Exploring Thematic Shifts in Japanese Science Fiction Literature: A BERT-Based Topic Modeling Approach to Project Itoh and Hanna Ren[1]

Sanghyuk Lee & Eugene Chung

Abstract: This study explores the thematic evolution in Japanese SF literature, focusing on Project Itoh's *Genocidal Organ* and *Harmony* alongside Hanna Ren's parody work *A Pistol Handed to Miaha*. Project Itoh's works are characterized by their exploration of human-subjectivity, technological oppression, and the societal roles of the body and language, engaging with posthuman themes and new conditions of existence. In contrast, Hanna Ren's text adopts a lighter tone, emphasizing sensory elements, humor, and romantic themes while maintaining structural ambivalence and reversals. By employing digital humanities methodologies, such as BERT-based topic modeling and text mining, this research bridges computational and traditional literary criticism. It identifies key thematic shifts from Project Itoh's heavy and introspective focus on liberation and existential conditions to Hanna Ren's playful engagement within societal constraints. This study situates Ren's work within broader contexts of parody, homage, and Hiroki Azuma's concept of "database consumption," reflecting contemporary trends in SF literature. Ultimately, the paper contributes to understanding the dynamic interplay of influence, innovation, and thematic adaptation in post-Project Itoh SF, offering insights into the ethical and existential questions that underpin literary expression in the digital age.

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标题：日本科幻文学中的主题转变研究：基于 BERT 的主题建模框架下伊藤计划与哈娜·任的作品分析

内容摘要：本文探讨了日本科幻文学的主题演变，重点分析了伊藤计划的两部作品《虐杀器官》《和谐》以及哈娜·任的戏仿作品《交给米娅的手枪》。伊藤计划的作品探讨人类主体性、技术压迫以及身体和语言在社会中扮演的角色，涉及后人类主题与新生存条件。而相比之下，哈娜·任的文本则采用了更轻松的语调，强调感官元素和幽默浪漫的主题，同时保留了结构上的矛盾与反转设计。本文通过数字人文学方法，如基于 BERT 的主题建模和文本挖掘，试图在计算文学批评和传统文学批评之间架起桥梁。此外，研究揭示了日本科幻文学主题上的关键转变，即从伊藤计划对解放与存在条件的深刻内省和沉重关注，转向哈娜·任在社会约束中的戏谑式探讨。通过将哈娜·任的作品置于戏仿与致敬和东浩纪"数据库消费"概念的更广阔语境中，论文试图反映当代科幻文学的发展趋势，并对伊藤计划在后科幻文学中影响、创新和主题适应的动态交互进行了深入探讨，为数字时代文学表达中蕴含的伦理与存在问题提供了新的见解。

关键词：数字人文；BERT；主题模型；伊藤计划；哈娜·任

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1. Introduction

The late 2000s marked a turning point in Japanese SF literature, often referred to as the end of its "winter," with the emergence of Project Itoh revitalizing the genre. Project Itoh's works, such as *Genocidal Organ* and *Harmony*, have been widely celebrated for their narrative innovation and thematic complexity, significantly influencing subsequent generations of SF writers. Following Itoh's passing, SF Magazine featured a special issue titled "Post Project Itoh" highlighting the enduring impact of his works. However, while this issue acknowledged his influence, it did not delve into how later writers have inherited, adapted, or transformed his themes. This lack of detailed analysis represents a critical gap in understanding the continuities and shifts within Japanese SF literature, which reflect broader cultural and societal changes.

Despite the resurgence of SF literature and the accompanying growth in scholarly interest, most existing research remains rooted in traditional literary criticism. Systematic, data-driven explorations of thematic transformations are notably absent, necessitating the adoption of methodologies from digital humanities.

Text mining and topic modeling, for instance, provide powerful tools to quantify and analyze thematic patterns across texts, offering new perspectives on literary evolution.

This study addresses these gaps by applying digital humanities methodologies to examine the thematic evolution in Japanese SF literature. Focusing on Project Itoh's *Genocidal Organ* and *Harmony* alongside Hanna Ren's parody *A Pistol Handed to Miaha*, this research explores how key themes are inherited, transformed, and reimagined, shedding light on the evolution of SF literature around 2010.

The following research questions guide this study: 1. How are the key themes and keywords from *Genocidal Organ* and *Harmony* inherited, transformed, and restructured in Hanna Ren's parody *A Pistol Handed to Miaha*? 2. What socio-cultural contexts are revealed in the process of thematic adaptation and transformation within Ren's parody, and what roles do parody, imitation, and borrowing play in the broader SF literary landscape? 3. How can digital humanities techniques, such as text mining and topic modeling, provide new insights into thematic evolution in SF literature, and what are their limitations compared to traditional critical approaches? By addressing these questions, this study contributes to a deeper understanding of thematic evolution in SF literature while demonstrating the value of digital humanities methodologies. This research not only bridges the gap between traditional and computational literary criticism but also highlights the transformative potential of interdisciplinary approaches in the digital age.

2. Research Methodology

2.1 Data Collection and Preprocessing

The study began with the collection and preprocessing of textual data extracted from PDF documents of *Genocidal Organ*, *Harmony*, and *A Pistol Handed to Miaha*. Optical Character Recognition (OCR) technology was employed to digitize the Japanese-language content, ensuring high accuracy by configuring the OCR settings specifically for Japanese text. This step produced clean, machine-readable datasets for computational analysis.

Subsequently, the textual data underwent preprocessing to standardize its structure and remove noise. Non-alphanumeric characters, excessive spaces, and irrelevant elements were filtered out. Sentences were segmented based on Japanese punctuation markers such as "。" and "!." A custom stopword list tailored to Japanese was applied to eliminate function words and other high-frequency terms with minimal analytical significance. Morphological analysis, conducted using the GiNZA parser, facilitated the extraction of linguistically meaningful

tokens, including nouns, verbs, and adjectives, to form a dataset optimized for computational modeling.

2.2 BERT-Based Topic Modeling Framework

To analyze the thematic structures within the texts, the study utilized a BERT-based topic modeling framework, moving beyond the limitations of traditional methods like Latent Dirichlet Allocation (LDA). Using the paraphrase-multilingual-MiniLM-L12-v2 model, sentence-level embeddings were generated to capture contextual meaning within the text.

Dimensionality reduction was then applied using Uniform Manifold Approximation and Projection (UMAP) to simplify the high-dimensional embeddings while preserving their semantic relationships. Following this, K-Means clustering was employed to group sentences into coherent thematic clusters. This process demonstrated significant advantages over LDA by incorporating the nuanced, context-sensitive relationships inherent in literary texts, which often include abstract and metaphorical expressions.[1]

2.3 Comparing LDA and BERT-Based Approaches

Latent Dirichlet Allocation (LDA) has historically been a foundational method for thematic analysis in literary studies. Blei et al.[2] introduced LDA as a probabilistic framework for extracting latent themes based on word co-occurrence, which has been extensively applied in the humanities. For instance, Goldstone and Underwood[3] analyzed thematic shifts in 19th-century English literature using LDA, while Liu et al.[4] traced thematic transformations in classical Chinese poetry to explore historical evolutions in poetic traditions.

Despite its contributions, LDA operates under the assumption of word independence, often failing to capture the nuanced semantic relationships and contextual meanings that are essential for analyzing complex literary narratives. This limitation frequently results in oversimplified thematic representations, necessitating the adoption of more advanced methodologies.

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1   See Maarten Grootendorst, "BERTopic: Neural topic modeling with a class-based TF-IDF procedure," *arXiv preprint arXiv:2203.05794* (2022); Wang Xuerui et al., "Topical n-grams: Phrase and topic discovery, with an application to information retrieval," *Seventh IEEE International Conference on Data Mining* (2007): 697-702.

2   See David M. Blei et al., "Latent Dirichlet Allocation," *Journal of Machine Learning Research* 3 (2003): 993-1022.

3   See Andrew Goldstone and Ted Underwood, "What Can Topic Models of PMLA Teach Us About the History of Literary Scholarship?" *Journal of Digital Humanities* 1 (2012): 39-48.

4   See Liu Dayiheng et al., "A Multi-modal Chinese Poetry Generation Model," *2018 International Joint Conference on Neural Networks (IJCNN)* (2018): 1-8.

BERT-based models, by contrast, leverage deep contextual embeddings to capture semantic nuances at the sentence level. Grootendorst demonstrated that BERTopic, which integrates BERT embeddings, consistently outperforms LDA in identifying coherent and meaningful themes across diverse textual datasets. Similarly, Wang et al.[1] and Kiros et al.[2] highlighted BERT's effectiveness in uncovering intricate thematic structures in modern and unstructured literary texts. This study adopts the BERT-based framework to overcome the limitations of LDA, enabling a more refined and comprehensive analysis of thematic evolution.

2.4 Thematic Interpretation and Analysis

The final phase of the methodology involved interpreting the topic clusters generated by the BERT-based topic modeling framework. CountVectorizer was used to extract high-frequency keywords from each cluster, forming topic profiles that provided insight into the dominant themes.

These profiles were contextualized within the broader literary and cultural frameworks of Project Itoh's original works and Hanna Ren's parody. The analysis revealed thematic progressions from existential motifs in *Genocidal Organ* and *Harmony* to the nuanced social commentary and intertextuality found in *A Pistol Handed to Miaha*. This thematic evolution reflects not only the creative dynamics of parody but also the broader cultural shifts in SF literature around 2010. By bridging traditional literary criticism with computational methods, this study offers a deeper understanding of how parody literature reinterprets and transforms core themes.

3. Topics Seen in Science Fiction Literature on the Project Itoh

In this section, I will analyze the main keywords and themes that appear in Project Itoh's *Genocidal Organ* and *Harmony*. Previous studies provide valuable insights into the overarching themes of these works. Akira Okawada[3] and Rui Maeda[4] interpret the literature of Project Itoh as offering a glimmer of hope for re-establishing subjectivity in an era where such a notion seems unattainable.

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1   See Wang Xuerui et al., "Topical N-grams: Phrase and Topic Discovery, With An Application to Information Retrieval," *Seventh IEEE International Conference on Data Mining* (2007): 697-702.

2   See Ryan Kiros et al., "Skip-thought Vectors," *Advances in Neural Information Processing Systems* 28 (2015): 3294-3302.

3   See Akira Okawada, "'World War Within' and a Glimmer of Hope: On Project Itoh's *Genocidal Organ*," *SWorld War Within' and a Glimmer of Hope: Project Itoh, SF, modern literatue* (2013): 10-46; Hiroki Azuma, *Otaku: Japan's Database Animals*. Minnesota: U of Minnesota Press, 2009.

4   See Rui Maeda, "The Loss of [the Mother] Land," *SF Magazine* 56 (2013): 32-35.

Sang-hyuk Lee[1] views these works as fictional inquiries into the possibilities of literature and subjectivity through innovative forms. Shun Izutani[2] explores the potential cracks in societal structures, exposing absurdity from a gender-queer perspective. These analyses focus on themes surrounding subjectivity and the world, investigating their limitations and possibilities.

However, these interpretations rely heavily on traditional textual analysis of the narrative and structure. To deepen the discussion, this study incorporates evidence derived from computational methods, such as topic modeling, which facilitates comparative analyses between Project Itoh's works and those of later generations. This approach allows for a broader cultural and literary examination based on quantifiable data.

Topic	Keywords
3	いく (go), いつ (went), すべて (all), たち (group), わけ (reason), ボス (boss), ルツィア (Lutzia), 人間 (human), 仕事 (work), 任務 (mission), 作戦 (operation), 大佐 (colonel), 大尉 (captain), 情報 (information), 標的 (target), 知っ (knew), 自分 (self), 記録 (record)
4	ジョンポール (John Paul), ブローニング (Browning), ルツィア (Lutzia), 人間 (human), 作戦 (operation), 思っ (thought), 情報 (information), 文法 (grammar), 暗殺 (assassination), 殺し (killing), 知っ (knew), 聞い (heard), 自分 (self), 虐殺 (massacre)
5	ことば (words), ビール (beer), ルツィア (Lutzia), 人間 (human), 会話 (conversation), 単語 (word), 子供 (child), 意味 (meaning), 物語 (story), 自由 (freedom), 若者 (youth), 英語 (English), 言葉 (language), 言語 (linguistics), 話す (speak)
8	いく (go), くる (come), イルカ (dolphin), ホテル (hotel), ポッド (pod), ルツィア (Lutzia), ヴィクトリア (Victoria), 人工 (artificial), 同じ (same), 廊下 (hallway), 沿岸 (coastline), 産業 (industry), 筋肉 (muscle)
14	デバイス (device), ナノマシン (nanomachine), ナノレイヤー (nanolayer), 人間 (human), 匂い (smell), 死体 (corpse), 焼ける (burn), 病院 (hospital), 筋肉 (muscle), 網膜 (retina), 自分 (self), 臭い (odor), 若者 (youth), 視線 (gaze)
16	Id, セキュリティ (security), テクノロジー (technology), ネットワーク (network), 会社 (company), 作戦 (operation), 個人情報 (personal information), 国家 (nation), 国防総省 (Department of Defense), 情報 (information), 政府 (government), 機関 (organization), 社会 (society), 記録 (record), 認証 (authentication), 諜報 (intelligence), 追跡 (tracking)
18	カウンセラー (counselor), カウンセリング (counseling), マスキング (masking), モジュール (module), 人間 (human), 処理 (process), 判断 (judgment), 医者 (doctor), 心理 (psychology), 感じ (feeling), 感情 (emotion), 戦闘 (combat), 機能 (function), 状態 (condition), 痛い (hurt), 痛み (pain), 自分 (self), 苦痛 (suffering), 調整 (adjustment)
20	アメリカ人 (American), 世界 (world), 人間 (human), 国家 (nation), 国民 (citizen), 意味 (meaning), 政府 (government), 文明 (civilization), 歴史 (history), 社会 (society), 自分 (self), 自由 (freedom)

Table 1   *Genocidal Organ* Topic Modeling Results ((Partial View)

1   See Sanghyuk Lee, "The possiblility of Formal Exeriments and Fiction by Project Itoh: focusing on *Harmony*," *Journal of Japanese Cultural Studies* 95 (2022): 195-232.

2   See Shun Izutani, "A Queer Reading of Expatrates," *Showa Bungaku Kenkyu* 77 (2018): 71-77.

Themes such as "control," "surveillance," and "nanotechnology" dominate the narrative of Genocidal Organ. These motifs highlight the dangers of systemic suppression of human autonomy through technological means. For instance:

Topic 14 focuses on management through psychological counseling in medical institutions, where technologies like nanomachines (ナノマシン ナノレイヤー) are embedded in individuals' bodies, such as in their retinas or muscles, to regulate behavior.

Topic 16 examines how states(国家 , 政府 , 機関) manage individuals via identity verification, personal information, and tracking systems. (ID, セキュリティ , 個人情報 , 認証 , 追跡)

Topic 18 emphasizes psychological control mechanisms like masking and counseling, which manipulate emotions, pain, and judgment. (マスキング , カウンセリング , 心理 , 感情 , 判断)

These results underscore how *Genocidal Organ* critiques the pervasive influence of institutional systems on individual freedom. Technological advancements, instead of fostering autonomy, become tools for comprehensive control over human consciousness and emotions.

Other recurring topics include missions (Topics 3 and 4), exploitation within capitalist systems (Topic 8), and the critical role of language (Topic 5). Yet, the central theme remains the suppression of freedom through mechanisms of control and management—a theme that resonates throughout Project Itoh and transitions into *Harmony*.

Topic	Keywords
5	Away, day, html, number, partnumber, ごめん (sorry), ミァハ (Miaha), 人間 (human), 言葉 (language)
6	Watchme, インストール (installation), システム (system), メディケア (medicare), 世界 (world). 人間 (human), 人類 (humanity), 体内 (body), 健康 (health), 分子 (molecular), 医療 (medical), 生活 (life), 産業 (industry), 病気 (disease), 監視 (surveillance), 社会 (society), 自分 (self), 複合体 (complex), 身体 (body)
8	ミァハ (Miaha), 世界 (world), 事件 (incident), 人間 (human), 友人 (friend), 死ぬ (die), 死者 (deceased), 殺し (killing), 瞬間 (moment), 社会 (society), 老人 (elderly), 自分 (self), 自死 (self-inflicted death), 自殺 (suicide)
9	Thinglist, 画面 (screen), 空気 (air), 螺旋 (spiral), 視界 (field of vision), 言葉 (words), 論文 (thesis/paper), 金属 (metal)
11	世界 (world), 人間 (human), 人類 (humanity), 必要 (necessity), 意識 (consciousness), 感情 (emotion), 憎ん (hatred), 永遠 (eternity), 王様 (king), 生命 (life), 痛み (pain), 社会 (society), 自分 (self), 野蛮 (barbarism)
15	Description, アルコール (alcohol), カフェイン (caffeine), タバコ (tobacco), ライター (lighter), ワイン (wine), 人間 (human), 吸う (smoke), 婦人 (lady), 必要 (necessity), 戦場 (battlefield), 摂取 (intake), 灰皿 (ashtray), 葉巻 (cigar), 銃口 (muzzle)

16	Anger, クラス (class), ミァハ (Miaha), 大人 (adult), 子供 (child), 学校 (school), 怒り (anger), 感じ (feeling), 成績 (grades), 教室 (classroom), 痛み (pain), 社会 (society), 自分 (self), 苦痛 (suffering)
17	Recollection, プライベート (private), 互い (each other), 人々 (people), 人間 (human), 倫理 (ethics), 必要 (necessity), 情報 (information), 意味 (meaning), 意識 (consciousness), 社会 (society), 自分 (self), 言葉 (words), 身体 (body)
19	ご飯 (rice), カプレーゼ (caprese), キッチン (kitchen), ミァハ (Miaha), 匂い (smell), 弁当 (bento), 料理 (cooking), 社会 (society), 自分 (self), 身体 (body), 食べ物 (food), 食事 (meal)
20	メディア (media), 上司 (boss), 事件 (incident), 人間 (human), 必要 (necessity), 情報 (information), 捜査 (investigation), 教授 (professor), 警察 (police), 閣下 (Your Excellency), 首席 (chief)

Table 2 *Harmony* Topic Modeling Result (Partial View)

In the case of Project Itoh's *Harmony*, the emphasis on "safety" and "administration" in the narrative and structure of the story stands out. *Harmony* depicts a society in which safety is guaranteed through technological advancement but paradoxically results in the suppression of humanity, as well as the restriction, management, and control of individual freedom. This highlights the dangers of social control, where the concept of safety conflicts with human free will and serves as a mechanism to oppress individuals. In this regard, previous studies by Shin[1] and Hong[2] point out the danger that the increasing emphasis on safety and life-oriented ideologies in technological societies can lead to the suppression of human freedom. These studies link this phenomenon to the structure of individual repression in Japanese society, which is characterized by the prying eyes of others. This analysis is an important contribution to understanding the societal critiques embedded in *Harmony*.

Comparing these prior studies with data from a digital anthropology method (topic modeling analysis) reveals some interesting points. First, the topic of "safety" does not directly appear in the first 20 topics extracted from the data. However, Topic 6 and Topic 15 align with findings from previous studies, showing that an overemphasis on "safety" acts as a form of oppression. For instance, in Topic 6, words such as "watchme" "system (システム)," "Medicare (メディケア)," "in the body (体内)," "molecule (分子)," and "surveillance (監視)" are closely associated, revealing a theme of monitoring and control. This connects to institutional and ideological repressive mechanisms, such as "classroom (教室)" and "school (学校)" in Topic 16, and hierarchical structures like "boss (上司)"

1   See Hakyoung Shin, "Project Itoh and Near Future of Post-humanism in *Harmony*," *Asian Culinary Studies* 41 (2016): 141-171.

2   See Yunpyo Hong, "The Meaning of Control and Freedom in *Harmony* by Project Itoh," *Japan Studies* 38 (2022): 131-158.

and "police (警察)" in Topic 20. Furthermore, in Topic 16, the term "anger (怒 り)" appears alongside these repressive mechanisms, reflecting a consciousness of resistance and subversion within the system.

It is also worth noting that words such as "body (身体)," "life (生活)," and "health (健康)" are strongly associated with Topic 6, emphasizing themes of monitoring, management, and control. Topic 15 explores behaviors deemed harmful to "health" and individual life, such as "alcohol (アルコール)," "tobacco (タバコ)," and "liquor (ビール , ワイン)" These themes are reflected in the character Miaha, who attempts to harm her body and health as a way of liberating herself from external and social oppressive forces that govern the body. In the novel, the body becomes a site of surveillance, management, and control by the state and society through the "life" technology represented by "WatchMe." Here, the private sphere of individual freedom is effectively erased, as everything is subject to public scrutiny under the guise of righteousness.

Referring to the aforementioned studies, Project Itoh addresses the issues surrounding the (im) possibility of subjectivity and its existential conditions through his science fiction literature. While related studies often focus on dimensions of "consciousness" or social conditions, the extracted data directly emphasizes the body. The data suggests that the body serves as a boundary between the private and public spheres. For instance, it is associated with "pain (苦痛 , 痛み)" in Topic 11 and 16, death and self-destruction (自殺) in Topic 8, and social relationships in Topic 17. Consequently, the management and control of the body are intrinsically linked to the management and control of consciousness. In this way, the private sphere is connected to the public domain, and the society depicted in *Harmony* is one maintained through the surveillance, management, and control of the body. The characters in the novel attempt to destroy the body—through which existing oppressive mechanisms operate—in their pursuit of a new existence and consciousness.

Of course, Project Itoh's *Harmony* connects the "body" to "consciousness" and "existence," emphasizing the significance of the material body. However, it does not neglect the importance of "language (言葉)" as a condition of existence. The word "language" appears in the data in Topics 5, 9, and 17, where it is associated with programming languages, devices, and social relationships, respectively. This suggests that Project Itoh views language as a social element closely tied to the broader concept of "humanity" as well as the "private (プライベート)" and "self (自分)" This interconnectedness of the social and the personal through language reinforces the idea that the two domains are not separate but rather interwoven. This interpretation aligns with Lee's (2022) analysis, which describes Project Itoh's

literature as a thought experiment that seeks to explore new human conditions through language and formal innovation.

4. Topics from Hanna Ren's A Pistol Handed to Miaha

After Itoh's death at a young age, the Japanese science fiction community honored him and referred to his influence as the "post Project Itoh." Hanna Ren is one of the later-generation writers influenced by him, and his short story A Pistol Handed to Miaha is included in the novel collection Smooth World and Its Enemies. This short story can be seen as a parody or homage to *Harmony*, not only because the name "Miaha" recalls the protagonist of Project Itoh's novel *Harmony*, but also because "pistols" play a significant role in the conclusion of *Harmony*.

Comparing Hanna Ren's A Pistol Handed to Miaha to Project Itoh's *Harmony* and *Genocidal Organ* allows us to explore not only the thematic similarities and differences between these works but also the subtle changes in style and focus between Project Itoh and later generations of science fiction. This comparison also provides insight into their formal characteristics as parodies or works that imitate and borrow from earlier texts. For the purpose of this paper, I will focus on the differences between the two—the Project Itoh and Hanna Ren—as distinct writers.

Topic	Keywords
4	インプラント (implant), ナイフ (knife), 咄嗟 (moment), 射出 (injection), 弾丸 (bullet), 拳銃 (pistol), 最後 (last), 本物 (real thing), 玩具 (toy), 贈る (give), 銃口 (muzzle), 銃弾 (bullet), 銃撃 (shooting)
6	アイコン (icon), オルゴール (music box), カクテル (cocktail), ガラス (glass), グラス (glass), ケーキ (cake), テーブル (table), 展開 (development), 文字 (letters), 書斎 (study), 目線 (gaze), 眼前 (in front of the eyes), 眼球 (eyeball), 眼鏡 (glasses), 見え (visible), 視線 (line of sight)
9	ソフト (software), ドア (door), ホール (hall), 廊下 (hallway), 意味 (meaning), 衝撃 (shock), 閉じ (close), 静か (quiet)
10	互い (each other), 人格 (personality), 人間 (human), 好意 (favor), 存在 (existence), 愛し (love), 愛する (to love), 愛情 (affection), 気持ち (feeling), 永遠 (eternity), 生涯 (lifetime), 異性 (opposite sex), 相手 (partner), 真実 (truth), 花嫁 (bride)
12	インプラント (implant), 医師 (doctor), 医療 (medical care), 失敗 (failure), 手術 (surgery), 病院 (hospital), 白い (white), 言葉 (words)
14	お願い (request), 分かっ (understood), 引き金 (trigger), 気づい (noticed), 決め (decided), 知っ (knew), 答え (answer), 犯罪者 (criminal), 論理 (logic), 音楽 (music)
15	人間 (human), 名前 (name), 小説 (novel), 恋愛 (romance), 物語 (story), 理由 (reason), 知っ (knew), 科学 (science), 終え (ended), 結末 (ending), 絶滅 (extinction), 肺腑 (lungs)
16	インプラント (implant), 世界 (world), 人間 (human), 受け (received), 墓地 (cemetery), 壊す (destroy), 技術 (technology), 拳銃 (pistol), 聖書 (Bible), 聞い (heard), 言葉 (words), 贈る (give)

17	ユーモア (humor), 口元 (mouth), 口調 (tone), 必死 (desperate), 感情 (emotion), 笑み (smile), 笑顔 (smiling face), 表情 (expression), 言葉 (words)
18	インプラント (implant), 不安 (anxiety), 世界 (world), 人物 (character), 受け取る (receive), 拳銃 (pistol), 聖書 (Bible), 言葉 (words)
20	人間 (human), 仮面 (mask), 白い (white), 白衣 (white coat), 白鳥 (swan), 黒い (black), 眼球 (eyeball)

Table 3 *A Pistol Handed to Miaha* Topic Modeling Result Table

Some of the similarities to Project Itoh's *Harmony* include Topic 12, which is related to healthcare; Topic 9, which features spatial words; and Topic 6, which includes words related to eating. Other topics, however, are quite different. For instance, Topic 10 focuses on love and romance, Topics 14 and 15 explore themes of knowledge, Topic 17 highlights humor, and Topic 20 examines contrasts.

If we first consider Topic 6, which contains words similar to the data from *Harmony*, terms such as "cocktail (カクテル)," "glass (グラス)," and "cake (ケーキ)" parallel words related to eating in Topic 19 of *Harmony*, such as "kitchen (キッチン)," "bento (弁当)," "cooking (料理)," and "meal (食事)" However, what distinguishes Hanna Ren's work from Project Itoh is that these food-related words are often accompanied by visual terms like "letter or character (文字)," "line of sight (目線 , 視線)," and "in front of the eyes (眼前)" This suggests that Hanna Ren is more focused on sensory or visual elements than on the materiality of food itself, in contrast to Project Itoh's thematic interest in the body and its societal implications.

As previously noted, Project Itoh extends its thematic exploration from material food and the body to issues of management and societal control. Hanna Ren, on the other hand, appears to prioritize sensory experiences over the body and its role in power structures, such as management and control.

This distinction is also evident in Topic 10, which delves into love and romance. Words such as "affection (愛情)," "love (愛する)," "eternity (永遠)," and "bride (花嫁)" are absent from Project Itoh's topic data. These terms reflect the lightness that characterizes Hanna Ren's texts. Compared to Project Itoh, which grapples with the possibility of new subjects and existence or the liberation of the "body" from societal management and control, Hanna Ren's parody text portrays romance in unattainable situations, reminiscent of Romeo and Juliet. In other words, while Project Itoh's novels emphasize heavy and serious themes, Hanna Ren's works bring a lighter tone, emphasizing love, romance, and sensuality. This characteristic of lightness in Hanna Ren's writing is further exemplified in Topic 17, where words such as "humor (ユーモア)"and "laughter (笑み , 笑顔)" emerge. These elements underline her distinct approach, which contrasts with the somber and

introspective mood of Project Itoh.

It is important to note, however, that Hanna Ren's text does not merely accept the phenomenon of the "here-and-now" represented by "lightness." On the contrary, it also includes topics such as "bullet (弾丸)," "bullet (銃弾)," "knife (ナイフ)" and other words with disruptive meanings, such as "pistol (拳銃)," "graveyard (墓地)," and "smash (壊す)." These appear in several topics, such as Topic 16. In Topic 20, where contrasting words are found, ambivalence is expressed through terms like "mask (仮面)," "white (白い . 白衣 , 白鳥)," and "black (黒い)" which highlight themes of contrast. To interpret this, if Project Itoh addresses the heavy theme of connecting the "I" and the "world" through the medium of the "body," breaking down the hierarchy of mind and body, and creating new conditions of existence through their compatibility, Hanna Ren instead explores the cracks and balance of opposites through atmosphere and setting.

This appears to be a defining characteristic of Hanna Ren's writing, which emphasizes reversals that subvert the expected "ending." For example, in Topic 15, the concept of an "ending (結末 , 終え)" is linked to "knowing (' 知った , 理由)" while words such as "extinction (絶滅)" and "lung (肺腑 -The meaning of 'cutting to the heart')" introduce a sense of reversal. To summarize, Hanna Ren builds her literature on the literary premise of ambivalence, balancing heaviness and lightness, stability and disruption, and the reversal of expectations.

When considering this conclusion in relation to Nam[1]'s research on the role of otherworldly light novels as a substitute for reality, it becomes apparent that while the Project Itoh seriously contemplates escape from an inescapable oppressive reality structure through fiction, Hanna Ren's work accepts this existential condition as a given. For Hanna Ren, this condition is no longer a quest for escape (as in Project Itoh), but rather a playful engagement within the inescapable constraints and forms of reality. The transition from Project Itoh's *Harmony* to Hanna Ren's *A Pistol Handed to Miaha*—specifically, the shift in imitation and borrowing—reveals a fundamental difference in the perception of existential conditions. While Project Itoh grapples with the heavy notion of seeking escape from the inescapable, Hanna Ren adopts a light-hearted perspective, accepting the impossibility of escape as a given and engaging in playful exploration within those constraints.

5. Conclusion

This paper analyzes the shift in themes across the texts of Project Itoh and subsequent

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1　See Yoomin Nam, "A Study on 'Villainess' Japanese Web Novels Using Textmining Method," *Border Crossings: The Journal of Japanese-Language Literature Studies* 16 (2023): 188.

parody or homage novels by Hanna Ren. Previous studies of Itoh's work have characterized him as a writer deeply concerned with the (in)possibilities and conditions of new subjects and modes of existence. This paper concurs with this analysis and extends it by examining more specific themes and word associations.

The results indicate that Project Itoh emphasizes the body and language. Project Itoh seriously engages with posthuman themes in science fiction literature, such as the concept of the body as a site where external and social forces operate, and the evolution of a new, liberated "I" through the destruction of the "body." This includes deconstructing the dichotomy between mind and body, highlighting how the material body is interconnected with consciousness and spirit. The element of "language" is also pivotal, emphasizing its role and the power of fiction as external and social constructs that shape individual identity. Consequently, the possibility of a posthuman subject in science fiction literature can be seen as a thought experiment rooted in these fundamental conditions.

On the other hand, as a post Project Itoh writer, Hanna Ren shares an interest in language but appears to place less emphasis on the body and the conditions of new existence. Instead, her texts seem to focus on the contrast between heaviness and lightness, or on dualities (e.g., cracks and balances) within the setting, rather than exploring dualities in subject matter.

This perspective aligns with contemporary contexts of parody and homage, as well as the growing prevalence of imitation and borrowing in literature, as described in Hiroki Azuma's concept of "database consumption."[1] These connections warrant further exploration in the field of SF studies. While this paper serves as an initial extraction of these features, future work will delve deeper into the differences between Project Itoh and Enjoe Toh's *Empire of the Dead*, which he completed using the prologue and setting left by Itoh. Additionally, further analysis will include topic modeling of Hanna Ren's parody or homage works, such as Frankenstein's Three Principles or The Revenge of the Dead.

I will conclude with a brief remark on the significance of such analyses. If "ethics" concerns how we perceive the world, relate to objects, and conduct ourselves, then recognizing and expressing this existential condition in literature becomes a matter of contemporary "ethics." Furthermore, as Lianyou Guo[2] notes,

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1   See Hiroki Azuma, *Otaku: Japan's Database Animals*, Minnesota: University of Minnesota Press, 2009.

2   See Guo Lianyou, "Analysis of New Trends In the Field of Japanese Cultural Content Research in China," *Border Crossings: The Journal of Japanese-Language Literature Studies* 17 (2023): 79-101.

with the increasing focus on virtual worlds like the "metaverse," it is imperative not only to analyze these technologies but also to interpret their meanings in relation to human existential conditions and ethics.

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