to exclusivity of agency in the universe, or even to sole agency in its own existence, and must recognize its own interpretations of the world around it, and consequently how the world also interprets human existence. Wheeler says that "This insight, which places humans back in nature as part of a richly communicative global web teeming with meanings and purposes, and which makes human culture, and thus technology, evolutionary and natural, should be of particular interest to ecocritics" (Wheeler 270). It is also of interest for SF

writers, and for Tchaikovsky in *Cage of Souls*, this concept suggests that if humans are destructive of the planet, some of the root causes may lie not with humanity alone, but also with the rest of nature. Humans, along with all other lifeforms, are what they are because of the natural evolutionary processes of the world around them. Even the human tendencies, therefore, that destroy the environment, are a result of the evolutionary forces existent in that environment.

In the end, Wheeler connects this back, as Rueckert does, to the power of writing, saying, "It is in literature that we are still reminded, in our own disenchanted modern time, of the conjuring power of signs in the making of worlds" (Wheeler 279). As with Rueckert's poem, Wheeler's literature stands as a model for the creative and interpretive acts of nature. Wheeler says that, "I think it must be clear that all biological systems are relational – that is, informational – systems" (Wheeler 271), suggesting that a return to this view of nature as a constant, generative intra-action, would help us solve the dilemmas of ecology that plague our world today – returning the human consciousness to its rightful place amidst, not separate from, nature.

4.5 Iovino and Oppermann and Material Ecocriticism

While Rueckert and Wheeler argue for coexistence between human and nature, one branch of ecocriticism, Material Ecocriticism, wants to go a step further, blurring the lines between the two categories to show that there was never any real distinction. Biosemiotics provides an insight into Tchaikovsky's interconnected world, but Material Ecocriticism is the final step needed to truly explore it. Outlined by Serenella Iovino and Serpil Oppermann in their *Material Ecocriticism,* this theory demands a rethinking of the human position and agency on this planet and in this universe, positing that all matter, living and non-living, acts and interacts with all other matter, forming "stories" (Iovino 7) that playout through each other, which can be read both through their representation in literature and their actions in the real world (Iovino 9).

This means, ultimately, that distinctions between types of matter are constantly renegotiated through these actions. It follows then that humans, while many times defining themselves as separate from other elements of the natural universe, are in fact nothing more than the current result of innumerable actions and intra-actions brought about by all the matter both within and without their bodies.

A key difference here, when comparing to Wheeler's theories of biosemiotics, is that living organisms no longer hold all the agency in interactions. Iovino and Oppermann explain that, "… New materialist thinkers invite us to reconsider the categories of this world" (Iovino 3), adding into consideration the agency of all matter, not just 'living' matter, and revealing how "discourses about the living world, though necessary, are per se insufficient, if separated from their broader material substratum of inanimate substances and apersonal agencies" (3). As Rueckert said, everything is connected to everything else, but in this case, the "everything" in question has become much, much broader, encompassing all matter in the universe. Iovino and Oppermann argue that agency, meaning, and purpose are everywhere, not just in living organisms, and that it is the interactions of all these meanings and purposes that have formed life as we know it. They say:

> In other words, not everything that happens in this world and interferes with living systems is "alive" in the biological sense. Agency assumes many forms, all of which are characterized by an important feature: they are material, and the meanings they produce influence in various ways the existence of both human and non-human natures. (Iovino 3)

Humans are not, they would argue, separate in any meaningful way from other livings organisms or even from the bedrock on which we all live, but exist as a collection

of influences, interacting with other influences. All are connected, intertwined. Iovino and Oppermann continue:

> Agency, therefore, is not to be necessarily and exclusively associated with human beings and with human intentionality, but it is a pervasive and inbuilt property of matter, as a part and parcel of its generative dynamism. From this dynamism, reality emerges as an intertwined flux of material and discursive forces, rather than as a complex of hierarchically organized individual players (3).

Therefore, when Tchaikovsky's work implies Earth's culpability in its own demise, and that of humanity, it is not only rhetoric, but Material Ecocritical theory. Earth, and all its matter, was integral in the development of humanity, therefore it shares the blame for humanity's actions. This interconnectedness of interest, blame, and meaning dismantles hierarchy as Material Ecocriticism attempts "to shed light on the way bodily natures and discursive forces express their interaction whether in representations or in their concrete reality" (Iovino 1). These expressions of interaction are the stories told across nature, and discovering them means that, "It is quite arduous for humans to declare their agentic independence in a hybrid, vibrant, and *living* world" (3). Such declarations of independence are often shown in science fiction to be the root cause of many of our ecological disasters, and are shown as such in *Cage of Souls*, but for Tchaikovsky, this independence can be synonymous with exile, Earth and humanity rejecting each other. Serenella Iovino and Serpil Oppermann would argue that such declarations, while they do impact perspective, are ultimately fantasy, teaching instead that, "the world's material phenomena are knots in a vast network of agencies, which can be "read" and interpreted as forming narratives, stories" (2). There are no "isolated" phenomena in their minds. Knots imply many strings, stretching off into the distance. Humanity sees itself as a single, everlasting entity,

when in reality it is but a chance "knot" of meaning, a "phenomenon," one of millions of stories written by the matter of the universe. For many, this means that humanity must learn to respect the other stories of nature, and rightfully so, but in *Cage of Souls,* this means only that humanity had no choice, that its story was already "written in the stars" (Tchaikovsky 74). No matter the case, these stories are what material ecocritics look for in texts. In this vein, Iovino and Oppermann propose that:

> The emerging dynamics of matter and meaning, body and identity, being and knowing, nature and culture, bios and society are therefore to be examined and thought of not in isolation from each other, but through one another, matter being an ongoing process of embodiment that involves and mutually determines cognitions, social constructions, scientific practices, and ethical attitudes. In this perspective, there is no simple juxtaposition or mirroring between nature and culture, but a combined "mesh." (Iovino 5)

The necessity of this analysis is clear, Iovino and Oppermann argue, because, "What lies behind the nodes of the ecological crisis—pollution, mass extinctions, poverty, enslavement of humans and animals, and many other forms of oppression—are tangles of natures and cultures that can be unraveled only by interpreting them as narratives about the way humans and their agentic partners intersect in the making of the world" (Iovino 6). For this paper, this means that any attempt to distinguish humanity, even for blame, is impossible, and must instead take into account all other threads and stories of existence impacting them. Recognizing the existence and validity of these stories, and their intersection with humanity, may help break the hierarchical, dichotomic mindsets that have led to the ecological issues of the modern world. This recognition

also, then, brings with it the question of if these other forces must be taken into account if humanity is to bypass these destructive tendencies.

Everything can be seen, to the material ecocritic, as, "phenomena coemerging from these networks of intra-acting forces and entities" (Iovino 7). It should be impossible to view the world this way and not change the way one interacts with the environment, both living and non-living. "Seen in this light," they say, "every living creature, from humans to fungi, tells evolutionary stories of coexistence, interdependence, adaptation and hybridization, extinctions and survivals" (Iovino 7). In *Cage of Souls,* Tchaikovsky reveals two very different evolutionary stories, that of humans and the new species that will take their place, but both are evolutionary; neither has stopped being influenced by the matter of the universe. One was just set up to fail.

Human survival, then, is just one of many "stories" of matter, and one written by many authors, most of whom were not human, or even necessarily alive. Iovino and Oppermann drive this point home by instructing the reader to "Think of our planet: the transformative stories built by telluric powers, magnetic forces, clashing and melting elements, and dawning forms of life extend the past of the earth into our present, determining the way all beings articulate their relationships to the world" (8). Tchaikovsky also asks the reader to look to the planet. For this paper, this means that the earth had its say in human development, and it continues to do so.

This, again, is the shift material ecocriticism makes, "Proposing that we can read the world as matter endowed with stories" (Iovino 20); nothing developed in isolation. This leaves humanity with "A vision of the world's phenomena as being in constant "relation" with each other" (Oppermann 22). No matter lacks agency, only representation; humanity cannot ignore the creativity of matter, and Oppermann argues for, "the idea of creative becoming as the most conspicuous characteristics of material entities" (Oppermann 24). Rueckert's creativity is

extended then from green plants to all of matter, with the goal of inviting the reader into, "empathy with all objects, human and nonhuman entities, and forces that constitute the matter of Earth within which human and nonhuman natures intertwine in complex ways" (Oppermann 27). These stories are not just humanity's past, they are its present, as Iovino and Oppermann explain, saying, "In the same way, all matter—even the one that we do not see, sense, or suspect—constantly interacts with other matter, whether in human or nonhuman forms" (8). These interactions are invisible, inevitable, and inescapable, and humanity, far from being isolated in nature, is thoroughly intertwined with it. Iovino and Oppermann would agree that the separation shown, in much of literature, to be the root cause of earth's destruction is no actual separation, but simply a lack of awareness of interaction, and that this lack of awareness is a uniquely human trait.

4.6 Hannes Bergthaller and Autopoiesis

There are some who would complicate this interpretation, however, or at least say that if this is the case, then this human trait, the tendency toward a delusion of isolation, is a direct result of the matter that impacts us constantly. Hannes Bergthaller, in his work, "Limits of Agency," suggests that this claim of complete intertwining might be an idealistic generalization missing many important factors. He argues that all life, in some fashion, automatically distinguishes itself from the rest of nature, severing certain ties to limit the impact of certain interactions. It is the very fact that all of nature produces information that makes separation and self-distinction necessary, otherwise the myriads of universal influences would be overpowering. He gives the example of ants, whose entire system of communication relies on the ability to ignore certain scents and chemical smells in favor of their own unique pheromones. This is not an ignorance of interaction with other scents, but a decision not to be impacted by them, severing

that interaction. They go the rest of their lives, and the rest of their species' lives, forever disconnected from direct interaction with the information created by the rest of nature (40-42). Humans, it could be argued, have just done this to an extreme degree, blocking out certain stimuli strategically to focus on the stimuli of forward progress. It could also be argued that this is still natural – an instinct for survival shared by many species; it is what life does and how it distinguishes itself from non-life and other forms of life. Human nature, as directed by all the stories with which it is intertwined, has just taken it further than any other species.

Bergthaller argues that material ecocritics, "in their effort to overturn the old anthropocentric and mechanistic ontologies… have pushed into the background the problem of how sharp ontological and ethical distinctions can emerge immanently, as a result of material self-organization" (39). He references the theory of "autopoiesis," systems that generate and maintain themselves. He says that theories of autopoiesis:

> …foreground the constitutive function of boundaries and offer an account of their emergence compatible with the ontological premises of the new materialisms; by the same token, they expose the limitations of an expanded concept of agency that does not take the full measure of this problem… as to highlight that in living beings, self-organization is predicated on self-limitation. (39)

This self-limitation is what material critics often see as ignorance or a lack of awareness. In Bergthaller' s view however, it is natural and necessary to allow for a species to act as an autopoietic system, meaning that, "a species is what it is because it can distinguish between itself and its environment, between inside and outside. It is only on the basis of this primary distinction that it can generate internal ordered complexity, maintain its own structure, and achieve a degree of autonomy from the environment" (43). Therefore, once an organism's system is influenced to

isolate, the process repeats, strengthening the isolation and self-recognition. As Bergthaller says, "This process is circular and self-referential, in that the system's structure is produced by its own operations, which are themselves conditioned by the structure. Self-referentiality means that the system, as long as it persists, can refer to its environment only by simultaneously referring to itself, that is, by regenerating its own constitutive elements and thus continuing its autopoiesis" (43). Humans, it could be said, have been so long aware of their distinction from other forms of life, and have isolated so many of their own unique signals, that their system is all but impregnable. In light of material ecocriticism though, it must be noted that this is evolutionarily natural – and that the first influence to isolate came from the universe itself. Bergthaller continues, "Autopoietic systems can therefore be described as operationally closed. How such a system responds to changes in the environment depends on the system's own evolved structure rather than on external determinants. The system itself "decides" which aspects of its environment are relevant to it." (43). Humanity, in his view, is a closed system because it needed to be. This, of course, does not mean that it is not a problem, or the root of many of the ecological problems faced by modern humans, but it does mean that, ultimately, it is not entirely their fault. This self-referentiality is built-in, by nature, to all living organisms, and something in nature allowed, or even forced humans to take it to an extreme.

4.7 "Becoming Animal" – Deleuze, Guattari, Lussier, and Baker

Deleuze and Guattari explore this theme, albeit in their signature poetic, idiosyncratic style, under the label of, "Becoming," and specifically, in this case, "Becoming-Animal" (308-309). They argue that all matter in the universe is in a constant state of "becoming" what it is, and it is the self-identification of what one is becoming that determines one's interaction with the cosmos from the broadest sense of "becoming molecule," which encompasses everything in the

universe, to the much more narrow sense of "becoming-human," which excludes almost everything else in the universe. They argue for a reversal, saying that true connection with nature means the broadening of the becoming, "deteritorializing" existence (309), breaking down blockages to the worlds influences and stories, moving from becoming-human to becoming-animal.

If identifying as human is the cause of separation, it could be said that it is recognition of self, taken to an extreme degree, that makes humans dangerous to the rest of the environment. Mark Lussier takes this even further, following in the footsteps of Deleuze and Guattari to say that any "…problem confronting any act of ecological engagement, then, can be found closer than one might imagine, in self-consciousness itself" (Lussier 257). This is to say that it is the fact that humans gained consciousness at all that ultimately led to this extreme separation from nature, this ancient first act of self-recognition igniting what has become an ecological blindness to our interdependence on nature. Consciousness itself, Lussier claims, is the root of the issue.

Following this line of thought, Steve Baker, in "What does Becoming-Animal Look Like?" makes Deleuze and Guattari practical by explaining that the reason animals interact with nature in a more symbiotic way than humans do is precisely because they are less conscious of their own identity, and he recommends, "Devising a means of unselfing, of becoming-animal…" (Baker 16) in an effort to return to this symbiosis. He calls for removal of barriers when interacting with nature, experiencing hostile habitats from within (69), recognizing one's own existence as current moments of movement not categories of future potential (77-80), embracing moments of intensity which sweep one along without rationality (74), and avoiding taxonomizing observations of the world, instead allowing "mundane misrecognitions" (93) of natural creatures, experiencing the beauty of individual moments of movement and "sloughing

off preconceptions and recognizable identities, and … discouraging anthropomorphic identifications" (95). In this "unselfing," the natural world becomes not a collection of species against which to compare one's one identity, but a series of moments and "intensities" (74) that are shared and interpreted from a position within nature. Tchaikovsky will provide a comparison between humans and a fictional species that has a less isolated system, exploring the human ability, or lack thereof, to return to this symbiosis, and he is not optimistic.

In light of these ideas, biosemiotics, material ecocriticism, autopoiesis, and the rise of self-recognition, this paper will read *Cage of Souls,* examining the depiction of human/nature intra-action, forced dichotomies and dualisms, severance from nature, and the role of consciousness in these actions, to explore the suggestion that humanity was doomed to go extinct on Earth and that the blame for their own destruction of the planet is not solely to be laid on their shoulders. This paper will explore Tchaikovsky's work, looking for evidence that humanity's consciousness ultimately led to their drives for anthropocentrism instead of interconnectivity, and that it is this isolation and distancing that eliminated any chance of their evolving to survive as the universe changed around them. It will show how *Cage of Souls* depicts a humanity that had no hope of avoiding extinction, while other species were given a chance, and it will analyze this depiction to reveal an argument against traditional discourses of blame and a call for a turn towards a new paradigm for the human/Earth relationship.

5. The Potential for Post Colonial/Ecocritical Intersection

Material ecocriticism, especially in light of autopoiesis, creates a natural breeding ground for dichotomies and hierarchies as species categorize the world with themselves at the center. Rueckert alludes to this in his discussion of human anthropocentrism and exploitative tendencies. The exploration of dichotomies and hierarchies very often reveals underlying structures of power

that perpetuate them, and while ecocriticism on its own does not overtly focus on these power structures, they are implicated in much of the destruction wrought by human culture. Therefore, one final addition to the ecocritical framework is in order: the post-colonial, which explores "colonialist ideologies and processes" within a text (Ashcroft 202). Rob Nixon prescribes this alliance, that of ecocriticism and post-colonialism, in his book, *Slow Violence and The Environmentalism of the Poor.* He begins by presenting his ecocritical lens of "Slow Violence," examples of which are, "Climate change, the thawing cryosphere, toxic drift, biomagnification, deforestation, the radioactive aftermaths of wars, acidifying oceans" (16), all of which he describes as, "violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all" (Nixon 16). Violence, Nixon claims, is conceptually linked with power, and he makes the point that these examples of slow violence against the planet are very often perpetrated by the rich and felt most by the poor, intertwining the destruction of the environment with power structures, and power structures are the realm of the post-colonial critic. Tchaikovsky discusses this concept during Chris Alvarez's interview on *Cage of Souls,* saying that, "I see that short-term commercial gains are going to out-way long-term survival gains up until the point where the planet won't survive" (41:00-41:45). These tendencies, while too small in Tchaikovsky's future to make a major impact on the planet, are still driving forces in what remains of humanity and loom large in their past as painted by the novel's narrator.

These power structures are formed around dichotomies, and specifically, according to Ashcroft et. Al., "one underlying binary – colonizer/colonized" (33). As they explain in *Post-Colonial Theory: The Key Concepts,* "The binary logic of imperialism is a development of that tendency of Western thought in general to see the world in terms of binary oppositions that

establish a relation of dominance" (33). It is not a major step to connect dominance over nature to dominance over other humans, or to connect these cultural binaries to the human/non-human binary revealed through ecocritical lenses. If this is the case, then many of the binaries to be explored in *Cage of Souls* may be seen to support colonial/imperial mindsets as well, and therefore, a joint use of the post-colonial and ecocritical may be useful in examining both the binaries and their impact on the planet, as well as how human connection to the planet gave rise to these post-colonial tendencies. Alfred W. Crosby in 1986, coined the term, Ecological Emperialism to "describe the ways in which the environments of colonized societies have been physically transformed by the experience of colonial occupation" (Ashcroft 94). The fact that so much of the planet in *Cage of Souls* is polluted and abandoned, and the only remaining settlements work in a colonizer/colonized dichotomy, implies that much of the destruction came from this mindset.

Some other key elements of post-colonial theory that also apply to the novel are that of metropolis, speciesism, anthropocentrism, and the "other." According to *Post-Colonial Studies: The Key Concepts, "*'Metropolis' is a term used binaristically in colonial discourse to refer to the 'centre' in relation to a colonial periphery" (Ashcroft 151). Shadrapar in *Cage of Souls* is by default the metropolis of the human race as it is the only city remaining, and yet it has one "colony," the island, which despite its designation as a prison, does also provide the center with resources needed for the continuation of life as it exists within the city, even though the inhabitants of Shadrapar have little or no perception of what happens in the periphery of the island.

Anthropocentrism, which is the placing of humanity at the center of the universe, can be seen clearly in *Cage of Souls* in the discussion of the jungle and the treatment of the creatures

within it, especially the "web children," who will be discussed in section 8.7. Ashcroft et. Al. say that "Perhaps the most significant change in the orientation of the humanities in the second half of the twentieth century has been the questioning of a once taken-for-granted anthropocentrism" (95). They explain that, "It is only relatively recently that the disciplines of, for instance, history, anthropology, philosophy, literature and cultural studies have begun to reclaim the 'natural' environment as crucial to the understanding of human 'being' (both past and present) and as of intrinsic worth" (96). They note, however, that the impact of anthropocentrism on the natural environment has only recently been studied, and that this has been integral in "the increasing recognition that the more-than-human is indissolubly interwoven with the human past, present and now future" (96). For the post-colonial theorist, "this increasing emphasis on the 'more-than-human' is environmentalism" (96). It is helpful, then, to look at the "more-than-human" through a post-colonial lens as well as the ecocritical, as it will reveal the cultural, not simply the scientific, separation brought about through anthropocentrism.

Anthropocentrism is one side of a coin shared with, "Speciesism," a term created by activist Peter Singer, "to designate the belief of most human cultures that they are superior to and very different from other animals" (234). He argues that "This belief enables humans to justify their killing, eating, abuse, enslavement of and experimentation on non-human animals" (Ashcroft 234). This too is seen in *Cage of Souls,* but in a slightly new way. Humanity in the novel is so far disconnected from the rest of nature that they have actually given up all interaction with animals, other than extermination. There is still the belief, however, that humanity is superior, which, as Nixon would suggest, could lead to the slow violence of ecological destruction.

Both anthropocentrism and speciesism are fueled by "othering," which Ashcroft et. Al. describe as "the social and/or psychological ways in which one group excludes or marginalizes another group" (Ashcroft 184), which in turn is based on the concept of the "other," or "anyone who is separate from one's self" (Ashcroft 182). This recognition of the other is important to theories such as autopoiesis, as it allows for the building of an identity based on what one is *not*, on comparison. It does also, however, allow for the psychological tendency to consider the "other" as less than oneself, as can be seen in anthropocentrism and speciesism, where the human perspective becomes seen as the only perspective, or at least the only one with value.

This post-colonial addition is also important as any discussion about human tendency, positive or negative, involves generalizations, often based on the experiences of certain groups, usually those in power, and ecocriticism is no different, guided in many cases by the philosophies, values, and beliefs of Western cultures. While it may be impossible to fully escape these biases in the analysis, the pairing of the postcolonial with the ecocritical presents a safeguard against unchecked generalization. Jennifer Horwitz, in "A Mighty Cooperative: Postcolonialism, Ecocriticism, and Place-Based Pedagogy," defends a unity of the postcolonial and ecocritical, which serves to challenge the "hegemonic strand of environmentalism," that was, as she put it, "dominated by a Euro-American epistemology that put forth romanticized imaginings of pristine nature and prioritized wilderness conservation" (410), a view which is critiqued in *Cage of Souls,* where Earth is just as imperfect as the humanity it raised. Ecocriticism then in turn empowers post-colonialism to reveal how colonial mindsets are "dependent on land theft, resource extraction, and the degradation of Indigenous cosmologies with devastating consequences for people and the environment…" (410). Horwitz reveals that many of the positions in ecocriticism were based purely on western philosophy and did not take

into account the western mindset's role in destroying nature, and she argues for a joint effort of ecocriticism and post-colonialism to highlight this gap. This unity has formed the new field of post-colonial ecocriticism, which she claims is "uniquely positioned" to expose "past and present environmental and racial injustices" (411). Nixon asks the question, "What would it mean to bring environmentalism into a full, productive dialogue with postcolonialism?" (Nixon 253), and he says that "A radically creative alliance between environmental and postcolonial studies can help… to foster imaginative coalitions that may help redress environmental injustice" (Nixon 277). This concept of justice adds to the simple "awareness" of ecocriticism, pushing not just for revelation but for retaliation against the power systems that perpetuate the misunderstandings and the destructions they cause.

Istvan Csicsery-Ronay, Jr., in his essay, "Science fiction and empire," connects the post-colonial directly to science fiction, paraphrasing Philip K. Dick's character Palmer Eldritch: "imperialism promises the stars; sf delivers" (446). Imperialism builds a vision of a world that can, and should, be conquered and controlled, and in many cases science fiction, especially early science fiction, simply expanded that vision to new planets or empowered it with new technology. Either way, "the fantasies were quite similar to the ideologies of mastery that inspired imperialist adventurers and colonists" (446). This can be seen many times in the concept of the frontier, "a boundary or a limiting zone to distinguish one space or people from another" (Ashcroft 122), as well as the desire to explore and "discover" what was, "invariably already known to local indigenous peoples, many of whom led white explorers to local landmarks, rivers and sources of food that enabled them to survive. Yet these discoveries were credited to the European explorers as though such places had not existed beforehand" (Ashcroft 113). This boundary of science fiction itself is critiqued in *Cage of Souls,* where the jungle is

most definitely an unknown frontier, and it is explored by the mystical character Trethowan, a scientific explorer who maps and documents the jungle and its life. He is most certainly an adventurer credited with many discoveries, and Stefan Advani has read his research, though when the two meet, the folly of such exploration and documentation in a changing, living world is revealed in what could be considered a post-colonial critique of the Western adventurer.

As can be seen, the ecocritical and the post-colonial often overlap. The post-colonial looks at dichotomies formed by the human tendency to exploit each other while ecocriticism looks at dichotomies formed by the human tendency to exploit the natural world. Both explore relationships between individuals, society, and the larger context, and both attempt to bring to light realities about the world that have been covered up by previous philosophies or worldviews. In many cases, both look for examples of agency among groups separated from each other by constructed barriers and explore what these separations do to impact this agency, and how this agency impacts the separation of the groups. Both, however, have also traditionally put all the blame on humanity for these dichotomies and separation. This paper will explore how Adrian Tchaikovsky, without discounting the destruction humans have done, reframes this in a plea for realistic, non-idealistic connection to nature (and thus to each other), and for a progress forward, not a return to some utopian ideal of the past.

6. A Note on Extinction:

It could be assumed that extinction, of all the concepts to be explored in *Cage of Souls*, is a fairly cut-and-dried one. It should be noted however, that in the context of new materialism, and ecocritical thought in general, the term has diverged from the simple death of the last remaining member of a species and has become more complicated, not limited to a single event, time, or space. In a world where interactions are incessant and everywhere, there is potential for

the impacts of a species (if the concept of species is assumed) to continue well after the death of its last member or even end well before it. This point is argued in Luke Donahue's, "Survival and Extinction: Deconstruction, Extinction Studies, Paleontology," when he says that:

> Scholars associated with Extinction Studies privilege sympoetic and bisoemiotic braids and fabrics. They insist that partial linkages among species (among their genetic sequences, internal cellular and bacterial life, developmental processes, morphological and behavioral traits, epigenetic and cultural inheritances, and modes of reading, registering, responding and recreating) convene to hold a species together while guaranteeing that that species is not a bounded identity but an entangled and disseminated knot. (Donahue 924)

These knots are what Iovino and Oppermann describe in their work on material ecocriticism, and they make extinction complicated. As Anna Lowenhaupt Tsing, et al. describe in their introduction to, *Arts of Living on a Damaged Planet,* extinction is not just a matter of "the loss of individual species but of assemblages" (4). As Donahue explains, "If species are their involution with other species… then that which goes extinct cannot be simple species, but in-definite and borderless entanglements" (924). Species, then, do not simply vanish, but fade and even evolve out of existence. It is also not only the species that fades, but all its implications for the future, meaning that in an extinction, "What is lost in not only what was, but its past and future" (Donahue 925). When a species goes extinct, it also takes with it all the potential entanglements it may have been a part of in the future and cuts off entanglements that have been winding up from the past. This paradoxically means that, "The extinct remains by cascading, affecting after the fact other species entangled and coevolving with 'it'" (Donahue 925), so extinction is not a single event, but a series of "unravellings" (Donahue 926) as all the impacts of

the species disappear, through which process the extinct species can remain long after the death of its last member, as its presence is felt in the entanglements that have still not yet unraveled.

This also means, however, that there is potential for the impacts of a species to disappear, for the species to go "extinct," before the death of its final member, if the ties connecting it to other species are severed early, as Donahue describes:

> Less intuitively, there is a sense in which extinction occurs before the death of the last living organism of a taxon. Scientists use the phrases "dead clade walking" and "extinction debt" to name "species committed to eventual extinction following a forcing event," such as geochemical upheaval, sea level rise, or bolide impact. Of course, the eradication of a taxon's conditions of survival cannot program extinction in a deterministic manner. (Donahue 931)

This means that there are events that will set in motion an extinction, a severing of entanglements to a degree from which a species cannot recover, unless an evolutionary step is taken, as Donahue clarifies that, "An extinction-bound taxon can always happen to develop a beneficial adaptation; or, conditions can change to its benefit. When scientists speak of extinction debt and dead clade walking, they are speaking of probabilities rather than biological certainties" (931).

The inevitability of human extinction is a key topic in *Cage of Souls,* and one that plays heavily in my thesis, as I argue that *Cage of Souls* reveals a humanity doomed not only by "forcing events" (Donahue 931), but also by the inability to evolve a "beneficial adaptation" (931) required to survive them because of human nature, which is the result of Earth's influences in their development of consciousness. I will be exploring

Tchaikovsky's depiction of the human mind's reaction to the knowledge of inevitable extinction, which is a topic that others, such as James Lenman, have also been exploring in a nonliterary context. Lenman, in "On Becoming Extinct," asks the question, if it is assumed that humanity will go extinct no matter what, does it matter if human extinction happens sooner rather than later (254)?

Lenman compares extinction to the death of the individual. He says that while all death is considered undesirable to humans, the death of an individual to old age, after living a full life, is seen as much less tragic than death of an individual at a young age. He argues that this comes from a "notion of the narrative shape of a full human life" (254), with a beginning, middle, and end, and if this narrative is played out fully, there is less sadness in its end. This narrative view can be traced back to autopoiesis and biosemiotics, where humanity has developed a uniquely specific ability to prioritize and interpret its own stories in a linear format, which also falls in line with Rueckert's claim that literature, a manifestation of human narrative, is a natural occurrence, akin to a plant's ability to grow a leaf.

Lenman explains that, to some extent, extinction can be seen as a macrocosm of individual death – the death of a species - and he says that humans may have a unique relationship with their own extinction, because, unlike other species, "not only do individual human *lives* have a certain narrative structure but so too, given our unique endowment with language, writing and culture does human history" (259). He then argues that perhaps extinction is seen as a bad thing, despite its inevitability, because, "when we think of the prospect of human extinction, perhaps we think of it as an evil in the same way we think of the premature death of an individual as an evil" (259). He then goes on to say that it would, however, be "implausible to suppose that human history – or that of any species – has a natural narrative structure in the same

way as a human life" (259). He argues that, without a collective end goal (which is something humanity has never reached a consensus on), there is no real way of determining a beginning, middle, or end of the species' story, and thus extinction will always be seen as an evil, as for the perspective of those who make up the final generation of humans, the time will always be seen as being cut too short (259). Humanity's unique interpretation of their own story, a trait developed by universal actions, has given their future an unusually dominant place in their consciousness, whereas most animals, as Baker explains, live in the moment. This also means that for most humans, extinction, although ultimately inevitable due to the laws of physics, will either be seen as in the distant future of our human story or, for the unfortunate final few, as a tragic foreshortening of the narrative.

All of this, however, supposes no great end goal, and no way of knowing that it will never be reached, and thus no notion of the human story "coming to an end." As mentioned in the introduction to this paper, however, Tchaikovsky, in *Cage of Souls,* does present a "universal" human goal, that of exploring the universe, finding others like us, and sharing our knowledge. He also, however, presents a clear realization that it will never be realized. Humanity, therefore, in this novel, is able to recognize its own "extinction debt" (Donahue 31), from both pollution and the swelling sun, and thus foresee the end of the human "narrative" and perhaps lose the desire to fight for survival. The main point to be noted here, then*,* is that while extinction very rarely impacts individuals in a species directly, for a closed autopoietic system such as humanity, who can recognize themselves in the universe, it would create a subtle, yet crippling, overarching sense of incomplete purpose that could never be fully escaped.

7. The Framework

7.1 Overview

Adrian Tchaikovsky's *Cage of Souls* is a science fiction story set in a distant future, on an entirely polluted Earth, and in a solar system whose sun's slow death is scorching the planet. The main character, a convict whose scholarly upbringing leaves him poorly equipped for the prison system, presents this dying world from his own unreliable perspective, telling his story to an unknown audience, revealing the uncertainty of human existence and survival. The prison in this story is a floating island in the center of an ever evolving, and always dangerous swampland of nature reconquering the planet as human dominion slowly fades. The last remnant of humanity is surviving in one last city set in the expanse of a destroyed environment. *Cage of Souls* can be read, superficially, as an adventure novel, where the adventurer must master and conquer a new, menacing environment, except that it is set in our own world where ultimate survival, for humanity, is no longer an option. The certainty of extinction (either from the sun or because of pollution), is ever present. Even while the reader cheers for the character's success, the constant knowledge in the back of their mind reminds them that it barely matters. Either the universe will destroy humanity, or humanity will destroy itself first. Also, while the novel can be read, accurately, as a critique of human destruction of the planet, a material ecocritical reading also reveals a more subtle, underlying critique, of the universe itself.

This critique suggests that human consciousness, simply one of the innumerable knots formed by universal interactions, is not suited for this universe, as it seeks for narrative identity, rationality, and fixed purpose, whereas the universe demands entanglement, instinct, and adaptation. Human consciousness is revealed as uniquely predisposed to isolation on a planet that generated an otherwise intertwined ecosystem, separating humanity through an evolutionarily forced self-recognition, leading to the projecting of dichotomies and hierarchies and atrocities against their own members and the exploitation of the planet, while at the same

time leading to the erasure of the human ability to evolve alongside nature to survive the changes wrought by the expanding sun. Earth and the universe, in *Cage of Souls,* are agential entities who have brought this consciousness into existence just to have it sit and watch itself die. This chain of events, started by universal entanglements and played out in the human species, made human extinction, self-extinction or otherwise, inevitable, placing humanity in a cage, meaning that the original relationship between Earth and humanity was not perfect and idealistic, as Western environmentalism would suggest, but rocky and flawed, with room for growth. This paper will reveal how, through the lens of a material ecocritical reading, Tchaikovsky's work reveals this cage and shares the blame for its creation between humanity, its planet, and the universe, using the extreme timelines of SF to argue for a shift in the relationship between Earth and humanity, from a mourned loss of utopia, which assumes that a definition of a perfect relationship exists, to an experimental exploration of possibilities within an imperfect situation.

7.2 The 'Cages'

There is no better place to start a literary analysis of a novel than with the title. A reader need not venture far into the novel to realize that, in the untold millennia separating their present from Tchaikovsky's future, humanity is the only species that has not evolved, kept away from the necessary adaptations which Donahue says are the only real hope of any species against extinction, and revealed as trapped, unmoving, and left behind. The phrase, *Cage of Souls,* while admittedly sounding somewhat over-dramatic, is integral to the argument I will be making in this essay; *Cage of Souls* reveals a humanity trapped by its nature, a nature shaped by the planet Earth and the universe surrounding it, and thereby not entirely their fault. The title has five layers of meaning in the story, or, in other words, it represents five different settings that can be seen as a "cage of souls" for this unfortunate species:

- The Universal Setting (The Cosmos)
- The Global Setting (The Earth)
- The Environmental Setting (The Jungle)
- The Societal Setting (The Prison)
- The Corporeal Setting (Individual Bodies)

These cages, emphasized by the SF reach into the future, represent the mistakes in Earth's human experiment. Each of these settings has interacted with the human consciousness, acting upon its unique narrative identity discussed by Lenman to form a cage in which agency is taken from humanity and placed in the setting itself, representing imperfections in in Earth's relationship with humanity and their culpability in its extinction. I will explore each "cage," asking the following questions:

1. What dichotomies or hierarchies are represented? If consciousness and autopoiesis create dichotomy and hierarchy, as Bergthaller's work suggests, then identifying these will be a first step in recognizing separation from nature.
2. What agencies are present/at work in these dichotomies/hierarchies? The result of dichotomies and hierarchies is often ignorance of other agencies, which is the argument made by Rueckert, Wheeler, Iovino and Oppermann, or at least ignorance of the interdependence with those agencies, so analyzing for ways this book intentionally reveals agency despite dichotomy and hierarchy will help reveal humanity's lost connection with nature as well as offer a comparison for humanity's own lack of agency.
3. What role does human consciousness, agency, and autopoiesis play in these dichotomies/hierarchies? After exploring the multiple agencies at work, building a basis for comparison, an analysis of how human consciousness – unique in nature

(supposedly), acts within these dichotomies and hierarchies it created will reveal the consequences of the separation, as well as its (un)suitability for this universe and the roots of its formation.

4. How does this role impact human death and extinction? How does extinction and death impact this role? Not only has human consciousness set in motion the extinction of humanity, but it also allowed humanity to recognize this inevitable end, so consciousness both impacts, and is impacted by, extinction, locking humanity into the a "cage," as the title implies. Comparisons will be made with the roles of other species in the universe to reveal how humanity's consciousness creates Donahue's "forcing event" that makes extinction inevitable, and also removes the chance for the adaptation through evolution that he suggests is the only way to avoid it (Donahue 931).

Through these questions, the material ecocritical reading will reveal a theme of sharing the blame, holding the universe accountable for the role it played in the emergence of human consciousness, without letting humanity off the hook for its destruction, suggesting that human consciousness, something developed in the intra-action of all matter in the universe, isolated them so completely that they could not evolve to survive the changing universe, and must therefore die. *Cage of Souls* presents an ecocritical view of the connection between humanity's consciousness and its home planet, where Earth and humanity are destructive of each other until Earth moves on, leaving humanity to wither. Tchaikovsky is asking a question of why they ever were allowed to develop this way in the first place, and, as I say in the introduction, if there was any way that these two entities, humanity and the planet it calls home, could ever not have been destined to destroy each other? In this way, he also reframes the reconciliation with Earth, called

for by so many SF authors, as only possible in a future transformation, and not in a return to an idealistic past, which he reveals as actually impossibly flawed.

8. Extinction and Human Consciousness in Adrian Tchaikovsky's *Cage of Souls*

8.1 The First Dichotomy

Before exploring each individual "cage" of the novel, a moment should be taken to look at the list as a whole. Within this list is found the first hierarchy in the novel, and the first dichotomy. The hierarchy lies in the intimate control each setting exerts on the setting below it. Material ecocriticism tells us that this control is not absolutely one-directional, but the hierarchy makes sense in terms of the human consciousness, as an assemblage of interactions that can recognize its own place in the universe, in that the individual body appears to have very little impact on the cosmos as a whole, whereas the cosmos as a whole can make a rather big impression on an individual body, with often catastrophic consequences for the consciousness wearing that body. And herein lies the dichotomy, one that appears over and over in this novel – life/death. In each of these settings, a person can either live, or they can die – there is no in-between.

It is this, ultimately, that makes these settings, "cages." For while this dichotomy seems straightforward and hard to argue – Tchaikovsky complicates it by suggesting that the simple fact of being alive is a death sentence. Death is the end of the "narrative" of human life, as Lenman suggests, and Tchaikovsky's world makes that abundantly clear to all who live in it. Being alive is, then, almost the same as being dead. Nature, as we've seen, has agency, but this title, *Cage of Souls,* also gives it intent – incarceration of humanity on a death row. Each of these settings is simply a holding ground for a human consciousness that will, at some point, inevitably, die.

This dichotomy will be revisited in many of the cages, along with others unique to each one, but it is one of the most integral to human existence, intimately tied to their narrative consciousness, and one that has an incredible impact on human consciousness.

8.2 The Universal – The Cosmos

This novel starts with Stefan Advani's journey through his universe. Of course, he would describe it only as a journey through a jungle, and story worthy enough just at that, but as will be seen later in the story, this jungle is but a single "knot" (Iovino and Oppermann 2), in a vast, intertwined universe. Every act of every creature (and molecule, as Iovino and Oppermann remind us) takes place as a part of this vast, inseparable network of influence, and thus traveling through the jungle is traveling through the universe. The jungle itself, as a rather important knot in the story, will be explored in a following section, but early on the reader is exposed to the influence of the cosmos on our main character, and on humanity itself. This universal setting influences two main dichotomies in the human consciousness (and one trichotomy):

1. Known/Unknown
2. Life/Death (Or Non-life)
3. Past/Present/Future

It takes only a quick glimpse at human history to recognize the dichotomy of "known/unknown" present in human psychology. Chris Impey, in his book *Beyond: Our Future in Space,* describes how the desire to explore, to turn the unknown into the known, has been part of humanity since our first step out of Africa. He says that "Animals roam, they seek food, and they expand their range. But only humans have the urge to explore for its own sake. We left Africa, and by 10,000 years ago we had forged better lives for ourselves by taming plants and animals and settling into fixed communities. But curiosity remained. So we harnessed the wind

to sail the oceans" (Impey 262). This desire is part of human identity, and he delves into the unique ability of humans to imagine themselves somewhere else, or to imagine what that somewhere else might look like, or what their "narrative" might look like in it, and he says that "The development of hypothetical scenarios through play isn't needed for survival and the tendency for mental exploration is peculiarly human. Restlessness isn't only in our minds; it's also in our genes" (Impey 10). This inborn imagination, he says, has translated into all forms of exploration, ranging from ocean voyages, to scientific inquiry, saying, "Imagination is one of a human being's most singular gifts, and we've used it to create fully realized worlds in art, music, fiction, and poetry. Science is not just a dry collection of facts and theory – its driven by imagination" (Impey 263). And this inquiry has led humanity, singularly out of all the species on planet earth, to the desire to leave the planet and explore the cosmos. He says that "space travel is an expression of a fundamental human trait: the desire to explore" (Impey xi). In *Cage of Souls* however, this yearning has died out ("Adrian Tchaikovsky 4:15), and the novel reveals how the human tendency toward curiosity was nothing more than a red herring orchestrated by the universe, the first mismatch in Earth's raising of this consciousness, distracting humanity from their place in nature until it was too late. One character in the novel, the governor of the "island," delves into this desire and its tragic impact on human consciousness in chapter six saying:

> 'When the world was young, or so we are taught, men believed that events were guided by the stars, which dictated the fates of individuals and nations. People believed that the stars were a secret language the future was written in. When the world was older and more sensible, it was believed that the stars were our future. Men made machines to take them beyond this world… We peopled the stars with

creatures like us, and set out to meet them. Such boundless optimism.'

(Tchaikovsky 64)

Humanity, the governor reveals, has always looked to the stars, and seen them as an unknown, but an unknown that could be deciphered either mystically or scientifically. But it was not to be, as he continues:

> 'It was all in vain, of course, the machines, the boats and vessels and birds and devices that were thrown up into the night sky… For the stars are very far away, and however fast our machines carried us, it was not fast enough. The gaps between stars are so great that nothing can cross them quickly, not even light, which is fastest of all. We never found a way to skip between the stars, to meet the people we were sure awaited us there. That broke the back of our optimism. The spirit of man was crushed by the distances between the stars.' (Tchaikovsky 64)

Humans, according to Impey, are the one species that looks to the stars, and in light of the Governor's message, this makes them the only species susceptible to the stars' crushing inaccessibility - a species pulled by strings from the stars, trapped on a single rock with no escape. And this leads to the next dichotomy, life and death (or non-life). The Governor continues his lecture, saying:

> 'The one thing we learned is that stars die… Stars waste away or bloat or become fierce and feverish, just as men do when they are ill. And like all men, stars die eventually. Thus the earliest stargazers were proved right after all. The fate of the world is written in the stars, for just as the stars bloat and burst and wither and die, so does our sun, which is no more than a star, after all.' (Tchaikovsky 64-5)

Suddenly, Lenman's human narrative (258) had a foreseeable end. Without the chance to move beyond earth, with the stages of known/unknown unchangeable in the universe, the one dichotomy left was that of life/non-life. This dichotomy has two meanings. First, as the governor described, "we peopled the stars with creatures like us," because our self-recognition taught that humans were separate, different, and they hoped for more life like them, to find that they were not alone. Impey supports this idea, saying, "In a universe built for life, our yearning for cosmic companionship is strong, and we may never realize our full potential as a species if we stay Earthbound" (Impey xii). In Tchaikovsky's future, this was the first failure in Earth's doomed experiment; humanity was never given a chance to reach its full potential. With this version the dichotomy, life/non-life, now dividing humanity from the entire rest of the universe, the dichotomy subtly switched to its second meaning, life/death. Now that life was isolated in one corner of the universe, the only important distinction remaining was life and death, which, as discussed earlier, is only a façade of a dichotomy, one leads to the other, and it is only a matter of time.

It is this time component with leads to the trichotomy also hidden in these quotes. When space was open, a frontier to be explored, time was simply another unknown as Glen Borchardt describes it, "the motion of matter" in the universe. While humanity was "matter" free to move in the universe, or at least when the reality of not being able to move was not yet revealed, then time was measure of where humanity would go – in the future. Once this door was shut, the movement made impossible, then there was no more unknown to be uncovered, the "end" of the movement had been reached, and the future was no longer to be explored, just waited for. The present, instead of a launching pad towards the future, was just a future past, which would eventually be looked back on, until there was no one left to look back on it – the next failure in

the human experiment, its own narrative perspective was inevitably to lead to despair. Gone was the human agency in their future; the stars had taken it all. The governor ends his lecture by saying:

> 'We have no future here… The sun may be a million years in dying, but we will not live to see its end. We are the last remains of a once-great people and we do not look into the sky because we have no wish, now, to see what the future holds. We study the past, instead, and make up stories about how things used to be. The historians do not realise, when they look into the sky, they are looking into the past. The light from those stars is older than you or I, and some of it is older than the Earth. When I turn my lens on a star I see the past, the universe as it was countless years ago. Perhaps I am seeing reflected light shed by our sun once upon a time. I am studying the past because when one is at the end of a road, the only way to look is backwards.' (Tchaikovsky 65)

As Lenman points out, the reason why extinction seems tragic is that is breaks the subconscious human desire for the completion of a narrative (259), and this "breaking" of the human spirit, and their looking back into the past instead of the future, could be seen as a realization that the narrative is being completed in this inevitable extinction. Whereas in the past, there was a belief that the human story could continue in space, the loss of that possibility puts an end to the narrative, and thus removes the tragic nature of extinction, resulting in lethargy, not sorrow, in the face of it. Instead of the instinctual survival Earth has imbued in its other species, humanity was given curiosity, and therefore disappointment. Instead of adapting with the rest of nature, humanity accepts its inevitable end with despair. As Tchaikovsky says in his interview with Chris Alvarez, this story is set in a universe where nature is, "very much kind of fighting

back, and attempting to overcome its own sort of demise in the way that the human race isn't" (45:00-45:15). Both humanity and nature are acting on their own set instincts, but humanity's leads to hopelessness, not survival. Stefan Advani reveals this lack of initiative in humanity when he describes the sun, saying: "I have heard that the sun is dying by degrees, swelling up with some illness and parching the land into the lifeless deserts you find to the west of the city. For the first time, in those jungles, I looked up and saw that it was true. In that disease-ridden place even the sky looked unhealthy" (Tchaikovsky 19-20). There is no shock here, no fear, just resignation. Human consciousness, as Lenman points out, allows humanity to recognize their existence as a story, not just a survival, and thus narrative takes the place of survival instinct. Tchaikovsky reaches into the future to reveal the results of this narrative view. An interesting character in the story, a time traveler believed to be crazy, summarizes this loss of survival instinct, in a way that emphasizes Vint's all important "difference" (Vint 240) between these times. The character says, "'I do not like this time… I am a cosmonaut of Union of Soviet Socialist Republics and I want to be in year nineteen-seventy-two, not in this time of ruins waiting for world to die. I want to be somewhere with hope'" (Tchaikovsky 363). Perhaps this character realizes the roots of this hopelessness in the current space race of their own time, but the reader certainly could, revealing the connection being made between hope and the potential to reach for the stars. When the human story is clearly ending, extinction obvious in a way no other species would recognize it, the natural desire to survive that pervades all other nature is not present in humanity, so it just sits there, trapped in the cage of the universe, waiting to die.

The novel asks the question, as SF is prone to do, of what would need to change between now and this presented future in order to avoid it. As in many SF novels, human pollution and irresponsibility is shown to be destructive, but the ultimate blame for this situation lies with the

universe. If it has been established that Earth, and the rest of the universe, had a part to play in the rise of humanity, then the mismatch between humankind and the universe is not the responsibility of humanity, but of Earth. Agency, at this level, is seen in mass, or distance, or at least size. A human cannot impact the sun, but the sun can impact a human – and a star a million lightyears away can force a human to go mad. While humans believed they had agency in exploring and "knowing" the universe, it was a lie told by the stars.

8.3 The Global – The Earth

While the universe is a cage for the human consciousness because of its vastness, the Earth becomes a cage because of its finiteness. In the geological and evolutionary recycling that characterizes this living planet, there is no room for the permanence which a narrative view of identity requires. Human consciousness then, evolved to seek identity in narrative, is placed on Earth, the forgetful planet, whose relentless evolution unravels and reweaves knots, covering up old existences and leaving them forgotten in the past, swallowed in the myriads of other stories of matter. This has two major results in Tchaikovsky's future world. Stefan Advani knows little about his home planet's history, or the vast numbers of unnamed faces who have gone before him, but he does know two things – on this planet the human and nature do not mix, and most of what existed before has been forgotten forever. This dynamic in the story reveals two global dichotomies:

1. Human/Nature
2. Known/Forgotten

Both of these dichotomies represent this mismatch of humanity's tendencies with the requirements and expectations of Earth. Humanity's goals, because of their unique consciousness, differ from those of the rest of nature, not pure survival but survival through

narrative, and this narrative view carries problems in light of Baker's call to see life in moments of movement instead of as past, present, and future. If one is looking for a story, it means focusing on a particular subject, or character, and on the actions of that character, while ignoring, or at least minimizing the actions of others. Earth's systems, especially in *Cage of Souls,* have little place for this type of survival, blending and intermingling, covering and reworking, pushing humanity to create separate spaces for narrative outside of nature, fighting against the changes and adaptations, trading evolutionary survival for narrative survival. This does not happen because humanity chooses it, but because nature gives them no choice. The results, however, are the destructive tendencies for which humans are often blamed. This will be revealed in more detail in the next sections, but one example is given here. Humanity's autopoietic system has isolated itself so completely that it is unable to recognize the stories of nature going on around it, and its own connections to these stories, and separation ensues. Stefan explains that "Animals had no place in my home of Shadrapar. We were civilised. Life was humanity…" (Tchaikovsky 4). This divide is not achieved peacefully either. Tchaikovsky achieves a sense of irony when he describes this isolation as so complete that humanity cannot recognize other forms of advanced consciousness, such as those it sought in the stars, that the earth is moving in to replace it, responding instead with anthropocentric speciesism and extermination. In describing one such consciousness, the "Vermin," Stefan says, "They are hairy rodents with long tails, about half the size of a man. Their forepaws are quite like hands, and their instinctive behaviours include crafting tools, keeping possessions and leaving messages for each other. Despite this, the Masters of the Academy have issued official proclamations to state that Vermin are, without doubt, dumb animals, and therefore fair game" (Tchaikovsky 143). These "vermin" are clearly more like humans than humanity allows itself to recognize because humanity has narrowed its interpretive

lens to see only the human story out of its own unique survival instinct. The human and nature do not mix. Humanity cannot live in the natural systems of earth, so it separates itself. Earth is moving on from humanity, but humanity is remaining stagnant. Thus, the planet is divided between places humans live and places they don't – places of nature. Stefan describes four total environments: Shadrapar, the Deserts, the Jungle, and the Oceans.

Shadrapar is the last remaining city, and it stands as the only place humans can comfortably live on this planet, utterly adverse to any interaction with nature, other than the raising of certain crops (Tchaikovsky 35). It is here that their "Academy" (Tchaikovsky 156) seeks to maintain the human narrative, albeit with little success, and where Stefan learned the writing skills needed to narrate this book. Shadrapar is entirely artificial, an SF extreme of the separation seen by Rueckert and others, because as will be seen, the nature around it is in the business of consuming, covering up, and erasing narrative.

The deserts are the next most habitable place, where the adventurous can survive for short period, and Stefan describes them as, "stretching in a vast desolation of white sand to the horizon. Occasionally one can make out the ruins of buildings out there, if the sun is not too bright. When the sun is bright then there is nothing to be seen but glare" (Tchaikovsky 135). These deserts were created by the sun (doubtless human-made climate change played a role, but it is not mentioned), and they are navigable if necessary – and things do live there. Stefan himself goes on an expedition into the desert in chapter thirteen in search of the ruins that can sometimes be seen there. It is not hospitable, and the life out there will kill, but humans do venture out – crossing the boundary temporarily, but always with the intent of coming back. He also says that "In some old maps, those lands are picked out as grassland. Some ancient charts suggest that there might have been a sister city, a thriving trade route. The lesson is easily

learned. The deserts are spreading" (Tchaikovsky 135). The sun, with its influence in all the stories of the solar systems, owns the deserts, and it is slowly erasing human activity and space.

The next environment, smaller than the deserts, is the jungle. Connected to Shadrapar by a river, visible as, "Looking to the east along the course of the river, you would see the land shade from wild grassland to full jungle" (Tchaikovsky 135). Compared to the dry deserts and the sterile city, Stefan describes the jungle as, "this vast living thing in whose guts we were stewing" (Tchaikovsky 4), continuing to say that "The jungle was life, ravenous and abundant" (Tchaikovsky 4). Of course, humanity has separated itself from all other life, so while humans do exist within the jungle, readers are quickly told that, "There was nothing in that jungle that was not hostile to human life" (Tchaikovsky 10). The jungle represents the Earth's evolutionary stories overwriting humans, not simply erasing as the sands do. Here, humans do not enter with plans to return, they enter and are swallowed.

The final environment is one completely inhospitable to humanity, and it is the one created purely by human destructive tendencies: the ocean, the ultimate result of narrative permanence. Stefan tells us that, "Expeditions cross into the desert, and the jungles house the Island and its inmates, but the sea is no place for human life, even for a moment" (Tchaikovsky 135). His descriptions ring eerily similar to oil spills and trash islands of our modern world when he says:

> North from Shadrapar lies a barren, rock-strewn beach leading jaggedly down to the poisoned shore. It is not water, as we understand it, that makes up that sea. It is some chemical-laced potion fatal to life, and yet inimitable to death as well. The tiny micro-animals that are responsible for decay and renewal are as averse to the sea as we are. If you ventured down to the tide's edge you would see

> a rolling expanse of black fluid out as far as the eye could see, and everywhere across it you would see the bodies: of fish and marine creatures, and the occasional luckless human being. The species of animal to be found floating on the tide are all extinct, and have been for millennia. There are bizarre and astonishing prodigies there that have no equal anywhere on Earth. Everything is preserved in its final attitude of twisted, envenomed death, and will no doubt still be there when the sun consumes the Earth and brings the whole sad show to an end. (Tchaikovsky 135-6)

This sea is humanity's handiwork, unlike the jungle or the desert. Humanity and nature do not mix, and not just for humanity's sake; both can destroy. The comparison between Earth's covering and consuming and humanity's sterile "preservation" emphasizes the extreme destructive ends of the disconnect in their goals. In the end though, as is a theme of this paper, it doesn't really matter. A human will die in any of these environments; of old age in the city, of radiation in the desert, of monsters in the jungle, or instantly of poison in the ocean, but they will always die – and they know it. Stefan ends his discussion of the sea with the comment, "Some who make the sea their study claim that there are things that make the waters move, and feed on those unnaturally maintained corpses. I believe none of it. The sea is death's unchanging kingdom on Earth, and it has no part in this story" (Tchaikovsky 136). Humanity's one lasting contribution to the global setting is one of death. Through destruction, climate change, and stagnation, humanity has isolated itself (or been isolated) from the rest of the planet, a prison divided into four environments, only one of which it can survive in.

In all of these places lies history – forgotten history. And it is this history that reveals the dichotomy of known vs. forgotten. When humanity first looked at the universe, the dichotomy

formed was “known/unknown.” Now that humanity’s future is sealed, and people have given up exploring and discovering the new, all that remains is the past, which can be either known or forgotten. From what had once been Rueckert’s “ecological nightmare” (Rueckert 113) of a world overrun by humanity, all that is left in Tchaikovsky’s world are poison and scraps. Stefan says, “It is a great lie of civilisation that the things we invest with our emotions are real and important, but they are not. Take away the people and they vanish into smoke. All those idle dreams: government, money, education, love, revenge. All these things are parasites that cannot survive without the host” (Tchaikovsky 555). This future world is scattered with ruins of things people used to value and understand, evidence of the mismatch between Earth and humanity, and all that can be done is pick through the remains. He mentions a major loss of knowledge when he mentions the possibility of another city across the desert, which exists only in enigmatic ancient charts (Tchaikovsky 135), but also that now, “Scavenging in the desert is a long and honourable tradition and the closer ruins had been picked clean long ago” (Tchaikovsky 147). If there was a city, it is forgotten ruins now, picked clean or covered by the sands. Where the jungle has reclaimed some of humanity’s old ground, another character describes, “Ruins. The jungle is dotted with them. They make good mining spots if you can find them. The chemicals from the old days still leak out and will do until the sun dies. As far as chemical waste goes, the ancients built to last” (Tchaikovsky 235). The message is clear – humanity is being forgotten.

The things that are revered by humanity are simply those ancient pieces still remaining at least partly understood. Shadrapar is built “within the Shadow of the Weapon” (Tchaikovsky 137), a giant structure built by the ancients meant, supposedly, to defend the city from its worst enemies. Who those enemies are has drifted out of the known, but the weapon remains. Another example is the Grand Memorial, “a stone twenty feet high inscribed with hundreds of lines of

unfamiliar script," and even this is only partially remembered, as Stefan explains, "It says a lot about the practical uses of learning that scholars spent decades trying to decrypt the meanings within that ancient language. Only a few years before my entry to the Academy did someone come up with the idea that it was just a list of names" (Tchaikovsky 156). Again, this is only partly known, and it no longer commemorates what its original builders had hoped to immortalize, but it has lasted, and has been thought about in commemoration of humanity's mere existence, whereas everything else has disappeared. In none of these examples, knowledge of the builders, or even the purpose of their buildings, lasted or remained known. It has passed into the realm of the forgotten. Stefan explains that "Knowledge that fell out of fashion was lost and never regained. At the same time, we were a city in which everyone told stories of the past and reinvented history to suit them. In the midst of this, the real scholars, including yours truly, had to struggle with what little information we could scrape together" (Tchaikovsky 137). Information was lost to the sands of time, the desert, the jungle, and to human nature itself. Despite humanity's best attempt at narrative survival, the planet they exist upon, and which raised them, simply does not allow it.

Even at the end of the novel, with the last city destroyed, Stefan's focus is on remaining in the "known," not being erased, as he ends his work with these final lines, "I will leave this account in the Temple, beneath the opened sarcophagus of the Coming Man. Let it be theirs who find it. Let it be yours" (Tchaikovsky 602). Would it make a difference if this story was never read – no – but does it matter to Stefan that there is a chance that it will be? Yes. This dichotomy, known/forgotten, is then exemplified in one of the final interactions of the story, where one of the characters, Hermione, confronts Stefan about their representation in the story, questioning why so much of their character has been left out – forgotten for all intents and purposes – never

to be understood by the unknown audience: "'Pretty face this and posh education that. You and me, we shared more time and words in the cell than you ever did with those two. And what am I, in here? Ugly and big… Big and ugly, like the world'" (Tchaikovsky 597). In a world like this, the hierarchy is constructed around longevity – what is remembered the longest or can stand the test of time, and Hermoine realized she was at the bottom, because someone else was writing the book. Regardless, both of them know there are few left to read it, with Hermoine suspecting Stefan might burn it symbolically (596), while Stefan plans to leave the book in the underworld's "Temple," putting most of his hope for memory in living on as a future species' "legends of their prehistory, mythic figures of an elder race" (602), recognizing that the only thing that remembers consciousness is consciousness. Earth will not.

Agency, then, in this global "cage" is reserved for those things that can leave a mark. The sun is creating the deserts, the sea remains unchangeable, and while humanity tries, the most enduring marks they leave are the poisons in the water. Stefan is taking what agency he can, but even that will be swallowed by the sun. Every human story is just as temporary. Earth will cover them up and replace them. This mismatch is an automatic separation, not one humanity chose on its own. It was built in from the beginning. Earth, then, is a cage because it forgets and erases; it pushes humanity to wrestle against natural cycles to survive, ultimately trapping it in artificially constructed spaces watching inevitable erasure. Human consciousness seeks narrative, and it finds knots. This consciousness finds no purchase on this planet of constant change, but, because of the universal cage around it, it also finds no means of escape.

8.4 The Environmental – The Jungle

On earth, surrounded by the universe, the novel opens in the jungle – more accurately, in a boat in the jungle - and for all intents and purposes, this is the setting that matters to Stefan

Advani. He will describe the dying world and the expanding sun, but those are just mundane backdrops to his particular story which starts with a "jaunt on the river" (Tchaikovsky 3). This river, and the jungle it fosters, are both powerful agents in this world. As discussed in the last section, they consume and overwrite all they encompass. It is in the struggle against this consumption that humanity's destructive, imperialist, and exploitative nature is unleashed, though it is not purely of their own making; it is a result of their nature to find permanence, the prophetic evolution they could not escape. The results of this will be discussed in the next section, but the roots lie here, in the cage of the living jungle.

In this cage, the novel elicits a comparison to another work of literature, although not of science fiction. In his interview with Chris Alvarez, Adrian Tchaikovsky describes *Cage of Souls'* introduction as, "you are going on this journey deep into the jungle in a very Joseph Conrad sort of way" ("Adrian Tchaikovsky…" 21:20). While he does not explore this reference more, readers of *Heart of Darkness* will inevitably see the resemblance: a small band of fragile humanity drawn deeper and deeper into a dark, living jungle by the methodical, mysterious flow of an uncharted river. Both main characters, Conrad's Marlow and Tchaikovsky's Stefan, are also entering their respective jungles for the same reason: colonialism, and both will end their journeys with new realizations about the roots of these evils and a new appreciation for humanity's powerlessness in connection with nature. Although separated by over one hundred years, both novels give agency to the jungle through their depiction of its living darkness and its oppressive life. This imagery, presented by Conrad in 1899, is taken up by Tchaikovsky in 2019, and set in a distant future to reveal the ever present and continuing divide between humanity and its origins in the intimate agencies of planet Earth.

Just as with *Cage of Souls,* an analysis of *Heart of Darkness* must begin with the title, and thus with darkness. Stewart Wilcox, in his analysis*,* says that "The title of course sets the tone-color for the whole. Darkness is the unfathomable and the impenetrable, the savage, prehistoric past, the center of Africa, of the earth itself, even of man's consciousness…" (Wilcox 211). In Stefan's first description of the jungle in *Cage of Souls,* he presents similar feelings, saying, "What struck me most was the darkness. It never got beyond twilight under that dank canopy. It scared me. I felt that it was one living thing, and that it was watching me" (Tchaikovsky 4). Unlike the bright glare of Tchaikovsky's sun-scorched deserts, this darkness is the darkness of life, where the power of the sun has been apprehended, as Rueckert's ecology would inform us, by innumerable creative agencies, used in infinite constructions and creations until so very little of it is left. It is a darkness created by a vast collection of interacting purposes that live in a constant intermingling. These purposes vie for light, climbing and growing, responding to other purposes, and adapting to new creations, creating a living, breathing darkness of life. The creatures of the jungle have learned to live in these shadows, blending in and adapting alongside them. Humanity, however, not programmed to blend in and adapt, but rather to isolate its own story, clears a space in which the light illuminates only them. Both Tchaikovsky and Conrad describe this phenomenon, known in post-colonial theory as "Ecological Emperialism," in which humanity's drive to carve out a place for its own recognition changes the physical environment, creating the destruction Rueckert and so many others mourn. Marlow exits the jungle in view of a town, saying, "A rocky cliff appeared, mounds of turned-up earth by the shore, houses on a hill, others with iron roofs, amongst a waste of excavations…" and that "A blinding sunlight drowned all this at times in a sudden recrudescence of glare" (15). Humanity has cleared the land of other purposes, making a space where their own goals will not

be overshadowed, overwritten, or co-opted by other agencies, illuminating their own identity starkly against the darkness of the jungle's life. It is here that the first of humanity's sins against the planet is revealed, what Marlow describes as, "inhabited devastation" (15); as humanity's own ends diverged from that of nature, it felt no remorse for eradicating it. Stefan's experiences on the artificial island in the swamp present a similar pursuit of the light, with an additional "sin." He describes a jealousy for the light, where inmates at the lowest levels pine for small shafts of light (Tchaikovsky 126), while those in control have their quarters on the higher levels, reaching above the trees and embracing the light (Tchaikovsky 61). In this we see the workings of human internal hierarchy, which will be discussed further in the next section, as those on the "top" achieve their escape from nature's overshadowing power by standing on those placed below, and this oppression is revealed in both novels. Both of these locations are exploitive of the earth, but they are also exploitive of other humans. This clearing of nature cannot be done, in any major way, by a single human. It is a collective work, and it requires effort, and the individual narrative has become so individual, and enmeshed in dynamics of power, that it is often the case that the many are forced to work to clear a space for the few, leaving a mark of identity that can be traced to a small group in power. Marlow clearly describes the town's creation as the work of slaves (Conrad 17), people imprisoned by their own species to build this artificial memorial to human uniqueness, and Stefan is a slave himself, sent by the metropolis of Shadrapar to the colony of the island to work himself to death in its service (Tchaikovsky 8). In this fight against nature's overshadowing growth, humanity turns against itself, conquering, enslaving, and erasing in turn in a never-ending attempt at marking identity in a world of shifting sands and "hungry" life.

Marlow recognizes the artificiality of this exercise when, later, as he looks at the people encased in this place, he says that "as I stood on this hillside, I foresaw that in the blinding sunshine of this land I would become acquainted with a flabby, pretending, weak-eyed devil of rapacious and pitiless folly" (17). While humanity's destruction of nature makes their own identity clearly unique in the unshared light, it cannot, as other life in the jungle, use the sun directly. The sun will kill a human given enough time, and this is exemplified in *Cage of Souls,* where the sun is irradiating the earth. *Cage of Souls,* in a counterintuitive way, also intensifies the foolishness of the enterprise by reducing the scale to two small pockets of humanity, carving two small openings in the quest against the inevitable. The darkness of the jungle, however, which would protect from the sun, leaves no room for the long-lasting narrative of humanity, so humanity is trapped, cutting, burning, building, leaving its mark, and killing itself in the process.

It is not just the darkness of the jungle, however, that unnerves Stefan and Marlow, but its togetherness and unity. Stefan describes the jungle as a single being, calling it, "this vast living thing in whose guts we were stewing" (Tchaikovsky 4). Conrad in turn reacts to the "overwhelming realities of this strange world of plants, and water, and silence," and says that "It was the stillness of an implacable force brooding over an inscrutable attention" (Conrad 34). This perception of the jungle's singular agency, in both novels, arises from the potential for unified action against the individual human within that darkness, and the incredible enmeshed ecology at work in its shadow. As shown above, Stefan describes a feeling of being watched by a collective mind of the jungle, a sense of the "other" so complete that it encompasses all life other than humanity in a single form – the jungle. When humanity became so focused on its own narrative, it isolated itself so completely from the information of other interactions, that the enmeshed workings of the jungle are not distinguishable from each other. The life of the jungle, and the fact

that the jungle is made up *entirely of life* that exists simultaneously and in harmony gives it the power to act, at least in the mind of a self-conscious, isolated human, as a single entity.

And this entity, when seen as single entity, will always appear to be in opposition to human identity because it calls for enmeshing and the giving up of self, leaving for only two possible paths: humans must stop being human, or humans must conquer Earth's pull. By Conrad's time, the second option was well underway, causing Marlow's reaction to the jungle, and the Earth, that "We are accustomed to look upon the shackled form of a conquered monster, but there - there you could look at a thing monstrous and free" (Conrad 36). In Tchaikovsky's future world, the reader sees the final result of this option (the only option humanity's narrative nature would allow), where these shackles have fallen off, and Earth is once again "monstrous and free," and while humanity is suffering the brunt of this new monstrous wrath, the Earth is changing and bringing rest of life along with it, as it always was.

In this cage of the jungle are revealed three dichotomies:

1. Human/Nature
2. Land/Water
3. Evolving/Static

The human/nature divide, revealed in the global setting and described in detail above, becomes much more personal in the jungle. The separation between human and nature is clear in Conrad's work, as Leo Gurko describes, "The theme of all experience being one experience, transcending time and space, underlies the story…. a vision of the earth as a single, interpenetrating whole" (Gurko 219). Of course, as explained in the preceding pages, Conrad's main character is seeing this "wholeness" from the outside, as a human, separate from nature, so

when Gurko describes "…a quality of nature organic to it which the author asks us to be aware of" (Gurko 219), he is not describing a unity between the human and nature, but an awareness of what could be, but which humanity has been separated from. This echoes Tchaikovsky's declaration, through the character Ignas Trethowan, that, "Just because we cease to look does not mean the world stands still" (Tchaikovsky 96). This character, who explores the jungle and writes about his findings, refuses to believe that the world is dead just because humans have given up. Humanity is left behind. He is convinced that life, capital-L *Life*, is still a whole thing, working together, and he says,

> Evolution works in our jungles almost fast enough to see. As the world becomes unliveable, so life throws up things that can survive in it, faster and faster. One ancient theory was that the planet was aware, a great living world-mind. If so, then that mind has woken up. Life is teeming in the world as never before, changing and changing in the hope of finding a form that can last, and it is not just insensate, animal urges that are being churned up by this flood. (Tchaikovsky 96)

The constant, growing, living whole that Stefan sees as "a rioting horror" (Tchaikovsky 4), Trethowan reveals to be a unified "world-mind," that is working in cooperation, despite humanity's disengagement. In fact, humanity was actively excluded. Tchaikovsky's journey down the river, like Conrad's, is a journey into what could have been, just extended into the future where all of humanity's spirit has been crushed, and while Conrad's journey ends in his infamous "the horror" (Conrad 71) of existence in such a world, Tchaikovsky leaves his character with the added realization that humanity's disengagement has left room for its replacement, as Trethowan's "flood" brings with it intelligent life as well (Tchaikovsky 96).

This “flood” is more than a metaphor. It is in this “cage” of the jungle, in this “rioting horror” of the river, that the human/nature divide also can be seen as a “Land/Water” divide. This concept, where humanity’s realm is symbolized by the structured “flatness” of the land, and nature’s realm by the “churning” (Talbayev 212) depths of the water, comes from Edwige Talbayev, in his paper, “Seawater,” where he describes the distinction between land-based and sea-based views of ecology. Anthropocentrism, Talbayev argues, sees the world as land, where borders and heights can be easily delineated and enforced, but when entering the water, “Being immersed amounts to losing one’s strict emplacement, doing away with the certainties of terrestrial ontologies” (Talbayev 213). Suddenly, everything is connected by the water. Being above, below, beside matters little. Hierarchies disappear when everything is mixed together. This mindset, Talbayev explains, “implies reshuffling the dominant social, economic, and political paradigms of Western modernity, which envision individual subjectivity as the purview of absolute, autonomous beings” (Talbayev 214). The water itself, not just the creatures in it, gains agency, because it is holding, moving, feeding, and connecting everything within it. In describing the agency of seawater, he ascribes to it, “power not only to alter the shape of social and spatial processes but also to connect intimately with animated life forms” (Talbayev 208). For Stefan, this role of the water is all too real, as the world around him has shifted from the human, structured world of solid-land Shadrapar to the fluid, murky, unchartedness of the river. He is well aware of the river’s reconfiguring power, saying, “The idea of being lowered into that poisonous river made me feel ill. On land, no matter what the beast, there is a chance, a warning. In the water it is different. A sudden tug, some expanding ripples, then nothing to show that a man was ever there” (Tchaikovsky 5). The river holds mysteries that cannot be unveiled from outside, and once immersed, the human being loses all position from which to explore or

categorize, becoming displaced, disoriented, and connected to everything within. This did not appeal to Stefan, who emphasizes the point by saying, “I was not ready, then, to co-exist with the water and the living jungle” (Tchaikovsky 7). It is in this water that life is moving forward, but humanity’s desire for permanence has grounded them to the land, another mismatch with the rest of nature. The water, which feeds this river, is a chaos of vulnerability to those looking in from above, just as Talbayev’s water is “The realm of uncontrollable forces.” Talbayev says that the “pelagic environment figures an existential threat to evade. Its ontology is one of obliteration and utter confusion, its structure a differential one in which the conflicting forces of modernity, nature, and non/human agency can play out” (Talbayev 211). Suddenly, the disconnect between human and nature that humanity has been solidifying for so long is washed away, “obliterated,” and humanity is no longer the center but immersed in a “confusion” of interaction. This process has identity shattering potential, as Talbayev describes, saying that it engages in, “Rescripting matter, all matter, in agential terms productively erodes Anthropocentric models,” and “blurs of the discrete categories of subject and object into an enmeshed form of intimacy” (Talbayev 208). This intimacy is what Conrad and Tchaikovsky represent in their descriptions of nature, and the river is at its heart, unknowable to human consciousness because they only see the surface out of necessity for their narrative survival. Talbayev explains that “Surface-level views of the pelagic emphasize connections and borderings, walls and surveillance” (Talbayev 210). The characters in *Cage of Souls,* looking down from their artificial boat, watching the boundary between their world and that of below, exemplify this surface level view. As Stefan describes though, “There was no sharp line between land and water: the river glinted still between the boles of trees with roots like reaching fingers” (Tchaikovsky 4). Not only does the river hold its own mysteries and consume those who enter it, but it is also an active force, encroaching on land and blending with

it, bringing with it the inevitable erasure which humanity is trying to avoid. According to Talbayev, the surface level views also "reflect the temporalities and mind frames of empire, capitalism, and colonialist intentionality" (Talbayev 210), and in *Cage of Souls,* the surface view human tendency to colonize and wield power over others has led them to construct, in addition to boats, an artificial island to assert control over the water below and around, though with only partial temporary success. Stefan tells us that, "The Governors of the Island had long given up mapping the boundaries of land and water, for such maps were never good the second time round. It was Trethowan's promise: life was indefatigable." (Tchaikovsky 109). This inability to conquer, survey, and understand, or conversely to engage in the water, leads to a disconcerting isolation within the jungle and the river. Even later, after being locked up in the one literal cage in the story, Stefan's reaction to the expanse of the jungle says it all; "I felt open to attack from all sides, from above and below. I found myself crouching, frog-like, in the bottom of the boat, trying to get low enough to hide behind the low sides" (Tchaikovsky 233). Humanity's nature would rather be in a prison than immersed in a place where it is not in control of its identity, even though this means being left behind as the river of life moves forward.

And this leads to the final dichotomy of the jungle – evolving vs. static. Humans have turned their backs, as Trethowan says, but everything else is still out there, growing, moving, evolving, adapting. When in the river, everything moves at the same speed, but on land, where humanity has established itself, it is possible (easier even) to remain sedentary. Humanity, as said before, is the only species on this future planet that has not evolved. Of course, in a setting where evolution is the controlling factor, the ultimate weaver of intertwined stories, humanity's separation was weaved from before their emergence, and this world is a cage because humanity's identity, in the longevity of their stories, does not work if change, adaptation, and loss of self is

all that survives. This jungle is a cage of human consciousness because human stories do not make it out. To survive physically, they must dive and thus lose their position as "human." The water holds "belonging," an existence within nature with no boundaries or walls, but land holds identity, as artificial as it is, separate, recognizable, defendable. In a bid to weave a story of their own, as their own nature demanded of them, humanity has been separated from their ability to evolve, and has remained static, stagnant, and alone. The hierarchy here, then, is based on enmeshing. How well can one move and grow within nature? In this hierarchy, humanity is placed at the very bottom.

It is also in this cage where the reader is given the first hint that humanity is no longer the only intelligence out there, when Stefan notices, "A little domed construction of wicker that actually sat in the water, and perhaps could only be entered from beneath" (Tchaikovsky 14). Whoever these creatures are, they survive, and their structures are not left in ruins, because they are not afraid of the changing of identity - they are not afraid to engage with the water.

Humans, on the other hand, are on a rusty, leaking, boat.

In the end, it is also in this cage that humanity's destructive nature is most overtly revealed, and from which most of humanity's blame for its evils arises. And while, in a free world, these actions should elicit nothing but rage against humans, in light of the universal and global cages revealed in this novel, these actions, as terrible as they are, can be seen not purely as causes but also as consequences, not only to human decisions, but to influences of Earth and the stars. Humanity, in *Cage of Souls,* is trapped on a planet in a universe it can never explore, equipped with a desire for narrative and legacy amidst an ever-evolving, totally enmeshing ecosystem and a geology that engulfs and covers over everything in time. Without negating the destructive impact of their actions, *Cage of Souls* reveals humanity's destruction of the planet to

be equal parts defensive as offensive, as Earth seeks to eradicate its creation and its creation tries to escape the inevitable.

8.5 The Societal – The "Island"

Within this cage of swirling, evolving life, where human identity is lost in the "churning" of the water, humanity has created a literal cage, where it can exist in relative safety. The jungle, then, with its evolutionary drive to swallow and overwrite, inspired another, more immediate cage – the "island" (Tchaikovsky 15). And this prison is one of the two locations actually referred to as the "Cage of Souls" by characters in the book (the other being Shadrapar), and it marks the only other bastion of human civilization. In it is represented humanity's own tendency to erase, exploit, and destroy, as they "stay afloat" in the sea of nature. Here, a reader is shown a microcosm of the post-colonial, destructive tendencies of "surface" level ecology mentioned by Talbayev (210), depicted by Conrad, and made inevitable by the universal, global, and environmental cages thus far explored. It also reveals the ramifications of the human/nature divide as it translates into a "sinking/floating" dichotomy, and finally, the first consciously created human dichotomy of the story, prisoner/free, which also reveals the hierarchy type a reader will be most used to, as they delve into the society of "the island."

If humanity cannot dive into the water, then it must survive on land or float on top. The land is being destroyed by the sun, pushing humanity (and most other life) into the swamp, so when Stefan arrives at "the island," he realizes that it was not an island in the traditional sense, "but the most perilous of boats" (Tchaikovsky 17). Humans had built themselves a prison where they could structure their lives separate from nature. The reader gets the following description of the island:

> The Island was roughly square, with the top two floors of decreasing size and the lower three all of the same dimensions. It was made of wood and cane, as though the entire building was a barred cell. The higher levels had a few spaces of solid wall, so that the staff could steal a little privacy… It was larger than any castle, and the prisoners within must have numbered over a thousand. We would vanish in that mass of the deprived and the lawless, and never surface. Our faces would be lost to the powerless mob. (Tchaikovsky 16)

All of this, the structured tiers of a prison society, where those in charge were placed physically over those imprisoned, was nothing more than a raft, adrift in swamp. It was a floating hierarchy, artificially constructed over the mingling water. Stefan says this, "The Island was afloat, however impossible that might be. Either there was some great portion of it below the water, and the lake was far deeper than I had guessed, or… Some constant effort was keeping the whole construction afloat, and I could foresee even then how that would shape the lives of those aboard" (Tchaikovsky 16-7). As a metaphor for human existence, this works well. Human existence has been separated from nature, which intertwines and co-exists, so they build up a hierarchy within themselves, artificial, and floating by constant effort. Those at the higher levels are only safer from the water as long as the structure below stays afloat, and here, as mentioned in the last section, lies another connection between ecocriticism and the post-colonial.

Similar to the carving out of physical space, this effort to stay afloat, and maintain the hierarchy while doing it, is run by someone. It could not be done by individual will, but, as can be seen in light of Bergthaller's theory, by the cooperation made possible through the nature of autopoiesis. Although, unlike ants, humans must decide on a regular basis which human (or set of humans) gets to give directions to the rest. In this world, for now, those who give directions

live in Shadrapar, the "metropolis," as the postcolonial would call it, where those in power reside. The island, then, is the "periphery," the colony sent out by the metropolis to serve the needs of the metropolis. The first need is to get rid of any humans that are not working very well with others – human individuality has gone so far that they can't even mesh with their own species. The island puts the unruly out of sight and out of mind. It is this shutting out, this erasure, which causes one inmate to call the island, the "cage of souls" (Tchaikovsky 46), as it is the place where people are sent to be forgotten. It is this concept that has been expanded to the environment, the globe, and the universe, as all of these settings are also revealed in the book to be places where humanity cannot escape, and must just wait to be forgotten. As Stefan explains,

> To a citizen of Shadrapar, the Island was nothing but an idea. It was where criminals go, and most people thought that this was a good thing. I had thought so myself, before I began to hold opinions unpopular with the state. The details were not known to the general populace. The understanding that the Island was a long way away in the jungles of the east; that no escapee has ever made it back to trouble the law-abiding; that it killed off prisoners as fast as it received them, and was thus never full, these facts were as much as anyone wanted to know. (Tchaikovsky 15)

As can be seen here, and as was noted in the post-colonial discussion, the periphery is never really understood by the metropolis, and this is exemplified by the fact that Stefan does not even know that the island ships things back to Shadrapar, supplying it with essential materials, as he learns from another inmate here:

> 'This here swamp in which we're sat is a mine… It may just look like muck and water to you, son, but it's packed with minerals, different ones at different points

> all over the place. They send boats out that fill their tanks with water, then trek the tanks back here, where we distil the minerals from'em… The minerals we ship back home and they get used for all sorts. Weapons, medicines, science, cosmetics, even as flavourings for food. Who back home'd think they relied on their prison for so many things, eh?' (Tchaikovsky 41-2)

Therefore, in this human society, those in power use the violence of forced servitude to inflict the "slow violence" of exploitation of the environment. And with this prison, came the requirement for people to run it, and thus is the reader presented with the first dichotomy that the human race would have actually recognized as artificial – "free/prisoner." As an example, Stefan befriends a man, Peter Drachmar, on the way to the island who turns out to be a future warden, and during a conversation, when otherwise communicating as equals, a comment Stefan makes elicits a response from the other, and "His look to me reminded me that I was going to eke out my days in penal servitude, whereas Peter Drachmar was staff" (Tchaikovsky 8). Of course, both are trapped in a floating box in the middle of a "hungry" (Tchaikovsky 3), living jungle, but between each other, there is established an artificial power dynamic. In this prison then, although all share the same desire to float, not sink, a hierarchy among humans themselves arises. In descending order, starting at the top:

1. Governor – Emissary from the metropolis who, like the metropolis inhabitants, does not get his hands dirty (Tchaikovsky 54).
2. Marshal – The man who does the governor's dirty work and enjoys it (Tchaikovsky 41).
3. Wardens – The Marshal's men who maintain the order of the hierarchy.

4. Prisoners – Those sentenced here. They are, in the words of the Marshal, “less than nothing to me and my staff” (Tchaikovsky 21), and in those of Stefan, “the powerless mob” (16).

As with all human-made hierarchies though, there are sub-hierarchies and the crossing of borders, as is proved in Stefan’s introduction to the island by one of the wardens, who asks him, “You sing? Tell stories? Jokes? Ever learn to dance?” When Stefan does not understand right away, the guard continues, saying, “Just wondered. Things go better for everyone if you can do a trick. Keeps people happy” (Tchaikovsky 26). There are those who can “sing and dance” though, and even Stefan discovers a useful trick or two to build his agency in the hierarchy:

> Father Sulplice – A prisoner, but also the only person on the island who truly understands the mechanism keeping the island afloat, and therefore very valuable, and untouchable. (Tchaikovsky 39)
>
> Lady Elera – One of the few women prisoners on the island, who seduced the governor, and now controls him. (Tchaikovsky 248)
>
> Kiera – Another woman prisoner who escapes, hiding out with a sympathetic warden and playing the others against each other to keep herself alive. (Tchaikovsky 204)
>
> Stefan – Through his scholarly ability, gains access to a cushy job as a translator and scribe for the governor. (Tchaikovsky Ch. 6)

As can be seen here, a sense of agency can be gained through skills, though agency in the prison (as a microcosm for any human society) is artificial, no decision that the human makes within this prison will alter the overall situation they are in – they are still in prison. As was mentioned in section 7.1, the actions of all the characters are also overshadowed by the constant

knowledge that nothing they do matters in the long run; Earth is being poisoned by the sun and will eventually be swallowed by it. The novel's focus on the ruins and forgotten knowledge of the past, emphasizing how little is known of those who came before, has the effect of extending this insignificance to all human action throughout history – once the Earth is swallowed, and probably even before this, nothing humans have done on it will have mattered at all. In the island, prisoners can move up, like Father Sulplice or Lady Elera, or Stefan, or even Kiera, though while they remain in the cage of the prison, they all still sink or float with the rest. If the boat starts to sink, then they all work together to fix it, or they all drown. The ultimate agency is still found in the environment, as it enforces, through constant attempted crossings and engulfings, the borders between the human and the natural. Humanity, even in the structures it builds, only enforces the agency of the universe around it, increasing the impact it has on humanity, and forcing themselves into acts of "floating." It is in this way then that the island becomes two types of cage. It is the prison where the metropolis sends those it wants erased, but it is also an artificial box within which humanity must remain or else be erased by nature.

8.6 The Corporeal – The Human Body

One thing that must be remembered is that through all these cages, the human narrative is lived out through individuals. It is in this final setting, the individual body, where the human consciousness becomes an individual "soul," the ultimate prisoner in the cage of the universe, and the blame for this cage can only rest on the universe itself. This is important because, as Wheeler tells us, every organism is but the current representation of a knot, tied by the universe, and "humanity" as an entity is made up of a vast number of self-aware knots. As Lenman points out, the human narrative view of history stems from the individual narrative view of life, in which each human sees their own story as unique and worth writing. This cage, the human body,

is the ultimate unforgiving, mortal gift of Earth to the infinite human consciousness. All the dichotomies (and trichotomies) explored so far, life/death, known/unknown/forgotten, past/present/future, evolving/stagnant, Land (identity)/Water (belonging), Conquered/Conqueror, and Prisoner/Free, are condensed in a single, unique point of view as a single consciousness is housed in a single body, and this consciousness must come to terms with its own temporality. It must learn for itself that it cannot force its memory on the planet, or on those around it, and that its death will be both inevitable and complete.

As mentioned earlier, Tchaikovsky has written this novel in the form of Stefan's memoir – an attempt to be remembered, an attempt to exist beyond the corporeal. Another character, Greygori Sanguival, a man who is attempting to surgically change himself into another species, confesses to Stefan that, "I am trapped in my human mind" (Tchaikovsky 567), and this theme of the individual mind is central throughout the story. One of the reasons why Stefan was exiled to the island was his scientific work to save humanity, and it had to do with the mind, and specifically its isolation and powerlessness in the universe. He and his friends believed in, and tested, the mind's ability to alter reality physically by accessing the power of the universe, as their leader, Helman, describes, after moving a pen with his mind:

> 'I am still working to understand the natural laws behind it. What I do know, however, is this. The moving object is directed by the mind. Moving an object requires energy, and the mind contains little in real terms. The energy comes from the fabric of the universe itself and is therefore virtually limitless, if only it can be unlocked. I have managed to snag a little of that energy but there is a vast well waiting to be drawn upon.' (Tchaikovsky 170)

This demonstration led to a project of immense importance, at least in their view. They were attempting to, with partial success, break through the barriers that "trapped" the human consciousness within the body – to engage in new entanglements instead of reinforcing old ones. They were using it for physical benefit, to find the ability to manipulate matter without fuel-burning machines, and even, possibly, "a way to mend the sun" (Tchaikovsky 168), as Helman expounds, and all through the powers of the mind. Tchaikovsky's inclusion of this fictional ability that would allow humanity to survive and escape this mortal cage, forces a reader to question if humanity has actually been given what is needed to survive in this world, or if it was set up to fail. As was mentioned earlier though, the group never completes their work, and Stefan ends up in prison. There are other aspects of their work, however, that Stefan discovers during his incarceration. He knows that it is possible to "touch" minds with others, such as Helman, (Tchaikovsky 113), and in the island, he manages to kill another prisoner by launching his mental powers at his unsuspecting mind (Tchaikovsky 113). In the end of the story, once Shadrapar has been wiped out by the weapon, he realizes that his mind, because of his training, had been in constant, slight contact with all other minds, and that the disappearance of all those people leaves a terrible "silence" that he cannot bear (Tchaikovsky 557). It is only at the very end though, that he realizes the full potential of this power when he manages to make mental contact with the Macathars, a new race of creatures who evolved in the deserts, and he realizes that their minds are so far advanced that they see humans barely as ants, and are surprised that one of these "ants" knows how to communicate with them (Tchaikovsky 585). The governor's worry, which echoes that of Chris Impey's *Beyond,* of never meeting minds like our own, was solved, in this, as was the entrapment of the human consciousness in a body – it could travel anywhere as the minds of the Macathars could (584-5). Of course, even in this story, only one person had this ability, and it

was too little, way too late. This makes it, for the reader, a standard of just how far humanity in reality has fallen short of escaping their cage, or, if Earth takes the Material Ecocritical responsibility for forming humanity, a standard of just how ill equipped they were for their existence. If telekinesis and telepathy are the tools needed for a sentient species to survive in this universe, humanity was not given them.

Also, importantly, because no other humans have this ability to connect to the minds of their species as a whole, the individual human is torn between their identity as a species and their identity as an individual. The species, also, has this tear, but as humans rarely act as a unified species, as is seen in the hierarchy presented in the last section, it will rarely stoop to save the individual. Thus, the individual, while occasionally rising to save the species, has an ingrained desire to save first its own story, and then, if possible, the story of the rest. An example of this tendency is clearly revealed in the Governor's lecture on the universe, the audience of which, other than the reader, was Stefan, who added this perspective to the discussion:

> At the time, as the Governor studied the stars, I became suddenly aware of a nearby side-table on which a bowl of little dried fruits had been placed, possibly for ornamental purposes. Whilst a man who had the power of life or death over me regarded the cosmos, I stole and consumed every one of his little fruits in utter silence. It was a small enough bounty for a hungry man, and he could have had me executed for it as easily as blinking, but I was a slave to my shrunken stomach. I could have done nothing else. (Tchaikovsky 65-6)

Stefan's work with the human mind was in an attempt to save the species from the extinction that has sent them into lethargy. He, as part of a team of intrepid researchers, had set out to do what no human in living memory had done, create something new – in this case, a

solution to the solar problem, and with it the problem of human isolation (Tchaikovsky Ch. 14). But when society decided the idea was too controversial for consideration, and Stefan was exiled, he promptly began focusing on himself. And it is the responsibility of each human to look out for themselves, because if society won't do it, and nature certainly won't do it, then who is left? This is summed up when, upon arriving at the island, a prisoner who had died along the way was left off the list to save on paperwork, and "The captain told him our number and never mentioned the dead man that the river creature had taken. Perhaps nobody mentioned him, and the Island went unaware that it was one life short." (Tchaikovsky 18). One similarity humanity has with other species and the earth they share is that it does not, as a whole, overly notice when one or another of its members dies. This man had a story that was unrecognized by nature and by his species, and now it was lost forever.

It is in this cage of individual isolation where the question of human/nonhuman becomes the most pointed. What does it mean to be a human? To be part of this species defined as humanity? Is this something the individual can decide? Tchaikovsky gives us six characters for comparison:

1. Stefan – The main character, sees himself as human, realizes the potential of being one with nature, though chooses to continue a human life, and expects a human death.
2. Trethowan – The explorer, who is also human, who wants to distance himself from humanity by living in the jungle, living with nature and "becoming-animal."
3. Thelwel – An immortal artificial "human," who sees himself as human, but not in the same way natural humans do, and eventually becomes the leader of the last remnant, leading through his new perspective (Tchaikovsky 592).

4. Faith – An immortal artificial human who refuses to identify with humanity and goes off on her own after Shadrapar's collapse.
5. Greygori – The transforming man, who attempts to surgically cut out the human and become a Macathar (Tchaikovsky 565-566).
6. Sergei – A time travel, who recognizes that this is the future of humanity, and attempts to return to his past – to humanity as it was – and simply delay the inevitable.

Each of these characters has interpreted, and engaged with their "humanity," in different ways, and this represents the individuality that isolates humans in their own stories and their own interpretations. In the end, it is this trait of individualism that Stefan attributes to the destruction of the city, in discussing his friends who were lost when Shadrapar was eradicated, saying, "Astonishing how a species-wide extinction event can pale before the knives of personal tragedy" (Tchaikovsky 600), and he hypothesizes that it was "that self-centredness, no doubt, that led some great magnate of our city to unleash the Weapon on his rivals" (Tchaikovsky 600), a decision with terrible consequences but which was only an acceptable part of the story for the one who made it.

This isolation is also, however, the reason that here the reader can see the only "cage" where humanity has the upper hand in agency, in their own bodies, to an extent. Each consciousness, because of its narrative self-identification, is able to make its own interpretations of the influences defining it as human. The body, evolutionary knot of cells and interactions that it is, shares this agency, but relatively equally, doing its best to live up to the requests of the consciousness, but making it clear when it cannot. It will eventually die though, leaving the consciousness without a home. So, the human consciousness has agency in this one place – until

the universe, or the planet, or the jungle, or other humans take that agency away. In this last cage, the sharing of the blame becomes most clear. A human can destroy the Earth, though it is always done with the knowledge and understanding that the Earth had decided to destroy it first. It is this knowledge that echoes up into all the cages, saying that humanity was not suited for this universe, and that it is not solely to blame for its story.

8.7 The Replacements

Through all these cages, it seems that humanity is the only species trapped in such a way. At first, this appears to be because they are the only species with the consciousness to self-identify, to interpret their own stories, to combine the ideas of Bergthaller and Wheeler. Humanity is being replaced though. As Trethowan says, “The world is sick of us. It’s turning over in its sleep, trying to come up with something to replace us” (Tchaikovsky 331). This is where a traditional SF story would place the blame for Earth’s “sickness” on humanity alone, pointing to the destruction and the separation, but in light of these cages, it is clear that humanity’s path depicted in *Cage of Souls* was never entirely up to them. They were pitted against their own planet in ways their replacements will not be. They were an experiment that didn’t work. Throughout this story, Tchaikovsky gives three more examples of intelligence as a comparison – asking the reader to consider what would need to be different for an intelligent, autopoietic species to survive. What might earth conjure to replace humanity?

The first are the Vermin. They are described in the same way that many an objective observer might describe humans, “Their forepaws are quite like hands, and their instinctive behaviours include crafting tools, keeping possessions and leaving messages for each other” (Tchaikovsky 143). The only difference is the evolutionary branch – they are rodents. They live underground, in the desert, in the jungle, and in the sewers of Shadrapar (Tchaikovsky 562),

everywhere on the planet other than the oceans. They have evolved for this new phase of Earth's history, where the sun is enlarged, and the deserts are expanding. Unlike humans, they are suited for this time, and they may survive, but like humans, they are developing consciousness and learning to establish themselves as distinct communities. Perhaps, the reader is left to speculate, their consciousness will not distance them as far from the progress of nature as humanity's did, or perhaps it will.

Next are the Macathars, who already possess the mind powers needed to exist in a universe this vast. In Stefan's one mind encounter, he describes the consciousness of the Macathar as, "more colours than mankind ever saw, more sounds than we hear, to smell the radiation and to feel the crisp vibrations of the Earth's crust and the songs of each and every star" (Tchaikovsky 584). These creatures have adapted to the deserts, they understand the universe, and they can use their minds to do what humans have needed to harness other energies to complete. These creatures started at an evolutionary consciousness so much higher than that of humans, that there is no comparison – humanity was just not given what they were.

And the last example is the "Web Children," who are the closest to humans, and have the best chance of becoming like them, though their consciousness does not isolate them from the jungle, and they live in and around the river. And Stefan teaches them how to use the mind powers, Lenman's all important "adaptation," and they embrace it as humanity did not (Ch. 27). Perhaps, if they embrace it, they can fix what was broken and build without the burning of fuel that humanity required. This species, though just as curious (Tchaikovsky 328), are not opposed to learning when given new tools to explore and, unlike humanity, they might have been given them in time, and only time will tell. The web children also met another intelligence like them in

the form of humanity, one which gave them these tools, a chance humanity sought after but was denied.

In the end, humanity is reduced to only, in Stefan's calculations, one hundred and forty (Tchaikovsky 599). He is not optimistic, saying, "I do not think we will survive, as a species" (Tchaikovsky 601). He ends though, with hope, not for humanity, but for the planet and the species that are replacing them:

> I have a vision of the world in several centuries' time. There are no human beings in my vision but there are the web-children who evolved, or were evolved, in our image, and they have prospered. They have made a civilisation that does not rest on energies and weapons. Instead they use the powers of their minds to build and create, and they work together. Perhaps they are working on a way to save the dying planet or revive the sun. Perhaps they have built a great boat in which to sail the heavens and find another home, just as men may once have done. (Tchaikovsky 602).

Earth is bringing up new intelligence experiments. They are not perfect, but they are different than humanity, emphasizing the experimental, imperfect nature of earth's relationship with intelligence, and with life in general, and making the reader consider what is required for an "ideal" relationship with Earth.

9. Conclusion:

Science fiction has, throughout its existence, revealed truths about human existence. Partnered with ecocriticism and post-colonialism, it has explored the real potential for the human destruction of planet earth and the reasons for this destruction. In many cases, however, the

psychology behind these reasons has been one dimensional – humans are existent in a world they do not respect. Adrian Tchaikovsky, however, presents a new take on this phenomenon – a humanity that was doomed to fail because of its very nature and the nature of the world in which it existed. In the world of *Cage of Souls,* Earth reared humanity to self-consciousness, but then demanded blind evolution for survival. Humanity was a failed experiment from the start that has to be replaced. Science fiction breaks walls, and Tchaikovsky uses SF to its full potential in *Cage of Souls,* diving deep into the concept of extinction and the human psyche, asking the reader to consider the end result of humanity's current trajectory but also questioning where the root cause really lies. He is also, however, asking what might be done in light of this new perspective.

In the writing of this novel, Tchaikovsky is unusually pessimistic. The reader ends the story knowing that there is no hope for humanity, and that there probably never was. It just wasn't meant to be. Humanity was just one of Earth's failed experiments, and while it took some time, they were eventually replaced. They failed to survive because they could not integrate into the rest of nature – they could not do what had to be done, because they were built to do something else. At every turn, human consciousness (this knot of universal meaning making), through its imposed isolation, has created dichotomies in their world in an attempt to narrate its existence. These dichotomies, however, give agency to actors other than humanity – so even though humanity is seeking agency through all these self-identifications, they lose it every time.

- Recognizing the known vs. the unknown gave the unknown power of them.
- Recognizing past, present, and future, gave the past and future power that was taken from the present.
- Recognizing life vs. death, gave death power over them.

- Recognizing human vs. nature, gave nature the power to erase them.

In an attempt to simply understand themselves, humanity have locked themselves in a cage, away from their identity, or swirl of identities, within nature. As mentioned in section three, however, Tchaikovsky is interested in transformation, and specifically the idea of transformation's potential to connect individuals with nature. *Cage of Souls* reveals how humanity is, at its core, unsuited for Earth, and also that this is because Earth did a poor job of raising it. It shares the blame. In doing this, however, it also does something else: it removes the concept of the ideal relationship that many SF novels and environmentalist movements present – an ideal that allows for blame to be placed on the species, or political group within this species, that broke that relationship. Sharing the blame removes this potential however, calling not for a restitution or return to the ideal, but instead for a transformation forward, acknowledging the imperfections in both humanity and Earth, and emphasizing how all of life has needed to adapt and evolve – perfection was never expected. This allows for individuals to break away from the concrete, problematic definition of humanity and to take up the agency found in the corporeal "cage" and interpret for themselves what it looks like to be human – transforming the relationship through individual transformation. It is not about rediscovering the strings of influence connecting oneself to the world, but about choosing anew, for oneself, which strings to tap into, just as Stefan did with his mind powers.

This theme of individual responsibility and the blurring the lines of what it means to be human is a theme that shows up in many of Tchaikovsky's works. *Children of Time, Doors of Eden,* and *Echoes of the Fall* have already been mentioned, and carry similar messages. In addition, in 2021, Tchaikovsky published *Elder Race,* where the main character is a lone cybernetically modified anthropologist, stationed on a distant world, and assigned to view and

document a branch of the human race that has been cut off from Earth for centuries and has forgotten their origins. He must, however come to terms with the fact that Earth has stopped communicating with him hundreds of years ago, and that he may in fact be the last of the "real" humans left. He must decide if he will act as his species demanded of him, and avoid all anthropological "contamination" of the native population, or if he will act as an individual, shaking off those constraints of "othering" and embrace a new role in relationship with those around him.

Even more pertinently, In 2024, Tchaikovsky published another novel, *Alien Clay,* in which another unfortunate academic finds himself in another penal colony where he is to work himself to death, and again, this academic is confronted with human mortality and limitation, and also with a new form of intelligence, and a new evolutionary ability that will change the course of human future. This time, however, it takes place on another planet, in a future where humanity has reached the stars, but still not their full potential of finding other intelligent life, which the main character soon discovers is about to change. He must then decide if he is willing to shake off the human identity as he knows it and embrace a new biological connection with other life.

Cage of Souls presents the same concept – humanity is not limited to its original form, and in fact must not stay there. *Cage of Souls* just presents this through a negative, a dying world in which humanity did exactly what it was told to do by Earth. *Alien Clay* and *Elder Race* provide positive depictions of a humanity that acknowledges that it is not perfect, and neither is its planet. In *Alien Clay,* the potential to transform lay only on this new, prison planet, and would never have been discovered on Earth. Humans do discover it though. *Cage of Souls* reveals what happens if they do not. Stefan's journey and choices are the same, except in his world, humanity never achieved anything beyond destruction and pollution. Neither novel points to a lost ideal,

but a future transformation – humanity is too late for this in *Cage of Souls,* and the next round of experiments is coming up, but in *Alien Clay* some (but not all) do make the change, and discover new potential, and a new connection with nature and the universe.

Tchaikovsky leaves the reader with many examples: Trethowan, Thelwel, Faith, and even Greygori Sanguival, all of whom are shaking off the original definition of human. Even Stefan has, in the past, worked to push past the built-in limitations and change his relationship with the natural world through the powers of the mind – individual adaptations to shake off Lenman's "forcing event." Whereas in both *Alien Clay* and *Elder Race,* humanity has travelled the stars and done both incredible and terrible things, the only human identity Stefan has is one of failure and abandonment. In this world where there is no more hope for the human species, the reader is confronted with the question of what it means for them. Will they continue to blame this group, or that group, or the human species as a whole, for the loss of what was? Or will they acknowledge that what "was" was never meant to stay, but to evolve, acknowledging their own agency in interpreting their own connections, embracing new strings from the universe, and transforming into what might be. Tchaikovsky asks for the realization that, in a world of constant evolution, adaptation, covering, and erasing, humanity's separation is not from an ideal, but from the willingness of all the rest of nature to transform and meet the Earth where it happens to be.

End Notes

[1] Self-Extinction - According to Claire Colebrook, self-extinction is “the capacity for us to destroy what makes us human,” whether by moving beyond the human or by dying out as a species (79).

[2] Becoming – According to Deleuze and Guattari, is a state of being that “deterritorializes” existence, focusing on the interactions around one’s “being” as constantly influencing one’s journey into becoming what one will be (Deleuze and Guattari 309). This will be explained further in section 4.7.

[3] Post-Human - Post-human theory focuses on “the decentering of human exceptionalism and the overcoming of the principles of humanism” (Rugo). In other words, it reveals a world in which human traits are not seen as exceptional, and where human exists interdependently with all other life-forms on equal footing, takes a subordinate role to another species, or even does not exist at all.

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