Altered Flesh, Strange Vibrations: The Science Fiction of Unno Jūza

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Despite the established academic study of early detective fiction in Japan, science fiction of the same period has not received significant attention. To fill this niche, this thesis serves as a specific analysis of the work of Unno Jūza (1897-1949), who was a prolific writer of genre fiction and is often cited as the "father" of Japanese science fiction. Unno's work exemplifies how early Japanese science fiction defines itself through its approach to the bodily consequences of advances in technology, as well as science's relationship to the state. Additionally, he borrows detective fiction forms, while still using tropes and themes more familiar to science fiction. Finally, Unno's work is speculative in nature, leaving space for reader interpretation and extrapolation, essentially inviting imaginative readings of his work.

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1.0 Introduction

Unno Jūza (1897-1949) was first published in the popular fiction magazine *Shinseinen* in 1928 with "Murder at the Electric Bath" (Denkiburo no kaishi jiken).[1] He studied electrical engineering at Waseda University and went on to work for the Ministry of Communication before becoming a full-time author.[2] His writings, ranging in length from short story to novella-sized mainly consist of science and detective fiction, and were published in a variety of magazines, the most notable of which was *Shinseinen*. *Shinseinen* was a popular magazine marketed towards young adults, famous for its relevance in the development of detective fiction, as that became the focus of the magazine.[3] Of his works, the most famous are arguably *Kaisei heidan* (Mars Army Corps) and the Homura Sōroku series, all of which were serialized. He published science fiction all through the war years and left behind a large library of previously unpublished material that was released steadily in the decades following his death from tuberculosis in 1949. While living he had two published translations of work by Jules Verne and Arthur Conan Doyle, and more translations including work by G.K. Chesterton and H.G. Wells were published posthumously. Unno's work as a translator is important to note because the authors he translated were influential both in their native literatures and on the development of detective and science fiction in Japan.

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[1] Yamashita Hiroyuki, "Hyuman arubamu: Tokushima ga unda nihon SF no chichi Unno Jūza" *Ushio*, August 2001. pg 214.
[2] Ibid.
[3] Saito Satoru, *Detective Fiction and the Rise of the Japanese Novel, 1880-1930*. Cambridge MA: Harvard University Press, 2012, 263.

I am someone who was steeped in an American science fiction landscape as a child, enthralled by *Star Wars* and *Frankenstein* in equal measure, and continue to consume science fiction media because it engages imaginatively with core aspects of humanity that I find compelling: the nature of the human body, and the urge to create community and order. Unno is of particular interest to me because he tackles subjects I find interesting in science fiction, mainly his consistent focus on aberrant bodies. However, his writing style feels different to anything else I have read in English or Japanese. His stories both meander in a way that fills the narrative with character and choose moments to be direct with clear intent. I credit that to the nature of its context as magazine published work, where this style serves to both hook readers and provide them with a clear sense of resolution in most cases. Moreover, I felt there was a meaningful gap in the history of Japanese science fiction, which tends to gloss over the 1930s and 40s as uniformly propagandistic and therefore unworthy of study.

1.1 Literature Review and Methodology

The term "science fiction," or as it is used in Japan today, SF, was not in widespread use prior to the postwar rebirth of the genre. There are several different words used in reference to science fiction, including *kagaku shōsetsu* (scientific novel)[4] and other phrases that use science (*kagaku*) in their framing. *Mirai ki* (records of the future) have also been pointed to by several scholars as being a science fiction precursor prevalent in the 1880s, synthesizing a native tradition

[4] Washida Koyuta, "Unno Jūza no kagaku shōsetsu," *Ushio*, November 1989, 406-409.

of future-looking work with introduced ideas.[5] However, *mirai-ki* in the 1880s were much more focused on imagining the political and cultural developments than technological advances.[6] This makes sense given their context, a nation re-imagining itself both as a part of a global nation, and in light of the Meiji Restoration.

Finding what authors called their own work is surprisingly difficult, but several larger categories contain work that we would now describe as science fiction. Firstly, *tantei shōsetsu* (detective stories), while mainly covering the topic of crime investigation, engages with the scientific method of investigation and more fantastical science.

Another meaningful category is *kaiki shōsetsu*, or tales of the strange. While this category also includes authors like Izumi Kyōka (1837-1939) and his modernity focused ghost stories, there are also nascent science fiction tales as well.[7] This categorization is intentionally loose, both in its use by authors and critics of the time, as well as in my own work. This looseness allows for works with similar thematic and plot elements to be grouped together without using terminology that has set meaning based on prior Euro-American genres. *Kaiki shōsetsu* is representative of a larger theme in early 20th century Japanese media, specifically in the interwar period: fascination with the strange and absurd.[8] The more widely recognized *ero guro nansensu*[9] elements of writing, both fiction and non-fiction, in this period come from a similar cultural place as the fascination with the

[5] Yoriko Moichi, "Japanese Utopian Literature from the 1870s to the Present and the Influence of Western Utopianism," *Utopian Studies* 10, no. 2 (1999): 90.
[6] Ibid.
[7] Henry J. Hughes, "Familiarity of the Strange: Japans Gothic Tradition," *Criticism* 42, no. 1 (Winter 2000): 60.
[8] Jeffrey Angles, "Seeking the Strange: Ryōki and the Navigation of Normality in Interwar Japan," *Monumenta Nipponica* 63, no. 1 (2008): 101.
[9] A term derived from "erotic grotesque nonsense," associated with Japanese Modernist texts. Intentionally provocative work.

strange: the desire for shocking, norm-challenging content mediated by the rise of mass print culture on a much larger scale than had previously existed in Japan.[10]

Thirdly, on the subject of military fiction, while it is not necessarily a precursor genre to science fiction, the link between them, especially as Japan's imperial and colonial ambitions grew, is undeniable. The link manifests in science fiction through the use of allegorical conflict set in a far-flung space age to represent the current military engagements of Japan. Moreover, military fiction of the time often highlights scientific advances in military contexts, such as new weapons and vehicles, which, while on the surface is not directly connected to science fiction, is appealing to a similar audience, namely adolescent boys. Therefore, it merits further investigation. Readers mainly interested in science and technology might cross genres in order to engage with fiction that stimulated that interest.[11]

In terms of prior literature, there is some work on specific authors or texts and a handful of works on the genre in relation to young readers and the broader scientific education apparatus. Missing was scholarship that explicitly put science fiction into conversation with contemporary movements, both genres and literary styles, in any complete fashion. Also missing from work that specifically addressed Unno was exploration of his work as a product of the serialization apparatus of the time, which I find to be a crucial consideration.

The opening two chapters of Robert Matthew's *Japanese Science Fiction* function as excellent background, summarizing works of note, critical responses and historical context, beginning with the Meiji Restoration and covering up until the end of the Pacific War. His parallel

[10] Angles, "Seeking the Strange," 103.
[11] Kawana Sari, "Reading Beyond the Lines: Young Readers and Wartime Japanese Literature," *Book History* 13, no. 1 (2010): 158.

history reminding readers of the state of broader Japanese literary culture of the time was interesting to contrast against the summaries of science fiction works.[12]

Also of general utility was a section of Hiromi Mizuno's *Science for the Empire*, which focuses on popular science magazines and their role in the advancement of both popular science and science fiction, and forms a solid foundation on which to discuss individual works in context.[13] Her work specifically highlights the necessity of popular science magazines in providing a place for science fiction to be published: "Science fiction provides another example of how the popular science magazines transgressed the established boundary of the 'scientific.' Like spiritual science, which academic sources considered unscientific, science fiction was an illegitimate field that neither the established literary nor scientific community in Japan regarded as literary or scientific." [14] The reaction to science fiction, according to Mizuno, is a patronizing one, characterizing the genre as trying to be two different things, science and fiction, and failing to be either, as well as the ever-present idea that it has no value because it is marketed towards children.

Science fiction of the war period has been glossed over by various studies of the genre in Japan. The genre is perceived to have gone into hiding, or stagnated, or transformed into military propaganda with no continuity with post-war expressions of science fiction.[15] The last point, that works from this period are not important to the continuity of the genre within Japan, is misguided, given that authors and artists that are subjects of significant study found wartime science fiction memorable.[16] Tezuka Osamu, one of the most influential *manga* artists of all time, whose work

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[12] Robert Matthew, "The Beginnings," in *Japanese Science Fiction A View of a Changing Society* (Routledge, 1989), 7–38.
[13] Hiromi Mizuno, "The Mobilization of Wonder," in *Science for the Empire* (Stanford: Stanford University Press, 2008), 143–71.
[14] Mizuno, "Mobilization of Wonder," 158.
[15] Kawana, "Reading Beyond the Lines," 156.
[16] Ibid, 161.

has gone on to inspire artists both in Japan and abroad, specifically cited Unno's work as a reason he became interested in creating science fiction. Without Tezuka, the media landscape, specifically comics and animation, would be irreparably changed, making Unno's work all the more important to examine.

Science fiction of this time also is outcast from both of its namesakes, with literary criticism of the period emphasizing literature focused on realism and rationality, both of which have homes in writings about the past and present, but frames imaginative explorations of possible futures as irrational.[17] The reasons for the literary establishment's attachment to realism and psychological complexity are beyond the scope of this project, and would be better served by a scholar of Modernism than one of science fiction. Additionally, the scientific establishment was dismissive not only of science fiction, but also of the popular science magazines in which it appeared, both because they also published material that was "unscientific," particularly scientific work by non-academic sources and on subjects relating to the paranormal. Some of what is now regarded as early science fiction was classified along with "irregular" or "deviant" detective fiction, because they strayed from the rationalist, psychologically interested model that was more in line with the literary establishment of the time.

Seth Jacobowitz is one of the few academics who has published on Unno, mainly a chapter titled "Unno Jūza and the Uses of Science in Prewar Japanese Popular Fiction" in *New Directions in Popular Fiction*. His work both builds on prior scholarship on early Japanese science fiction, and then goes on to summarize a few of Unno's stories and make the case that Unno "privileges

[17] Abe Kobo, "Two Essays on Science Fiction," trans. Christopher Bolton and Thomas Schnellbächer, *Science Fiction Studies* 29, no. 3 (2002): 342.

the figure of the deviant almost as a Romantic anti-hero who pursues scientific knowledge."[18] While I agree that Unno's work contains such scientific deviants, my focus is instead on deviations of the body and the implications thereof.

There is also an established base of work analyzing detective fiction and modernist fiction, which I have found instructive methodologically. Sari Kawana's *Murder Most Modern* is a prime example of prior scholarship which combines contextualization and close reading. Kawana uses case study close readings in order to chart the relationship between detective fiction and society over time from beginnings to the postwar period, arguing for the genre's place in the narrative of Japan's emergence onto the world stage as a "modernized" nation.[19] Both her argument and her methodology have informed my work in thinking about science fiction as a phenomenon tied intensely to national identity, technological advancement, and the transformation of Japan in the late 19th and early 20th century. She suggests that "Detective fiction tries to make sense of the world that entered modernity as it both recycles and reshapes elements of the Enlightenment."[20] Which resonates deeply with my own views on science fiction. Additionally, *Murder Most Modern* has a chapter on mad scientists in detective fiction, discussing Yumeno Kyūsaku's *Dogura Magura* alongside one of the subjects of this thesis, "Hae otoko." Her work necessarily places all these works in detective fiction, despite their speculative scientific nature at points.[21] This aligns with my own anaylsis of the close relationship between early science fiction and detective fiction.

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[18] Ken Gelder, ed., *New Directions in Popular Fiction* (London: Palgrave Macmillan UK, 2016), 173.

[19] Kawana Sari, *Murder Most Modern* (Minneapolis: University of Minnesota Press, 2008) 12.

[20] Kawana, *Murder Most Modern*, 8.

[21] Kawana, *Murder Most Modern*, 111-146.

Arthur Mitchell's work in *Disruptions of Daily Life: Japanese Literary Modernism in the World* examines modernism through a similar lens, seeking to cast off anachronistic ideas perpetuated by a literary academic culture surrounding modernism more generally by addressing it in its own cultural context, instead of inscribing it on a pedestal derived from its influence on later writers.[22] His point is that modernist literature in Japan was intentionally perverse, provocative, and counter to established cultural norms both from within the country, and those imported from without.[23] Work on Japan-specific modernism tends to focus on it as a phenomena at times influenced by, but inherently separate from Euro-American modernist forms.

Why has detective fiction from this era escaped the bounds of the "genre fiction" label and become a subject of serious academic study, when science fiction has not? A divergent point between modernist writings and the early science fiction I study is in the perceived "literary" status of the work. Whereas modernist writing ranges, including both the I-novel and more "lowbrow" material, science fiction is placed firmly in the latter category. There is an incorrect assumption that because science fiction was written for a mass audience, with exaggerated genre features, that it is uncomplicated, or written for an "uneducated" audience, and is thus unworthy of serious academic study.

Part of the reason that detective fiction has garnered academic analysis to the extent that it has is because of its resonance with the cultural anxieties of its readers and writers,[24] an aspect it

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[22] Arthur M. Mitchell, *Disruptions of Daily Life: Japanese Literary Modernism in the World*, Cornell East Asia 202 (Ithaca, NY: Cornell University Press, 2020), pg 3.

[23] Mitchell, *Disruptions of Daily Life*, 33.

[24] Kawana, *Murder Most Modern*, 8.

shares with science fiction. Detective fiction has been and continues to be used in the Japanese context in order to chart the cultural anxieties of the moment, such as mental illness and urban poverty, or more recently, credit card debt and the *hikikomori* phenomenon. Science fiction's difference is in the mix of actual commentary and allegorical work, in which arguments about what it means to be a citizen are exaggerated and morphed into what it means to be an ideal human, or, for example criticisms of the lackluster quality of scientific education in Japan are made.[25] Science fiction, Rather than rooting its explorations of cultural anxieties like violent crime in a semi-realistic detective narrative, it obfuscates by using fantastical elements as stand-ins.

Related to similarities between detective and science fiction, Mark Silver's *Purloined Letters* addresses how translation and borrowing transformed the genre of detective fiction in Japan, and the idea of a "fully Japanese" version of the genre.[26] Silver's work, especially surrounding the complicated nature of translation and cultural borrowing in the growth of the detective fiction in Japan, points away from the idea of "cultural imperialism" by Euro-American sources and instead towards active cultural borrowing on the part of Japanese writers.[27] This phenomena of translated works leading to further native extrapolations on the genre is also present in the case of science fiction, with the role of authors like Émile Gaboriau instead filled by Jules Verne, and translators like Kuroiwa Ruikō with Unno Jūza.

As established by Silver, early genre fiction in Japan has deep connections to translation, specifically of European authors. Unno, for example, translated work by G.K. Chesterton, Jules

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[25] Kawana, "Reading Beyond the Lines," 161.

[26] Mark Silver, *Purloined Letters* (Honolulu: University of Hawai'i Press, 2008), 5.

[27] Silver, *Purloined Letters*, 16.

Verne, H.G. Wells and Arthur Conan Doyle. This dissemination of translated work, as well as the place of translation and adaptation in indigenizing these genres cannot be overstated. The "adventure" genre was foundational not only to the early science fiction of the period, but also to the structures necessary to make the mass consumption of locally written genre fiction possible.[28] A look at how the thematic content of this translated media in comparison to Japanese emulations may be fruitful, but it is outside the scope of this project.

Close analysis of primary sources is the core of this project. Therefore, so are Unno Jūza's works in both early science fiction, and the genres I feel are part of the media ecosystem in which science fiction developed, including works of his that are classed as detective fiction. Additionally, the easy public availability of his complete works makes it easier to track his writing over time, including where they were originally published. There is some academic work on the subject, but none look at his whole career. As a case study, Unno is excellent because his writings range around the different genres heretofore discussed and vary in audience from children to young adults.

An additional advantage to studying Unno is that his work is well-archived digitally, making it easier to study the breadth of his work. Near the end of his career he produced diaries of his own experience of the war as a civilian writer, which may provide valuable insight into his thoughts on the events that shaped both his writing, and that of writers who are considered his successors.

In summary there is work both on specific texts and generalist histories in science fiction, as well as works on modernism and detective fiction which provide excellent models for research surrounding fiction and its cultural influences. Through emulation of these previously established

[28] Matthew, "The beginnings," 8.

models and use of case studies following the example of prior work, a path opens up towards a better understanding of the cultural context and literary history of science fiction in Japan.

Japanese science fiction as a topic of study is increasing in frequency and complexity, and yet, there is a lack of comprehensive work surrounding the development of the genre in the late 19th and early 20th century. The majority of extant work takes the form of author specific or smaller scale study, which this thesis replicates. For this reason, much of the work that methodologically informs my own is on the subject of detective fiction. These two genres share prominent authors, themes, and were published in the same magazines. Therefore, transposing methods used on detective fiction to science fiction has merit.

In the main body of this project, I will discuss Unno's work on two different themes. In the first, I discuss bodily modification, mainly through analysis of "Hae otoko." The aberrant body in Unno's work takes multiple forms: altered through vivisection or the addition of mechanical parts, feminized and militarized in equal measure. The study of the body in Unno's work has repercussions in that it connects to the wider study of the body in science fiction and also bridges the gap between prewar science fiction and the postwar expression of the genre. In the second section I will mainly discuss "Uchū senpei" and its implications the relationship between science and the state has for the body and mass media, with additional analysis of other works. My work joins a growing field of early science fiction studies in world literatures, and by illuminating Unno's work, invites scholars of science fiction studies to compare with their own subjects of study. The field is growing, with increasing focus on themes of modernity and national identity in the early 20th century.

2.0 "Hae otoko" and Modification of Genre and Body

In this section I will mainly be discussing "Hae Otoko," which was serialized in *Kōdan Zasshi* from January to October of 1937. It is a novella length entry in Unno's Homura Sōroku series, most of which have some fantastical scientific elements, including men with synthetic limbs and observatories that transform into rockets.[29] All were published via magazines and newspapers, with most being short stories, but also including longer serialized pieces. Its protagonist, Homura Sōroku (punning on Sherlock Holmes), is a famous young private detective who, while staying in Ōsaka following a case, becomes embroiled in a series of murders that are seemingly unconnected to one another. First, an unrecognizably charred body is found in the fireplace of an abandoned building. Then a wealthy industrialist is found hanged in his own home. Finally, a judge is fatally shot in the head. All of these crime scenes are locked room style mysteries where it was seemingly impossible for a culprit to enter. As "Hae otoko" progresses, the culprit is revealed to be the resurrected result of medical experimentation on the corpse of an executed convict, taking revenge on the people responsible for both his execution and his resurrection in a distorted form.[30] Following an intense chase sequence, the hero and the Fly Man have an unarmed fight in a hot spring, which results in the death of the Fly Man. The story ends with Sōroku returning to Tokyo and marrying the daughter of the second victim, Itoko, whom he saved from danger numerous times throughout the narrative.

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[29] Kawana, *Murder Most Modern*, 139.

[30] Unno Jūza, "Hae otoko," Aozora Bunko, n.d., https://www.aozora.gr.jp/cards/000160/card1254.html.

The doctor who created the Fly Man had a specific goal in mind: increasing human intelligence and efficiency by removing "unnecessary" body parts. The Fly Man's body is altered in the following ways: 1/3 of his intestines are missing, his stomach was removed, he only has one lung and one kidney, and the "unused" bone and muscle was then removed.[31] Some unspecified modifications were done to his hands and feet, leading to his ability to attach machine guns to his forearms. Near the end of the work, Homura finally comes face to face with the fly man, trapping him in a pit of sand. There, his physicality is described: "A brutal atrocity, the head of the incomparable murderous devil, the Fly Man." (Akugyaku zannin、tatoeru ni mononaki satsujin ma・haeotoko no kubi ni soto naranakatta.)[32] Even at the very end of the story, his form is obfuscated by a cloak, or the sand in which he is encased, leaving the description of him in the scientists diary as the most complete one.

"Hae otoko" uses the framework of a mystery to excite readers with its presentation of the monstrous body. The story is structured as a mystery, with a series of crimes escalating tensions leading to the reveal of the truth and the capture of the culprit. However, it also relies on similar tropes familiar to early monster movies: the norm being threatened by an entity whose physicality and behavior are deviant, and therefore frightening. To illustrate: the Fly Man is 8 feet tall, with exaggeratedly long arms and legs, and he sends threatening letters to his victims before striking, each of which has a dead fly with its wings torn off enclosed. The monster movie mood is accentuated by the use of citizens, police and other characters as bait for what is ostensibly the monster: the Fly Man. This is most obvious when Itoko, the spoiled and beautiful daughter of the

[31] Ibid.

[32] Ibid.

second victim, is repeatedly mysteriously missing or under threat. The invocation of horror is further enhanced by the narrative taking every possible moment to point out that the Fly Man looks like a demon[33] and is unsettling to even look at.[34] Additionally, the surrounding environs, an exaggerated version of Ōsaka serves to create tension by grating against Tokyo-ite detective Homura Sōroku. Where it transcends from a monster mystery and into science fiction is with the focus on the artificiality of the Fly Man's body, and his own potential for scientific innovation.

"Hae otoko" reads differently when approached from different genre angles: from the perspective of a detective fiction reader, the more fantastical elements become window dressing for a story about the revenge of a wronged man upon a system that exploited him. Unno employs stock characters like Itoko, the daughter of the second victim, a wealthy industrialist, to great effect, placing her in danger strategically, giving Sōroku motivation to visit or revisit locations, and happen across new information. The detective structure of the story might focus more on the logical elimination of a rational solution, leading to the necessity of the Fly Man's strange anatomy. Kawana's analysis follows this model, focusing on the revenge narrative and the Fly Man's aberrant physiology in relation to the "mad scientist" model of antagonist.[35]

The science fiction reading is more involved in the act of imagining the Fly Man as a possibility, in reveling in his monstrous form, and in interrogating how science is not necessarily benevolent, regardless of intent. The doctor's creation of a more optimized human reinforces

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[33] Ibid.

[34] Ibid.

[35] Kawana, *Murder Most Modern,*144.

existing structures of power by using the body of a falsely accused and unduly executed prisoner, framed for beating a man to death in the colonies.

The goal of this experiment? Creating a *reduced human* (Shukushō ningen), with the theory that with less "unnecessary" flesh on the body, intelligence will be increased. The description of the Fly Man's internal organs is much more specific than external descriptions, which shapes the reader experience by leaving gaps to be filled in. This is likely intentional, as the reader could then substitute whatever thing they would have found most upsetting to look at, rather than having a single prescribed appearance that might be less effective.

The goal of creating a genius in order to advance culture and technology is complicated when the doctor realizes that his creation is smarter than him. Instantly, instead of a wonder, the Fly Man is a threat to all of society and must be destroyed. The text makes this comparison explicit in his diary: "The fact could be said that it was an unfavorable comparison, like the sun near the moon."[36] (Taiyō no soba no tsuki no yōni miotori ga surutoiu jijitsu datta.) Treating him as an intellectual threat in addition to his physical monstrosity further isolates the Fly Man from normative society, the society that he was intended to help.

2.1 In Conversation with Western Genre Fiction

The Fly Man, as a being artificially constructed which turns upon his creator, will naturally draw comparison to the creature of Mary Shelley's *Frankenstein*. They share a physical deviancy

[36] Unno Jūza, "Hae otoko," Aozora.

from the norm, both eight feet tall, with countenances that provoke fear and disgust in equal measure. While Unno may not have been explicitly referencing Shelley, examining these monsters in comparison is informative. Their shared physical deviancy aside, they are unalike in motivation, ability to assimilate into the human body, and in the attitude towards metaphysical identity which they represent. Their creators also differ in their end goals, motivations, and processes.

Where the creature cannot assimilate into human society, having both no memories or knowledge from the "donor" of his brain, and being physically incapable of hiding his monstrosity, the Fly Man spends most of the novel masquerading as a prosecutor, completely unknown to the main detective. The inability for the monster to assimilate into human society is key to the conflict of *Frankenstein*, with the creature's appearance and lack of social context essentially locking him out of participating in society, and this serves to drive his conflict: holding his creator accountable for abandoning him. In contrast, the Fly Man has seemingly no issue in passing for human, and he retains his prior memories of how to function in society, in addition to an increase in his intelligence, only defeated when he is tricked into a pit full of sand by Homura. Their relationship, marked by the Fly Man's disguise, reads more in line with Conan Doyle's Moriarty than Poe's orangutan: he is an intellectual rival, not just an explanation for the locked room problem.

While the Fly Man retains his sense of self following the experimentation on his body, the creature in Frankenstein is a new being, assembled from multiple individuals. Their approach to a fundamental issue tackled in science fiction, the metaphysics of identity, are different. The Fly Man, though grotesquely transformed, nevertheless retains a selfhood independent of his altered form, which is enhanced by the increase in intelligence that allows him to enact his revenge. The main difference as it pertains to the metaphysics of identity between the two is that the creature is a composite of disparate parts, whereas the Fly Man is the result of altering and subtracting from

existing structures. Identity in each case is different. In the former, identity is created when life is given to the creature, and the body carries no memories of its own. In the latter case, identity is preserved across iterations, partially because all his flesh is his own, simply twisted into monstrous form. Selfhood is a key theme within science fiction, especially in conjunction with bodily alteration.

Both monsters are motivated by revenge. In *Frankenstein* the creature seeks revenge upon his creator for abandoning him, eventually extorting him into creating a female of his kind so he can experience kinship with another being. The Fly Man, on the other hand, targets those who made this perversion of his body possible, not for abandoning him, but for their roles in his arrest, in his execution, and in his resurrection. He lacks the desire for a nurturer figure or a being that shares his physiology that the creature has, and his recompense cannot take a form other than the death of his creator.

Both monsters are the result of abandonment. The creature in *Frankenstein,* existentially abandoned by his creator in a way that purposefully echoes God's abandonment of mankind, and the Fly Man, the result of abandonment by negligent and corrupt systems. Having examined the Fly Man's creator earlier, bringing him into contrast against Victor Frankenstein yields the following results: where conquering death is the goal of Frankenstein's endeavor, it is not even brought up how the Fly Man is resurrected by his creator. The resurrection of the dead is only the last step of the process for the doctor, whose goal is instead increasing human intelligence by increasing their efficiency. The difference, where conquering death is the goal of one, and a stepping stone in the process for the other, highlights a difference in their specific bodily fascination. Shelley was directly inspired by galvanism, most commonly illustrated by running

electric current through a dead frog to cause its muscles to twitch, whereas Unno draws more on vivisection as a cultural touchstone, leaving the method of resurrection ambiguous.

In comparing "Hae otoko" with the existing Western canon, I was naturally drawn to other locked-room style mysteries where the crime is seemingly impossible due to the physical circumstances. This led me back to Sari Kawana's chapter on "mad scientist murders," where she puts "Hae otoko" into conversation with Edgar Allan Poe's "The Murders in the Rue Morgue." The murderers in both cases are out of the ordinary. In Poe, an orangutan brutally murders two women, and I have established the strangeness of Unno's titular Fly Man, but Kawana adds:

> By having such unexpected culprits, Poe's Rue Morgue and Unno's "Hae Otoko" tease out two dominant narratives of modernity- imperialism and science, respectively- and the fantastic darkness that these modern realities create.[37]

In addition to her insight, I would add that both culprits, the Fly Man and the orangutan, have their involvement proven by their physicality, meaning that no other beings could enter the space. Also, "Hae otoko" is equally entangled in imperialism because the Fly Man was falsely accused in Japanese colonial territory. However, the Fly Man is not an animal in the way the orangutan is: he, brings to mind, as earlier noted, Sherlock Holmes' nemesis Professor Moriarty, an intelligent equal to our hero detective, playing off of him with clever precision. He takes advantage of the system that created him by spending parts of the narrative masquerading as a prosecutor, visiting his own crime scenes and outright explaining to police and Sōroku what he did, mocking their bumbling behavior and forensic ignorance.[38]

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[37] Kawana, *Murder Most Modern*, 142.

[38] Unno Jūza, "Hae otoko," Aozora , n.d., https://www.aozora.gr.jp/cards/000160/card1254.html.

A concrete link between Unno Jūza's detective stories and science fiction is their shared investment in imagining science, and how they reflect Unno's clearly expressed desire for broader scientific education in Japan. The manifestation of the scientific imagination varies based on context, but generally, the detective fiction focuses in on forensic and medical sciences, whereas the science fiction more often depicts imagined future technology like space flight, as well as inserting advanced science into settings that are recognizably of the time, as is the case with "The Demon of Vibration" (*Shindoma*). Unno's work has a preoccupation with how science interacts with the human body in profound ways, particularly how the body can be manipulated in order to increase productivity or create a "perfect being."

Unno's view of science is hardly rosy, given that creepy, manipulative, morally bankrupt medical students or practitioners are stock characters that appear frequently in his science fiction and are present in his detective stories as well. This stock character might represent anxieties around the unfettered growth of scientific endeavors, as well as the lack of general oversight and widespread scientific literacy. Unno's unethical scientists tend to pursue the idea of advancing humanity, particularly in a bodily context, with a focus on productivity, and in at least one case, obedience. Their desire to "improve" humanity at any cost is usually framed as well-intentioned, but their methods are questionable at best, and qualify as torture at worst. These scientists are best summarized with a quote from "The 18 o'Clock Music Bath": "In the end, scientists are such cold things." (Kagakusha towa hikkyō sōiū tsumetaimono de atta.)[39]

[39] Unno Jūza, "Jyūhachi-ji no ongakuyoku," Aozora bunko, n.d., https://www.aozora.gr.jp/cards/000160/card865.html.

In order to cultivate a deeper understanding of how scientists and the body interact in Unno's work, it is useful to investigate other stories of his. "Ikiteiruchō," (The Living Intestine) originally published in the magazine *X* in 1949, concerns an experiment undertaken by a morally dubious medical student who acquires a full human intestine, living and preserved in fluid, through coercing the head surgeon at a prison hospital. He then, through vague chemistry, adjusts the fluid in the intestine's container until it can survive in breathable air. As the experiment progresses, the intestine displays the ability to move around, as well as an attachment to its nominal creator, which comes to head when the medical student leaves for supplies, and returns, finding the intestine seemingly gone. It then leaps up and strangles him from behind, killing him. As the story ends, it is revealed that the intestine belonged not to a prisoner as he thought, but to a young woman who worked at the hospital.

This story exists at the intersection of two of Unno's key themes. On the one hand, he depicts his stock unethical medical student, on the other, he engages in semi-serious consideration on the autonomy of human organs outside of the body as a form of evolution. The narrative constructs the intestine as an object of disgust, detailing the way the skin on its exterior changes to resemble lips, and simultaneously imbues it with a genuine affection for its creator, so much so that it strangles him by accident due to what is implied to be separation anxiety. The fact that the intestine came from a young woman (not a prisoner as both the medical student and his supplier thought) adds an odd thematic element, ascribing femininity to an object of disgust rather than positioning the feminine as endangered by scientific progress, as happens in other stories by Unno. Examples in his fiction generally place women as victims of advanced technology, being kidnapped using rockets, and otherwise endangered. Furthermore, the prison hospital from which the intestine is procured is not the only one of its kind in Unno's work, as the corpse of a prisoner

used in experimentation appears again in "Hae otoko." The criminal body is the focus of mutilation because it is deemed acceptable, a consequence of immoral actions, only tragic when falsely accused as in "Hae otoko." The body in Unno's work is not only a site of posthumous technological alteration, but it also transforms while living.

"The 18 o'clock Music Bath" (Jūhachi-ji no ongakuyoku), published in 1939, is set in an unspecified future where all humans live underground. It focuses on a handful of scientists participating in, and resisting, a system by which their minds and bodies are controlled by regular "music baths" where they are exposed to vibrations which increase productivity, energy, and obedience to authority. The scientist in charge of the music bath dismisses developments in android technology because his manipulation of the human body through sound makes them functionally indistinguishable from androids: obedient and productive. The music bath itself and other uses of broadcast technology, as well as the direct relationship between the state and science in this story will be analyzed further in the next section, but in relation to "Hae otoko" and the visceral body, "The 18 o'clock Music Bath" has plenty to offer.

Its androids, for example, are startlingly biological, with the main example being one named Annette, who is killed and has her remains fed to a parrot. She is a milky-skinned mute, implied to lack genitals, and the leader of this underground country is attracted to her at first sight. For a being that does not speak, she evokes powerful emotions of protectiveness, lust, or jealousy in the humans who interact with her. It must be taken into account that she is a sex object in all of these instances, as her mere appearance pits the male leader of the underground nation against his possessive female secretary of state. Comparing Annette to the Fly Man brings to the fore the intensely gendered nature of altered bodies in Unno's fiction. The majority of his scientists and his experimental subjects are men. Annette, despite her nature as an artificial being, is given a human

form that is appealing and is kept naked. It also bears mentioning that the story ends with androids, who look just like Annette, taking over after the society is entirely destroyed by Martians. By positioning her as both sex object and successor to humanity, the narrative endows Annette with extraordinary power, despite her complete lack of agency.

Other experiments appear briefly, mostly as shock value, like a chimpanzee with the brain of a human child, or a man with no body below the waist suspended in a tube of yellow liquid. These oddities are the results of the same scientist that produced Annette, and it is worth thinking about why readers view creations like this as set dressing in mad scientist literature. Partially it is the juxtaposition that causes horror, because the brain of a child does not belong in a chimpanzee. A human should not live in a tube. Part of this inclusion has to be attributed to the *ero guro nansensu* impulse to seek non-normative bodies and strange phenomena. This goes further with a development in the same story as the non-normative body is shifted out of experiment and onto a scientist.

A side plot in "18 o'clock Music Bath" involves the character Paul, introduced as they arrive late to the introductory music bath, and is described as having performed "dissections" on themself. The reality of the situation is that Paul has altered their own body with the intention of changing their sex. One could argue that Paul, was written for the *ero guro nansensu* shock value, a deviant to be disgusted by, as the character Penn is. The narrative never makes it clear what Paul's intentions are in altering their body in this way, but Bara, Penn's wife, points to this behavior as heroic, and asserting an ownership of the body that these people, in a society that has outlawed smoking and alcohol, and guaranteed eternal youth. Bara describes this effort as "escaping from the burden of gender" (Sei no sokubaku kara nogarerukoto) and expresses a desire to become a man, something the narrative later says that they succeeded in doing. While the narrative might

frame this impulse, and Paul's, as deviant or worthy of disgust, Bara's reasoning is clear: in a society where freedom is so inhibited, and sex is de-coupled from reproduction, altering one's own body to change sexes is an act of rebellion against a stifling system.

2.2 Conclusions

Unno's speculative alterations of the body clearly place his *oeuvre* in science fiction, even when in form it resembles detective fiction. "Hae otoko" is an essential piece of early Japanese science fiction to study because it is a key example of detective fiction and science fiction being "sibling genres," a term which expresses how these two traditions deal with similar themes, were published in either in the same or similar magazines during this period, but are still separate. Additionally, Homura Sōroku's mysteries all involve him coming into contact with fantastical science, invariably practiced by an eccentric with dubious ethics, so while their forms follow mystery conventions, they are science fiction stories.

The atmosphere of "Hae otoko" is full of tension but also a simultaneous curiosity and dread for the possibilities of science's effect on the human body. The body in Unno's science fiction is a major site of scrutiny: so much of his work is interested in how the body can be manipulated by technology, particularly with the goal of making it more efficient, and more intelligent. We can speculate as to why this might be the case, but a few factors come to mind. First, modern medical science was a fascination of many writers of the period, particularly psychology. Secondly, in a time period where technology was advancing rapidly, why should the body be left unmodified when it could be improved?

There is a fundamental difference between science fiction and detective fiction. Detective fiction in general is "closed," with a definite solution that the story narrows towards. Solving a mystery involves eliminating possibilities, essentially restricting possibility. Science fiction often does the opposite, embracing the strange and illogical in pursuit of engaging ideas and allegories.

In discourses of the body in this time period, especially when ideas of human advancement are concerned, eugenics need to be reckoned with. A historical approach would be necessary to fully wrestle with the context of eugenicist thought in Japan, and its manifestations in science fiction writing. Unno is understanding of the impulse to improve humanity through technology or biological alterations. However, it is worth noting that every single scientist that attempts these "improvements" fails spectacularly or is killed by their success. In the next section, I discuss further elements of technological "improvements" of humans in Unno's work in the context of "Uchū Senpei."

3.0 “Uchū Senpei” Science, the State, and Radio

“Uchū senpei” is an important candidate for analysis for a number of reasons. First, it was originally published in July of 1943[40], placing it at a crucial moment in the Pacific war, four months after the Great Tokyo Air Raid, which killed approximately 100,000 people and left more than a million without homes. Secondly, it includes a preface by the author published alongside “Uchū senpei,” which offers valuable insight into authorial intent as it was presented to readers. Third, the subject matter, that of space colonization, exists at the intersection of militarism and science, making solid ground on which to build a larger analysis of the different ways in which his work can be read. Fourth and lastly, it allows for a further interrogation of the intertwining nature of science and the state in Unno’s work, particularly concerning radio and technological extrapolations thereof.

Before directly discussing the work, a more thorough examination of the author’s preface is necessary, to highlight what Unno’s goals in writing this were, as presented to readers. His main goal is to stimulate interest in science and “adventure” by writing space exploration stories in a world that he views as shrinking with Japan’s growing imperial influence. He strongly calls for an increase in scientific imagination among the reading public, especially young readers. This is notable both because of his own background as an electrical engineer, and his prominence in publishing work for young readers. His own background as an electrical engineer employed by the

[40] “Uchū senpei,”Aozora Bunko. https://www.aozora.gr.jp/cards/000160/card3355.html Originally Published in July 1943, Shinseinen 新青年.

government would have given him some idea of the scientific acumen of his contemporaries, and a sense of the infrastructure present in Japan. Furthermore, his position as an author primarily writing for young audiences gave him the leverage to encourage children directly to pursue scientific education, rather than attempt to persuade the government or parental organizations.

Originally published in *Shinseinen*[41], "Uchū senpei" concerns Kishi, a journalist who has agreed to a proposal by a scientist called Dr. Riemann[42] (Riiman) to take part in an "extraordinary super adventure trip" (Hijyōna chōbōkenryokō). When he arrives, he is knocked out and taken to a mysterious location, which turns out to be a rocket. He later learns that the rocket's destination is in pursuit of a mysterious adversary known as "Space Group X." Kishi and five other kidnapped journalists eventually find out the plan is to establish a forward base on the moon in order to better repel attacks targeting the earth. Then, by some misfortune, they become caught in a gravitational whirlpool and only escape by jettisoning both the bodies of dead crew members and 39 living "lunatics" trapped in coffins. The ending introduces the concept of travel by radio waves and sets up the idea of traveling through space very quickly.[43] This plot at a glance does resemble a colonialist narrative, with the journalists and rocket crew leaving Earth with the expressed purpose of establishing human settlement and resource extraction. However, the thematic components complicate a reading of it as an entirely uncritical endorsement of Japan's prescient imperialist ambitions. These components include its withholding of information from the main characters, as

[41] "Uchū senpei," Aozora Bunko.

[42] This spelling is borrowed from 19th century German mathematician Bernhard Riemann, as there are no prior English translations of "Uchū senpei"

[43] Ibid.

well as the narrative's disinterest with depicting the destination, and its lingering on one journalist's despair at leaving Earth.

The experience of these journalists, as a group of people undergoing what is an undeniably traumatic experience, is worth further examination, especially when issues of mass experience through media exposure are considered. The majority of the crew are European, though their nationalities align with the Axis powers and their occupied territories (excluding Italy).[17] Despite the multicultural nature of the cast, there is little to no difference in their surface portrayals, giving the cast a rather flat, if not more Japanese seeming in their behaviors and dialogue.[18] This is only intensified by the internality of Kishi, the narrator, who has minimal interactions detailed between him and the other journalists.

Information is highly regulated on the ship, coming by way of the news briefings given to the journalists by a staffer named Irene. There is an established pattern, where she will enter their room, call for attention, broadcast news, refuse to answer any follow-up questions, and then leave.[44] These terse occurrences come off as strange within the story, which otherwise ignores the fact that these journalists are essentially prisoners of Dr. Riemann after a certain point. This tense relationship to the news, as regulated through a figure of absolute authority, could be interpreted as allegorical for the way in which news was regulated during the war, with few sources and little room for public questioning. Regardless, withholding information from individuals who are at that point both members of the press and members of the crew creates a hostile atmosphere towards journalism.

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[44] Ibid.

The choice to have an adversarial relationship with information sharing in a narrative where the principal characters are journalists is fascinating because of the context in which this story was released. Censorship is an inescapable part of studying fiction in wartime, and "Uchū senpei" is no different. The tension between the journalistic impulse to record and convey information as introduced to them, and a system which selectively releases information echoes the historical context in which the story was produced.

A crisis point in the narrative is when the ship begins to be pulled into an area of space where the moon's gravity and Earth's gravity cancel each other out, creating a dead zone where they would be trapped forever should they be pulled in. The narrator watches as the ship ejects the coffins of 15 dead crew members in order to escape. Then, to his horror, he is told that 39 "lunatics" (*kyōsha*)[45] will also be ejected, still living, in similar coffins. It is an offhand remark in the same sentence where it's mentioned that furniture will be ejected as well.[46] When he expresses shock at the cruelty of shooting still living people into space, a senior reporter to him justifies it by pointing out that without this "small sacrifice,"[47] everyone still on the ship will die, and the loss of this mission will be a loss for humanity, as it would set back plans to defend against hostile alien forces.[48] The idea of this as an acceptable sacrifice is not unilaterally apparent, with the narrator collapsing at the sight of their deaths. The classification of these individuals as "lunatics" removes their utilitarian worth to the collective mission, meaning that in the face of the mission continuing,

[45] Ibid.

[46] Ibid.

[47] Ibid.

[48]Ibid.

their lives matter less than both the other crew members, and the resources, material and capital, that made the voyage possible. There is never a clear reason given for why these people went "insane," though it is implied that viewing the expanse of space from the observation deck can elicit such a reaction.[49] The pathologizing of their condition leads to them being classed as similar in worth to couches and corpses. The stigma present here of what is defined as "abnormal" behavior privileges usefulness to the collective, meaning that when a character is withdrawn and hardly speaks to his fellow journalists, he is the first person Kishi thinks of when told about the "lunatics."[50] By classing this behavior as an irreversible illness, the story frames their "sacrifice" as acceptable. Looming large in this context is the treatment of trauma within Japanese society, which becomes more evident when putting this passage alongside those where the narrator has a crisis about his lost time on Earth, as well as his predicament being essentially trapped by Dr. Riemann. The body is discarded if the mind is unwilling or deemed not useful to the collective.

Near the end of the story, a machine is introduced which can transport people at the speed of radio waves. Kishi is persuaded by the spy to sneak into an observation room for experiments involving this machine. He watches as researchers, including Dr. Riemann, put a baby between two electrodes, and then the baby is slowly disintegrated, becoming a bottle of red fluid. Understandably he believes they have just killed the child and is only convinced otherwise by Riemann's assurance that the child has been transported via the machine back to Earth.[51] It is revealed that the purpose of the mission is, in addition to establishing a forward base on the moon,

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[49] Ibid.

[50] Ibid.

[51] Ibid.

to establish one of these machines on the moon so that it can act as a waystation before there is a similar terminal installed on Mars.[52] This kind of experimentation, which is visually grotesque, is a familiar element of Unno's work, where scientists who believe they know how to improve the lives of human society do awful things in the pursuit of that goal. This transformation of the body from physical form into a completely unrecognizable, seemingly inanimate form is the most extreme of Unno's bodily modification.

One of the compelling characteristics of interwar and wartime science fiction like "Uchū senpei" is the inherent link between technology and imperialist fascism because of the preeminence of military technology, and the co-opting of scientific advancements for military uses. This entanglement is deeply embedded in science fiction of this period because so much of the boundaries of imagination are set by what was the most advanced possible technology of the time, which in this period, was military technology, either hostile or friendly. I think that trying to leave this element of the narrative out would be irresponsible academically and morally, because it is inseparable from the moment of history that shaped these works. This is where the reactionary nature of genre fiction is crucial; even with censorship dictating what stories could be published, the popular scientific imagination was dominated by war stories because of the ongoing conflict, which leads to the prominence of those types of narratives in genre fiction. In "Uchū senpei," the narrative sells militarism by presenting a mysterious threat (Space Group X) that can only be intercepted through the cooperation of civilians in the form of journalists.

[52] Ibid.

Also of importance to this text is the role of the scientific establishment as an arm of the state, as well as an increase in the presence of scientific education in mass media. The Meiji period saw the beginning of a state sponsored attempt to increase native science education, largely by expanding the middle school system, and in the development of science and adventure magazines for the new class of educated young boys.[53] Unno acknowledges in "The 18 o'clock Music Bath" that "Science can never dominate politics, but politics will always dominate science."[54] (Kagaku ga seiji wo seifukusurukoto wa zettaini arimasenga, seiji wa itsumo kagaku wo seifukushiteimasu)

The link between militarism and science in mass media can be traced in part to magazines like *Kagaku gahō* and *Kodomo no kagaku*, which were aimed at young boys. These magazines followed a model set by British counterparts, tying masculinity to the exploration of imperial territory.[55] Additionally, there were explanations of the latest in military technology appearing in popular science magazines of the era as both nationalist propaganda and engineering interest pieces.

3.1 Radio and The State

Unno uses radio as a technology extensively within his science fiction, which speaks to the place that radio has as both a technology, and as a form of media in this time period. His

[53] Those interested in further readings on scientific magazines for youth should consult Meade, Mizuno.

[54] Unno Jūza, "Jūhachi-ji no ongakuyoku."

[55] Mizuno, "The Mobilization of Wonder," 147.

background as an electrical engineer and radio enthusiast is also relevant Radio was closely regulated by the government due to its military importance and the logistics of the technology, making it a key link between science and the state.

An example of this relationship can be found in "The Last Broadcast" (Hōsōsareta yuigon).[56] This short story is told through a frame narrative: inventor Yukichi Amano listens to a broadcast on his VHF radio, the broadcast comes from another planet, minutes from being destroyed. As the broadcast closes, Amano's office collapses around him, and he assumes the instability that caused the original planet's destruction has spread, and that soon all the universe will be in ruin. "The Last Broadcast," like many stories by Unno, has a twist ending, where the world is not actually ending, rather a plane crashed into Amano's attic, killing him, and the broadcast was from an earthly source, a man arrested for an unlicensed VHF broadcast.

The story on both layers has resonances regarding both radio communication and the relationship between science and the government. In the broadcast, the speaker claims that though he has publicized his theory on the imminent destruction of his planet, he was met with hostility from the scientific establishment, the press, and multiple government entities, including the military and the police. He is in hiding, living in a cellar while the nation around him calls for his execution. The science behind his theory is explained, though it does not have basis in reality. In his future, the ability to transmute elements is possible, and the world-ending event will occur when scientists attempt to turn oxygen into chirorium, a rare fictional element with immortality granting properties. He theorizes that this process will generate excess energy in a small space, apparently causing earthquakes and storms and eventually destroying his whole planet.

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[56] Unno Jūza, "Hōsōsareta yuigon," Aozora bunko, n.d., https://www.aozora.gr.jp/cards/000160/card873.html.

The layers of obfuscation in "The Last Broadcast," first that the world is not actually ending and second, that the broadcast is not from an alien planet, are disorienting upon first reading, which naturally invites second readings and further interpretation by the reader. This interpretation mainly concerns the author of the broadcast: with possible answers ranging from a fiction writer in the vein of the "War of The Worlds" radio broadcast of 1938, which supposedly caused panic in listeners believing it was real. Perhaps the broadcaster is "mad," a common explanation for odd behavior in fiction of the time. The uncertainty invites the reader to further speculate on the nature of this broadcast, and on what Amano's original radio research may have been about.

Radio was tightly regulated in Japan in this period, and had been since its introduction in 1925. This was not unique, nor deviant from the positions held by other nations, many of which operated similar licensing programs.[57] It was considered more necessary to regulate radio than film or print media for a number of reasons, chief among them was the technical limitations of the medium. Limited frequencies meant that the airwaves needed more licensing and regulation in terms of who could broadcast and on what channels, especially given the military and communicatory significance of radio technology.[58] So, when "The Last Broadcast" ends with a new clipping saying the broadcaster was arrested by the Ministry of Communication, that is not unusual.

"Uchū Senpei" also has echoes in the much shorter "Theory of Planetary Colonization," (Yūsei shokuminsetsu) originally published in *Shinseinen* in 1932, where a scientist (comically named Dr. Gorgonzola) kidnaps a female reporter in a rocket under the pretense of an interview

[57] Gregory J. Kasza, *The State and The Mass Media in Japan 1918-1945* (Berkeley CA: University of California Press, 1988) 73.
[58] Ibid, 72.

with the intention of finding a new planet for him and the reporter to populate.[59] Both stories center around the kidnapping of journalists for the purpose of colonizing further planets, but on different scales. The dynamic between the reporter and their captor is different, with the reporter in "Theory of Planetary Colonization" being completely unwilling the entire time, with a cliffhanger ending where she expresses her longing to return to earth as it recedes into the vastness of space. In contrast, the cast of journalists in "Uchū senpei" come around to the mission of Dr. Riemann, even the reluctant protagonist.

Interestingly, "Theory of Planetary Colonization" was published more than a decade before "Uchū senpei," meaning that the concepts Unno is addressing in the latter work are not new to him. The difference between the two is in the role of the journalists. In "Theory of Planetary Colonization," the whole work is presented in dialogue, as if this is the transcript of a recording rather than a written piece, and the reporter conducts an interview, and unlike in "Uchū senpei" has her questions answered in a complete fashion. However, the dynamic is different, with only her present as both recorded and captive, while in "Uchū senpei" there is a group of journalists.

As in the prior section on "Hae otoko", it is instructive to put "Uchū senpei" into conversation with established English canon in order to examine how they represent the different attitudes and anxieties of their cultural contexts.

In Arthur Conan Doyle's "The Disintegration Machine," first published in *The Strand Magazine* in 1929, a reporter takes a scientist and fellow Englishman to visit a Latvian inventor

[59] Unno Jūza, "Yūsei shokuminsetsu," Aozora bunko, n.d., https://www.aozora.gr.jp/cards/000160/card1238.html.

who has created a device that takes the form of a chair.[60] This device can disintegrate matter, including people, and can then return them to a solid form, and is able to alter them in ways such as removing all the hair on a body. Having made the decision that his Latvian counterpart represents a threat to England, the English scientist disintegrates him with the machine, unable and unwilling to bring him back.

Conan Doyle is also playing loose with scientific ideas, not giving an explanation of how the machine works, and generally using similar technobabble to Unno, mainly terms like "vibration." The prominence of radio and the proliferation of sound as a medium of information transfer likely plays a part in the creation of an imaginary in which "vibrations" and in Unno's case, sound specifically, can have impossible effects on the human body. Radio, as well as the rapid transformation of transportation, are components in the beginnings of imagining mechanical teleportation. The fact that the teleportation technology in "Uchū senpei" relies on radio waves is of vital importance to readings of the text that center on the relationship between science and information dissemination.

In both stories the bodily experience of teleportation is treated as an object of horror, the first occurrence in "Uchū senpei" is purposefully shocking: a baby seemingly reduced to a puddle of red liquid. In "The Disintegration Machine," the horror is more vague, and stems more from the possibility that one might be disintegrated and never returned to corporeality, or the military applications of this technology being used against England.

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[60] Arthur Conan Doyle, "The Disintegration Machine," Public Archive, Project Gutenberg Australia, n.d., https://gutenberg.net.au/ebooks06/0601391h.html.

Given that Unno translated Conan Doyle, and that "The Disintegration Machine" predates the release of "Uchū senpei" by several years, it is possible that this was a direct influence. Regardless, both Conan Doyle and Unno are writing in a similar imaginative space, and their writings are indicative of differences in context: Conan Doyle's expresses an anxiety about the position of the British Empire in the wake of the first World War. Unno's work similarly expresses feelings about the place of Japan's imperial ambitions and place in the world, though with less anxiety, and more certainty in the strength of Japan's position.

3.2 Conclusions

In "Uchū senpei" and other stories I have discussed, Unno continues to focus on the body, but also includes the impact that radio as a form, the horrors of technology, and more. Unno's focus on radio and mass experience connects two imagined communities: radio listeners and science fiction readers. A group of people might listen to the same radio show every day for months or years, yet never meet, but still be connected by their consumption of the same media. Mass experience similarly connects individuals who may share nothing but an event or experience, linking bodies through the ephemeral.

The idea of mass experience relates back to considerations of how Unno's work functioned in its original reading context. Unno's work is an invitation to the reader to participate in meaning-making. The vague-ness and the sense that something is missing in the writing is both a product of its start in serialized form and an intentional fragmentary nature. The reader is given room to speculate as a valid form of interaction with the text, and perhaps the intended form.

4.0 Conclusions and Avenues for Further Study

Unno Jūza's science fiction merits study because it was produced for a mass reading audience. The reach of his work, and its intention to be read in a media ecosystem based around magazines and newspapers lead to a writing style that is fascinating. Hooking in readers with strange titles and turns of phrase, and giving them space in which to speculate about their own place among these strange new technologies.

This openness, in contrast with the established literary form of the time, seeks speculation rather than certainty, bucking psychological complexity as the main marker of good writing. Literary works of the same time, for example, Tanizaki Jun'ichiro's *The Makioka Sisters* (*Sasameyuki,* serialized 1943-1948), dwell on the complexities of the family, or other internal contradictions brought to the fore by interpersonal relations in a changing context. Contrast that with the focus Unno's work puts on the body, and the material, with a focus on impact on the reader rather than on the complexity of the characters. Unno's inherently future-looking fiction strikes a clear contrast with historical fiction and fiction of the present. In rejecting a constructed past, specifically one compared to a present framed as morally bankrupt, Unno's work also turns away from stereotypical nationalist narrative of decline brought on by globalization. His works are not lionizing a Japanese past, but rather about championing a Japanese future, which often means he leans on support of Japanese imperialism. However, not all his science fiction is recognizably of the far future. Much of it takes place in what is ostensibly the present, but with established technologies that were impossible at the time of writing. By imagining both futures that look similar to his present, and those which are unrecognizable, Unno makes room both for escape and for speculation.

Prior studies of science fiction in Japan that start in the postwar are incomplete without consideration of where that fiction came from: it could not all be inspired by imported work, there was science fiction that strongly resembles what the genre looks like today in the immediate prewar and wartime periods, and it is to be dismissed to the detriment of considering a native science fiction tradition. Additionally, treating the wartime period as a time in which there was no "advancement" or change in how science fiction functioned as reading material flattens work from that time period into one-note propaganda.

In "Hae Otoko," both body and genre are chimeric, with the novel using detective fiction forms and science fiction elements in concert to create an experience that is unique because of its hybridity. The hybridity of genre in Unno's work reflects his own background as an author who got his start with a detective story ("Murder at the Electric Bath" 1928), but also a tinkerer's spirit, combining a romantic melodrama, a monster story, and a mystery driven by revenge into a single work. Unno's work on the body, in this and other stories, differs from views on the body in science fiction of the period that originate with labor utility in mind, Čapek's *Rossum's Universal Robots* (Rossumovi Univerzální Roboti, first staged 1921) for example. Instead of a tool for manual labor, the body in Unno is a conduit for intellectual prowess. For example, in "Hae otoko" where the alteration of the Fly Man's body is in service of the betterment of his mind, or in another of the Homura Sōroku stories, where an inventor gives himself mechanical arms in order to work faster with intellectual goals in mind. In addition, we can see the anxiety with which Unno treats the body: these attempts to better humanity through alteration ultimately meet with failure.

However, this focus on the body in an imaginative space could also be seen as an embrace of the uncertainty which modernity places on the body. The development of medical technology,

as well as the impact of increased urbanization on public health, brought the body into focus as a site of tension. With technology rapidly changing, one might assume the body would be ripe for augmentation. Rather than approaching this question from the experience of one having their body altered, Unno's work focuses entirely on the observer's reaction to the altered human form, with a focus on shock and horror. Why then, do I consider his work an embrace of the uncertainty of the body in relation to modernity? By focusing on reaction of the observer rather than the person whose body is altered, Unno makes readers spectators rather than participants, not addressing the horror of living in an altered body. This voyeurism indulges a desire to view the grotesque, while maintaining distance between the reader and the subject.

The body as a thematic element in science fiction becomes popular decades after Unno was active, mainly in regards to transhumanism and cyborg concerns. His anxieties about the body include concerns about immortality, augmented intelligence and the militarization of the body. The last point is particularly resonant in "Hae otoko," where the Fly Man's removable machine gun arms add to his particular menace. However, in "Hae otoko," "The Last Broadcast" and in "The 18 O'clock Music Bath," bodily modifications, whether created by vivisection, medicine, or sound waves, are cited as being distinctly unnatural.

There is the contradiction in Unno's work, in which science is both the key to Japan's future, and an object of horror. In contemporary science fiction, this dynamic is usually defined by morality, with virtuous characters using science to advance causes, where immoral characters create horrors. However, the two are tied together in Unno's work, with a significant number of his scientists pointing towards generalized progress for humanity as their goal in creating visually unsettling altered bodies.

"Uchū senpei" illustrates in microcosm the dynamic between science, the state, and information as represented by journalists. It also uses radio in a science fiction context which is influenced by its prominence both as a technology and as a medium at the time. The role of both recipients of information, and recorders also comes into play, with both being aspects of the experiences that the journalists have over the course of the narrative.

In both major works, descriptions are left almost intentionally vague, for the purpose of stimulating reader imagination: when Unno describes the Fly Man in "Hae otoko," it is that he is terrible to behold, only arriving at a clear description near the end, where the description is linked to the process by which he was made. This operates on similar principles to monster-based horror works, where a full description of the monster is deferred for as long as possible, so that the audience might imagine whatever they would find most frightening. The ending of "Uchū senpei" also invites reader speculation of who this Space Group X might be, and what dangers the group will face next, an uncertainty given Unno never wrote an explicit sequel to this short story.

The participation of an imagined community of readers in the process of meaning-making is a key to understanding the appeal of Unno's work in a contemporary context. Serialized fictional reading material, at least in the contemporary American context, is the realm of subculture, with text only work being much rarer than the now ubiquitous webcomic format. The larger point is that when work is serialized, there are both limitations in the amount of content that can be consumed in a unit of time, and gaps between publication where the audience is purposefully left in suspense. This gap in publication allows for the work to become a conversation topic and subject of speculation either between readers, or between readers and non-readers. Where a contemporary reader might find Unno vague and sometimes repetitive, those are choices that align heavily with their context as serialized or magazine published works.

Further study of Unno's body of work is merited, with potential areas of focus including his work on science fiction for young readers, the relationship his work has with Japan's imperial ambitions, or an in depth analysis of his postwar diary (*Unno Jūza haisen nikki*) which was published posthumously. Additionally, a comparison of his earlier works with those published in the postwar under a different pseudonym may prove fruitful. Another angle might include a deep analysis of his work as a translator, comparing his works to originals in English and speculating on why he chose the works he translated.

In terms of theoretical approaches, early in the process I was interested in considering the materiality of Unno's works, as they were largely published in magazines, some serialized. Seeing what other authors, columns, and advertisements appeared in the same issues would help to illuminate the original reading experience. However, original materials have been near impossible to come by, not helped by the ongoing pandemic making international travel unfeasible. An archival approach to the topic of early Japanese science fiction is possible, and might bring entirely new perspectives with the introduction of physical media, and possibly letters to editors regarding prior published Unno stories, evidence of an engaged reader base.

Aozora Bunko has been an invaluable tool in this time, providing full text versions of all of Unno's work, both for download and reading online. Open access was one of the factors that led me towards Unno's work as an undergraduate seeking material to translate. The ability to run word-frequency searches in Voyant is only possible because the full text in HTML format is available, and while that tool was not a focus of my analysis with this project, it was crucial in guiding me in choosing excerpted quotes and terms that are of importance to each work I discuss.

When you can draw the line directly from Unno's fiction to an artist as influential on contemporary popular culture, not only in Japan, as Tezuka Osamu, who cited "Kaisei heidan"

(Mars Army Corps) as the reason he became interested in science fiction,[61] it becomes impossible to overlook Unno. While "Kaisei heidan"'s considerable length kept it from being covered in this project, Tezuka's most famous work (Astro Boy 鉄腕アトム 1952-1968) focuses on the robot body as it is used as both a weapon and a tool in the advancement of mankind. His second most famous work (Black Jack, ブラック・ジャック 1973-1983) focuses on a rogue doctor. Marked by surgical scars where his body was reconstructed after being caught in an explosion, he skirts a corrupt bureaucracy in an attempt to help people. The difference between Black Jack and Unno's medical tinkerers is their morality, where Black Jack practices medicine well despite his menacing appearance, in Unno's work, such practitioners are never so charitable. When considering all these parallels, additional research is needed.

In summary, Unno is prolific, influential, and overlooked, making him a perfect candidate for further study. His fiction addresses thematic hallmarks of science fiction: bodies, and the relationship between science and the state, all of which come to prominence in later science fiction.

[61] Kawana, "Reading Beyond the Lines," 161.

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