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Translanguaging as Method in Science Fiction *Story of Your Life*

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***Abstract*—This article explores the intersection of translanguaging and science fiction through the case study of "Story of Your Life" by Ted Chiang. By analyzing the use of translanguaging as a method in science fiction, the article examines how it drives the development of science fiction plots. Through the exploration of the parallel narrative structure, this study highlights the pervasive presence of translanguaging in science fiction as a means to break linguistic and semiotic boundaries. Additionally, it investigates the powerful transformative impact of translanguaging, leading to cognitive changes for the protagonist/narrator and enabling the story-narration with temporal and spatial disruptions. By delving into the interplay between translanguaging and science fiction in "Story of Your Life," this article showcases how translanguaging becomes both the content and form of science fiction, creating a unique and experimental field for communication that utilizes multiple languages, modalities, and symbols.**

***Index Terms*—science fiction, translanguaging, cognition, transformative impact, communication**

I. Introduction

In the 2023 Hugo Award-winning science fiction novelette "The Space-Time Painter", there is a famous line that says the light has predicted the future outcome before it is emitted and then acts on it (Hai, 2022). This sentence may be difficult to understand in everyday life, but it aligns with the rich imagination and extraordinary premise of science fiction. It subverts our understanding of space-time and resonates with the symbolic meaning of the story's title. Interestingly, a few years ago, another novelette, "Story of Your Life" (Chiang, 1998, 2020), winner of the 2020 Nebula Award for Best Novella, organized by the Science Fiction and Fantasy Writers of America, had a similar plot and provided an explanatory interpretation of this kind of space-time cognition. It used Fermat's principle to explain the refraction of light in water as a way of understanding the subversion of space-time cognition. It is believed that the aforementioned sentence is a tribute from a new author to a classic work through intertextuality.

Cognition, with its emphasis on rational and logical reasoning, pertains to the aspect of science fiction that encourages us to understand and comprehend the unfamiliar, extraterrestrial setting portrayed in a science fiction book, movie, or narrative (Roberts, 2002). Cognition uses reason and logic to facilitate understanding of science fiction and achieve the purpose of communication. In the two examples of subverting space-time, we observe physical phenomena through cognition and interpret symbols to understand the science fiction plots. According to Li Wei, the observation of physical occurrences and the interpretation of symbols, viewed through the lens and approach of translanguaging, involve people utilizing textual, auditory, linguistic, spatial, and visual and other available resources or modes for meaning-making (Li, 2011a, 2011b, 2013, 2018, 2022), thus achieving communication.

This article aims to explore how translanguaging is employed as method in science fiction, using the case study of the novelette "Story of Your Life" by Ted Chiang. This story is highly representative as it depicts a linguist's process of deciphering an alien language through translanguaging and how it transforms their understanding of space-time cognition. It exemplifies the concept of "cognitive estrangement" (Suvin, 1972; Spiegel, 2008) in science fiction and is filled with translanguaging, multimodality, multilingualism, and multisemiotic elements that greatly expand the abundance of cognition. The story follows protagonist Louise Banks, a linguist and the narrator, as she attempts to communicate with mysterious alien beings who have arrived on Earth. Through deciphering their written language, Louise's perception of time undergoes a profound transformation and develops an awareness of the future.

This article will explore two dimensions: the use of translanguaging as method to drive the development of science fiction plots and its transformative impact on cognition for the protagonist/narrator, resulting in a parallel narrative structure with temporal and spatial disruptions. As translanguaging is pervasive in science fiction, it serves as a writing method to propel the development of science fiction plots and breaks linguistic and semiotic boundaries in conveying the meaning-making of scientific fiction; furthermore, it is explored that translanguaging has a powerful transformative impact, leading to cognitive changes for the protagonist/narrator, enabling the parallel story narration with temporal and

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spatial disruptions.

In "Story of Your Life," the dynamic interplay between translanguaging and science fiction becomes readily apparent. Translanguaging assumes a central role as the language and communication modality employed by the Heptapods, an extraterrestrial species. Through the practice of translanguaging, the protagonist/narrator undergoes a profound cognitive transformation, leading to a disrupted perception of space and time. Translanguaging functions not only as the substance but also as the very essence of science fiction, creating an innovative and experimental realm for communication that harnesses the power of multiple languages, modalities, and symbols.

II. Translanguaging and Science Fiction

Translanguaging, a concept that transcends traditional code-switching, encompasses the dynamic and flexible use of multiple languages across various contexts. It involves seamlessly integrating languages to facilitate effective communication and construct meaning, when individuals can bring together their personal history, experiences, environment, attitudes, beliefs, ideologies, cognitive abilities, and physical capacities in a cohesive and meaningful manner (Li, 2011a, 2011b, 2013, 2018). In this manner, translanguaging serves as a methodology (Li, 2022) that encourages a shift towards meaning-making, embracing multiple semiotic resources and approaching translanguaging as an integrated experience, thus embracing transformative power as it continuously evolves, generating new identities, values, and practices.

On the other hand, science fiction, as a genre that thrives on imagination rather than strict adherence to reality, defies the dichotomy between what is real and what is imagined (Bould et al., 2009). It enthusiastically embraces imaginative and fantastical concepts and narratives, giving rise to what Suvin terms "cognitive estrangement" (1972, p. 88). This concept of cognitive estrangement highlights the shared characteristics of cognition, imagination, and boundary-breaking within the realm of science fiction. In fact, estrangement and cognition form the fundamental pillars of science fiction, shaping its identity and relying on an alternative imaginative framework (Suvin, 1972; Spiegel, 2008).

Through the lens of translanguaging, it becomes evident that human thinking extends far beyond the confines of language and encompasses various cognitive, semiotic, and modal resources that extend beyond conventional speech and writing (Li, 2018; Han, 2022; Han, 2023). This perspective aligns with Suvin's concept of cognition within the realm of science fiction, which emphasizes the intellectual engagement and exploration of new ideas. Moreover, from the translanguaging standpoint, language is viewed as a multisensory and multimodal semiotic system intricately connected with other cognitive systems (Li, 2018). This viewpoint transcends the traditional boundaries between linguistic and non-linguistic cognitive and semiotic systems, resonating with the notion of estrangement in science fiction. Estrangement involves the creation of alternative frameworks and the pushing of boundaries beyond the limits of our empirical reality.

In "Story of Your Life," translanguaging plays a significant role in the exploration of estrangement and cognition within the science fiction narrative. The protagonist and narrator, Louise Banks, engages in translanguaging with the Heptapods, an alien species with a profoundly different language system. Through the method of translanguaging, Louise experiences a departure from her familiar linguistic and cognitive structures, immersing herself in the Heptapods' alternative framework. By engaging with the Heptapods' language, Louise expands her cognitive horizons and gains a non-linear perception of time, a core feature of the Heptapods' language. This transformative experience aligns with the concept of cognition and the estrangement involved in science fiction.

Moreover, the narrative of “Story of Your Life" emphasizes the paramount importance of transcending linguistic and cultural barriers in communication and understanding. Through the act of translanguaging, Louise not only serves as a bridge between the linguistic divide separating humans and Heptapods but also fosters empathy and collaboration among diverse communities. This underscores the transformative power of translanguaging in facilitating cross-cultural communication, aligning with the overarching themes of bridging estrangement and nurturing cognition within the realm of science fiction. In particular, for Louise as the protagonist and narrator, the utilization of translanguaging brings about profound cognitive shifts, enabling her to recount parallel narratives that incorporate temporal and spatial disruptions, further amplifying the transformative impact of language use in her storytelling.

In summary, the relationship between translanguaging and science fiction, in the context of "Story of Your Life," revolves around the concepts of estrangement and cognition. Translanguaging allows for the exploration of alternative linguistic and cognitive frameworks, pushing the boundaries of perception and understanding. It enables characters to engage with estrangement, experiencing a departure from their empirical reality and expanding their cognition. Through this exploration, the novella highlights translanguaging as method and its transformative power in fostering communication, empathy, and cooperation between different linguistic and cultural communities.

III. Case Study of Story of Your Life

"Story of Your Life" is a captivating science fiction novelette written by Ted Chiang (1998). It explores the life of linguist Dr. Louise Banks, who is tasked with deciphering the complex language of an alien species known as the Heptapods. As Louise delves deeper into their language, she begins to experience a profound cognitive transformation

that allows her to perceive time in a non-linear manner. The story delves into the themes of communication, understanding, and the nature of human perception. In 2016, the story was adapted into a film titled "Arrival," which further expanded on the themes of communication, connection, and the human capacity for understanding.

The forthcoming analysis will be structured into two distinct sections. Firstly, we will delve into the examination of translanguaging as method employed in comprehending the intricate languages of the Heptapods. This will shed light on the role of translanguaging as a powerful tool in bridging the linguistic gap and facilitating understanding between humans and this enigmatic alien species.

Secondly, we will explore the transformative influence of translanguaging practices on the cognition of our protagonist and the story narrator, Louise Banks. Through the immersive experience of translanguaging, Louise undergoes a remarkable cognitive shift, leading to a disrupted perception of time and space and gaining an awareness of the future. This transformation becomes the catalyst for her ability to intricately narrate the entire story, weaving together the complex threads of temporal and spatial disruptions.

By dissecting these two dimensions, we aim to uncover the significance of translanguaging as both a method of communication and a catalyst for cognitive transformation in "Story of Your Life." Through this analysis, we will gain a deeper understanding of how translanguaging shapes the narrative structure and drives the profound concepts of time and space exploration within the science fiction.

A. Translanguaging as Method

(a). Case I – Intricate Nature of the Hetapods' Language

> The language had no written punctuation: its syntax was indicated in the way the semagrams were combined, and there was no need to indicate the cadence of speech. There was certainly no way to slice out subject-predicate pairings neatly to make sentences. A "sentence" seemed to be whatever number of semagrams a heptapod wanted to join together; the only difference between a sentence and a paragraph, or a page, was size. When a Heptapod B sentence grew fairly sizable, its visual impact was remarkable. If I wasn't trying to decipher it, the writing looked like fanciful preying mantis drawn in a cursive style, all clinging to each other to form an Escheresque lattice, each slightly different in its stance. And the biggest sentences had an effect similar to that of psychedelic posters: sometimes eye-watering, sometimes hypnotic. (Chiang, 2020, p. 94)

This is the paragraph that Louise tries to explain the visual syntax and dimensional grammar of the Heptapod B. In this paragraph it highlights the intricate nature of the Heptapod B through the lens of translanguaging by comparing it to "preying mantis" clinging to the "Escheresque lattice", a pattern or design that is reminiscent of the artwork of M.C. Escher, a renowned Dutch artist known for his mathematical and optical illusions. The term "Escheresque lattice" suggests a lattice or grid-like structure that exhibits the same kind of complexity, optical illusions, and mathematical precision and implies the presence of interlocking shapes or figures that create a visually captivating and intriguing pattern, much like the mesmerizing and mind-bending images. The narration reveals that the languages used by the Heptapods are not conventional in the sense of being based on spoken words, but rather utilize a semasiographic writing system. This system conveys meaning without relying on speech and breaks traditional clear-cut boundaries between symbols, icons, and words.

Translanguaging as method comes into play as the protagonist and narrator, Louise, deciphers the language and categorizes it as Heptapod A (spoken language) and Heptapod B (written language). The visual syntax and two-dimensional grammar of Heptapod B pose cognitive challenges and demonstrate the translanguaging capacity of the Heptapods. The two entirely different languages present dimensional audio, visual, and cognitive complexities that challenge common understanding of languages. Furthermore, the logic behind the Heptapods' language is explored, highlighting the concept of "semagrams" as a means of conceptualization. The visual effect achieved by combining semagrams to indicate syntax, along with the absence of written punctuation, creates a striking resemblance to the intricate patterns found in the works of M.C. Escher. These patterns evoke emotions and psyches, creating a space that encompasses languages, emotions, and perception.

Through the emphasis placed on the two-dimensional nature of Heptapod B, the conveyance of inflections and meanings is achieved by manipulating the curvature, thickness, undulation, and other graphical characteristics of the strokes. Despite bearing resemblance to a calligraphic style, the grammar of these traits remains consistent and free from ambiguity. In summary, the above text showcases the complexities of the Heptapods' language and its understanding through the lens of translanguaging. It highlights the distinct nature of Heptapods' language, their visual and two-dimensional characteristics, and their impact on cognition, perception, and emotional states.

(b). Case II –Interdisciplinary Understanding of Heptapods' Language

> […] here's the path a ray of light takes when crossing from air to water. The light ray travels in a straight line until it hits the water; the water has a different index of refraction, so the light changes direction…Any hypothetical path would require more time to traverse than the one actually taken. In other words, the route that the light ray takes is always the fastest possible one. That's Fermat's Principle of Least Time. (Chiang, 2020, p. 97)

To further understand the "semagrams" language and its topsy-turvy logic, physics is employed to decipher the secret. The underlying logic of heptapods is highly equivalent to human's working-out principal by employing the calculus of variations towards refraction of light, the Framat's Principle of Least Time in determining the optimal path.

The metaphorical comparison between the Heptapods' topsy-turvy logic and human mathematical concepts allows for a deeper comprehension of the Heptapods' universe. The text suggests that the Heptapods' mathematical system may be fundamentally different from the human system, potentially even "topsy-turvy" in terms of time and space. By incorporating physics concepts and mathematical principles, such as Fermat's Principle and the calculus of variations, the human scientists aim to bridge the gap in understanding the Heptapods' "topsy-turvy" mathematics. This represents a boundary-breaking process where different disciplinary concepts, in this case, physics and mathematics, are utilized to interpret and navigate the complexities of the Heptapods' language and cognitive framework.

This interdisciplinary approach, involving the integration of seemingly disparate elements, expands our cognition and pushes the boundaries of our understanding. The inclusion of physics concepts and mathematical principles, which may have initially seemed alienated from language, contributes to our ability to grasp the intricacies of the Heptapods' language and its spontaneous actions. In doing so, our cognition extends beyond its previous limitations, enabling us to delve into the realm of the unknown.

By integrating the principles of translanguaging as a methodology, we gain a fresh conceptual framework that facilitates significant shifts in our analytical understanding. This framework encourages us to move beyond viewing language as mere abstract codes, instead focusing on the creation of meaning and sense by inclusion of physics concepts and mathematical principals. It prompts us to acknowledge and explore a wide array of multi-semiotic resources, without favoring any particular modes or methods of meaning-making. Translanguaging is approached as an all-encompassing and integrated experience here in the narration.

Moreover, the topsy-turvy logics reaffirms the value of Moment Analysis (Li, 2018), which emphasizes the significance of spontaneous actions as crucial data points in understanding the rhythm and meaning of social life. This inclusion of spur-of-the-moment actions aligns with the interdisciplinary nature of our exploration, as it expands our cognition and pushes the boundaries of our understanding. By integrating seemingly disparate elements, such as physics concepts and mathematical principles, we enhance our ability to delve into the intricacies of the Heptapods' language and their spontaneous actions. Through this interdisciplinary approach and methodological framework, our cognition extends beyond its previous limitations, enabling us to venture into the realm of the unknown.

B. Transformative Power of Translanguaging on Cognition

(a). Case I – Boundary-Breaking and Cognitive Estrangement

> More interesting was the fact that Heptapod B was changing the way I thought. For me, thinking typically meant speaking in an internal voice; as we say in the trade, my thoughts were phonologically coded. My internal voice normally spoke in English, but that wasn't a requirement…With Heptapod B, I was experiencing something just as foreign: my thoughts were becoming graphically coded…I saw semagrams with my mind's eye, sprouting like frost on a windowpane. As I grew more fluent, semagraphic designs would appear fully-formed, articulating even complex ideas all at once. My thought processes weren't moving any faster as a result, though. Instead of racing forward, my mind hung balanced on the symmetry underlying the semagrams. The semagrams seemed to be something more than language; they were almost like mandalas, I found myself in a meditative state, contemplating the way in which premises and conclusions were interchangeable. There was no direction inherent in the way propositions were connected, no "train of thought" moving along a particular route; all the components in an act of reasoning were equally powerful, all having identical precedence. (Chiang, 2020, pp. 103-104)

The text explores the linguist's advancement in understanding Heptapod B and its interconnectivity and pre-defined structure. The linguist, Louise, discovers that in Heptapod B, each stroke in a sentence travels across multiple semagrams and participates in different clauses of the message. This suggests that the Heptapods must know the entire sentence's layout before writing the first stroke, and removing any stroke would require redesigning the entire sentence. This pre-defined design and interconnectivity parallel the findings of Fermat's Principle of Least Time in light refraction, where the light needs to know its destination before beginning its journey.

This observation of how learning Heptapod B influences the linguist's thinking process. She notes that her thoughts usually involve speaking in an internal voice, but due to her practice with Heptapod B, her thoughts start to manifest as written semagrams rather than progressing linearly. She sees complex ideas articulated all at once and this shift in thinking mode, from "phonologically coded" thoughts to graphically coded thoughts, resembles the experience of thinking in a non-phonological mode.

Furthermore, this shift in thinking mode exemplifies the transformative and boundary-breaking nature of translanguaging. Louise's remarkable ability to think in Heptapod B expands her cognitive repertoire and challenges the limitations of traditional language-based thinking. It showcases the immense potential for language to reshape and transcend conventional modes of cognition. Louise's experience with Heptapod B introduces her to a new and unfamiliar linguistic system. This unfamiliarity creates a sense of cognitive estrangement, a state in which one's familiar cognitive frameworks are disrupted and new perspectives emerge. By engaging with Heptapod B, Louise is able to step

outside the confines of her traditional language-based thinking and embrace alternative patterns of thought.

This expanded cognitive capability signifies a departure from the hierarchical nature of conventional thinking, where certain components or modes of meaning-making are given more prominence. In the realm of translanguaging, all elements involved in the process of meaning-making, regardless of their linguistic or semiotic nature, are granted equal importance (Li & Zhu, 2013; Li, 2018). This egalitarian approach to cognition allows for a more comprehensive and inclusive understanding, where diverse components contribute to the overall reasoning process.

The breaking down of conventional boundaries and the elevation of alternative thinking patterns highlight the transformative potential of translanguaging as a powerful force that can reshape our cognitive frameworks and expand the horizons of our understanding.

(b). Case II – Non-Linearity and Simultaneous Mode of Consciousness

> Looking at a sentence like this one, I understood why the heptapods had evolved a semasiographic writing system like Heptapod B; it was better suited for a species with a simultaneous mode of consciousness. For them, speech was a bottleneck because it required that one word follow another sequentially. With writing, on the other hand, every mark on a page was visible simultaneously. Why constrain writing with a glottographic straitjacket, demanding that it be just as sequential as speech? It would never occur to them. Semasiographic writing naturally took advantage of the page's two-dimensionality; instead of doling out morphemes one at a time, it offered an entire page full of them all at once. And now that Heptapod B had introduced me to a simultaneous mode of consciousness, I understood the rationale behind Heptapod A's grammar: what my sequential mind had perceived as unnecessarily convoluted, I now recognized as an attempt to provide flexibility within the confines of sequential speech. I could use Heptapod A more easily as a result, though it was still a poor substitute for Heptapod B. (Chiang, 2020, pp. 109-110)

The above reflection about the non-linearity of Heptapod B allows linguist Luise to develop a “simultaneous mode of consciousness” and understand the insufficiency of Heptapod A. Luise realizes that Heptapod B's peculiar grammar is a result of the heptapods' attempt to break free from the constraints of sequential speech. This understanding deepens the linguist's comprehension of the semasiographic writing. The linguist's engagement with Heptapod B reshapes her memory and cognition, challenging her sequential thinking patterns. The non-linearity of Heptapod B allows a brandnew rationale that encapsulates the simultaneous mode of consciousness and highlights the limitations of sequential speech. However, the linguist recognizes the influence of her human, sequential mindset on her perception of reality, acknowledging the amalgamation of human’s and heptapods’ perspectives in her worldview.

By experiencing the writing system of Heptapod B, the linguist embraces a shift in her cognitive approach, as she recognizes a mode of cognition that transcends sequential thinking. This resonates with the very essential idea of translanguaging, where individuals engage in flexible cognitive processes that incorporate multiple languages or linguistic systems.

Moreover, the heptapods' mode of consciousness, characterized by simultaneity, acknowledges the limitations of sequential speech and instead embraces writing as a mode of communication. This preference exemplifies a cognitive flexibility that surpasses the constraints of a single linguistic system, aligning with the principles of the "space of simultaneity" (Phyak, 2023), where coexist and thrive inclusive environments that foster a rich and dynamic translanguaging practices, transformative ideologies, and lived experiences of all the involved beings.

(c). Case III – Awareness of the Future and Parallel Narration

> Usually, Heptapod B affects just my memory: my consciousness crawls along as it did before, a glowing sliver crawling forward in time, the difference being that the ash of memory lies ahead as well as behind: there is no real combustion. But occasionally I have glimpses when Heptapod B truly reigns, and I experience past and future all at once; my consciousness becomes a half-century-long ember burning outside time. I perceive--during those glimpses—that entire epoch as a simultaneity. It's a period encompassing the rest of my life, and the entirety of yours [daughter[1]]. (Chiang, 2020, pp. 113-114)

When the story comes to the end, the linguist, as protagonist and narrator, reveals the story’s parallel narration and foresees the birth and death of the linguist’s daughter. This text exposes the transformative power of the simultaneity of consciousness and the linguist’s awareness of the future that have been exerting impacts on the linguist's cognition.

The linguist’s proficiency in Heptapod B allows her to experience past and future simultaneously and perceive an entire epoch as a simultaneity. This fusion of worldviews corresponds to the cognitive estrangement pre-set by science fiction, revealing also the transformative capacity as a natural sequence of long-term translanguaging practices, as argued by Li Wei, “the transformative capacity of the Translanguaging process not only for language systems but also for individuals’ cognition and social structures” (2018, p. 27).

The conclusion of the text emphasizes the linguist's awareness of the transformative power of knowing the future and the attention she pays to every detail. She reflects on her chosen route and contemplates whether she is working toward an extreme of joy or pain, seeking a minimum or maximum outcome. This introspection probes into translanguaging in

[1] Louise’s future daughter. The narrative is spoken through the voice of Louise, who addresses her words to the daughter she has yet to bring into the world. The child's name is conspicuously absent throughout the entirety of the story.

shaping individuals' lives and choices. The metaphorical representation of memories as “cigarette ash” (Chiang, 2020, p. 113) as the sequential present versus “gigantic blocks” (Chiang, 2020, p. 113) as the dimensional existence vividly presents the abstract understanding of the simultaneity of consciousness. Then the narration concludes with the linguist's contemplation of her chosen route and the transformative power of knowing the future. Finally, the linguist reconciles with herself with the chosen route. No matter minimum or maximum, the future comes at its ease and it explains why there are two lines of story-writing.

IV. Conclusion

The present article highlights the significant role of translanguaging in science fiction. As an unexplored theme, translanguaging serves as a method to drive the development of science fiction plots by breaking linguistic and semiotic boundaries and expanding the meaning-making in the genre. Through translanguaging, science fiction narratives can explore the subversion of space-time cognition, as seen in example like "Story of Your Life".

The novelette "Story of Your Life" exemplifies the dynamic interplay between translanguaging and science fiction. The employment of translanguaging as the language and communication modality of the Heptapods, the extraterrestrial species, not only drives the plot but also leads to a cognitive transformation for the protagonist/narrator. Translanguaging becomes the substance and essence of the cognitive estrangement expected in science fiction stories, creating an innovative and experimental realm for communication that harnesses the power of multiple languages, modalities, and symbols.

Moreover, translanguaging enables profound cognitive changes, leading to disrupted perceptions of space and time. This transformative effect allows for the creation of parallel narratives with temporal and spatial disruptions, enhancing the richness and complexity of the science fiction experience. It serves as a powerful tool for conveying complex ideas, subverting traditional understandings of space and time as a method. It adds depth, richness, and multidimensionality to the genre, making science fiction a captivating and thought-provoking literary form.

By integrating translanguaging theory into the study of science fiction, researchers and scholars can uncover new insights into the complexities of language, communication, and cognition within speculative narratives. As a matter of fact, translanguaging theory offers a framework to examine how language and communication practices shape and are shaped by the imaginative worlds of science fiction. It allows for a deeper exploration of the intricate relationship between language, meaning-making, and the construction of alternate realities. Furthermore, the combination of translanguaging theory and science fiction can shed light on the interplay between linguistic and semiotic resources, multimodality, and the representation of diverse linguistic and cultural identities within speculative narratives. It opens up avenues to investigate how the use of multiple languages, modes, and symbols in science fiction texts contributes to the creation of intricate narrative structures.

Additionally, the application of translanguaging theory in the analysis of science fiction can provide a fresh perspective on the genre's potential to challenge and subvert established linguistic and social norms. It allows for the exploration of how science fiction narratives reimagine language and communication practices, pushing the boundaries of what is considered possible or acceptable in our own reality.

References

[1] Bould, M., Butler, A., Roberts, A., & Vint, S. (Eds.). (2009). *The Routledge companion to science fiction.* Routledge.
[2] Chiang, T. (2020). Story of your life. In *Stories of your life and others* (pp. 78-117). Picador.
[3] Hai, Ya. (2022). The space-time painter. In Yang Feng (Ed.), *Galaxy's Edge 009*. New Star Press.
[4] Han, L. (2022). Meaning-making in the untranslatability: A translanguaging analysis of the film Love After Love. *Theory and Practice in Language Studies*, *12*(9), 1783-1789.
[5] Han, L. (2023). Translanguaging as a communicative method in film-audience relationship—case study of the film Wu Ming. *Theory and Practice in Language Studies*, *13*(12), 3135-3140.
[6] Li, W. (2011a). Moment analysis and translanguaging space: Discursive construction of identities by multilingual Chinese youth in Britain. *Journal of Pragmatics*, *43*(5), 1222-1235.
[7] Li, W. (2011b). Multilinguality, multimodality, and multicompetence: Code-and modeswitching by minority ethnic children in complementary schools. *The Modern Language Journal*, *95*(3), 370-384.
[8] Li, W., & Zhu, H. (2013). Translanguaging identities and ideologies: Creating transnational spaces through flexible multilingual practices amongst Chinese university students in the UK. *Applied Linguistics*, *34*(5), 516-535.
[9] Li, W. (2018). Translanguaging as a practical theory of language. *Applied linguistics*, *39*(1), 9-30.
[10] Li, W. (2022). Translanguaging as method. *Research Methods in Applied Linguistics*, *1*(3), 100026, 1-4.
[11] Phyak, P. (2023). Translanguaging as a space of simultaneity: Theorizing translanguaging pedagogies in English medium schools from a spatial perspective. *The Modern Language Journal*, *107*(1), 289-307.
[12] Roberts, A. (2002). *Science fiction*. Routledge.
[13] Spiegel, S. (2008). Things made strange: On the concept of" estrangement" in science fiction theory. *Science Fiction Studies*, *35*(3), 369-385.
[14] Suvin, D. (1972). On the poetics of the science fiction genre. *College English*, *34*(3), 372-382.

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