

Translation of nova in the Croatian translation of Frank Herbert's Dune

Ramljak, Ivana

Master's thesis / Diplomski rad

2022

Degree Grantor / Ustanova koja je dodijelila akademski / stručni stupanj: **University of Zagreb, Faculty of Humanities and Social Sciences / Sveučilište u Zagrebu, Filozofski fakultet**

Permanent link / Trajna poveznica: <https://urn.nsk.hr/urn:nbn:hr:131:996029>

Rights / Prava: [In copyright / Zaštićeno autorskim pravom.](#)

Download date / Datum preuzimanja: **2024-05-14**



Repository / Repozitorij:

[ODRAZ - open repository of the University of Zagreb Faculty of Humanities and Social Sciences](#)



UNIVERSITY OF ZAGREB
FACULTY OF HUMANITIES AND SOCIAL SCIENCES
DEPARTMENT OF ENGLISH

Translation of nova in the Croatian translation of Frank Herbert's *Dune*

Master's thesis

Ivana Ramljak

Supervisor: Vinko Zgaga, senior lecturer

Zagreb, January 2022.

SVEUČILIŠTE U ZAGREBU
FILOZOFSKI FAKULTET
ODSJEK ZA ANGLISTIKU

Prijevod novuma u hrvatskom prijevodu *Dine* Franka Herberta

Diplomski rad

Ivana Ramljak

Mentor: Vinko Zgaga, viši lektor

Zagreb, siječanj 2022.

Abstract

This work examines the concept of a novum in science fiction literature and how nova are translated into Croatian to gain insight into which translation methods are used the most for this. The text the research is conducted on is Frank Herbert's novel *Dune* and the Croatian translation done by Stanislav Vidmar. The research is based upon Vinay and Darbelnet's translation procedures framework. The results show that nova are mostly translated using the method of literal translation. This goes for both neologisms and neosemes. Another frequently used procedure is borrowing. The results of this research could be useful to translators who specialize in science fiction and linguists who deal with neology in literature.

Key words: *novum, neologism, neoseme, translation procedure*

Sažetak

Ovaj se rad bavi konceptom novuma u znanstvenoj fantastici i kako se novumi prevode na hrvatski jezik. Cilj rada je spoznati koji se prevoditeljski postupci najčešće koriste za prijevod novuma. U radu se analizira Dina, djelo Franka Herberta, u izvorniku i u prijevodu Stanislava Vidmara. Samo se istraživanje temelji na Vinayjevoj i Darbelnetovoj podjeli prevoditeljskih postupaka. Prema rezultatima, novumi se najčešće prevode doslovno, tj. uporabom doslovnog prevođenja kao prevoditeljskog postupka. To vrijedi i za neologizme i neoseme. Drugi najčešće korišteni prevoditeljski postupak je posuđivanje. Rezultati ovog istraživanja mogli bi biti zanimljivi prevoditeljima znanstveno-fantastične književnosti te lingvistima koji se bave neologizmima u književnosti.

Ključne riječi: *novum, neologizam, neosem, prevoditeljski postupak*

1) INTRODUCTION	6
2) LITERATURE OVERVIEW	7
2.1) DEFINING “NOVUM”	7
2.2.) DUNE: THE UNIVERSE.....	13
2.3) NEOLOGY AND NEOSEMES.....	15
2.4.) NEOLOGY IN DUNE	19
3) PREVIOUS RESEARCH.....	22
4) AIMS AND HYPOTHESES	23
5) METHODOLOGY	24
6) RESULTS	26
6.1.) NEOLOGISMS	27
6.2) NEOSEMES	29
7) DISCUSSION	31
7.1) MORE INTERESTING EXAMPLES	32
7.2.) SLAVIC-SPEAKING FREMEN?	34
8) CONCLUSION.....	35
REFERENCES	36
APPENDIX 1: NOVA IN DUNE.....	38
APPENDIX 2: NEOLOGISMS- ST TERM, TT TERM, METHODS.....	43
APPENDIX 3: NEOSEMES- ST TERMS, TT TERMS, PROCEDURES	48

1) Introduction

The popularity of science fiction (SF) has risen in the past 50 years.¹ Despite this, it can be difficult to precisely define it. Critic Farah Mendlesohn (2003) claims that it is “less a genre – a body of writing from which one can expect certain plot elements and specific tropes – than an ongoing discussion.” (p. 1) Much like technological advancement, which is one of its most common themes, SF keeps developing and reinventing itself. It borrows a lot of influence from other genres: for example, plot types that are present in other genres (such as characters going on a quest, tragic outcomes etc.) work in SF settings too. This begs the question: does SF have a narrative of its own? The answer is yes, even if it is not immediately recognizable: “It is rarely considered in these terms, but if sf does have an immediately recognizable narrative it is centred on what has been termed the ‘sense of wonder’” (Mendlesohn, 2003, p. 3) This sense of wonder entails questioning and imagining what the future will look like. Since its beginnings, SF has tried to give us glimpses of possible futures. These images ranged from optimistic displays of equality and technological advancement that worked in humanity’s favour to bleak, dystopian places. What all these have in common is the fact that their creation is based on contemporary scientific consensus, and that a certain, quite subtle language is used to convey this strange newness.

This strange newness has a name: novum. Coined by Yugoslav academic Darko Suvin, the term novum is used to describe new inventions, agents, etc. in an SF narrative which differ from the empirical world. Nova are arguably the most prominent feature of SF. Mentioning lightsabres or the Millennium Falcon to someone might remind them of Star Wars quicker than some of its plot points. These strange new terms for strange new things will be the focus of this paper.

Arguably, this language of strangeness can be conveyed in every known language. Without this, SF would probably not be as popular and widespread. Croatian is not an exception, and this creates a demand for translations of SF works. Many SF classics have been translated into Croatian, some even several times. This paper will deal with the Croatian rendering of Frank Herbert’s seminal novel *Dune*. Published in 1965, it went on to become the best-sold SF novel of all time. (Touponce, 1988) The Croatian translation investigated in this work will be the one done by Stanislav Vidmar for publishing house Egmont in 2019.

¹ <https://theaggie.org/2017/04/25/why-science-fiction-is-the-genre-of-the-21st-century/>

The source text used in the study will be the one from the 50th anniversary edition of the novel, published in 2015. The aim of this work will be to uncover all the nova in Herbert's *Dune*, classify them linguistically and with the help of Vinay and Dalbarnet's framework discover which translation procedures were used the most in Croatian translation of this novel.

2) Literature overview

2.1) Defining “novum”

Science fiction seeks to create new worlds and new potential futures. This characteristic has “led to the most popular alternative interpretation of ‘SF’: speculative fiction.” (Mendlesohn, 2003 p. 4) Speculation involves new ideas and thoughts, which in SF become the crucial parts of the narrative. SF uses speculation in its worldbuilding and it does so by using specific devices which help differentiate it from other literary genres. An important device used by SF authors for the purpose of worldbuilding is the novum. In this part, the concept of the novum will be defined and its background and influences explained.

Novum was defined by Yugoslav academic and writer Darko Suvin (1979) in his work *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre*. In it, he claims that “SF is distinguished by the narrative dominance of hegemony of a fictional ‘novum’ (novelty, innovation) validated by cognitive logic.” (p. 63) This novelty is what drives the SF genre: the entire genre is based upon a certain curiosity. It asks itself what the future could look like, how technology could impact the human race and what conquering and subsequent terraforming of other planets would look like. Farah Mendlesohn (2003) describes that sense of wonder as “the emotional heart of SF.” (p. 3) Furthermore, she adds that “the thought experiment, the ‘what if?’ (which Darko Suvin calls the novum), is crucial to all SF (2003, p. 4) Mendlesohn (2003) even prescribes them a heroic status, claiming that it is nova and new ideas that make SF special among literary genres: “it is here that SF most departs from contemporary literature because in SF ‘the idea’ is the hero.” (p. 4)

The ideas of science fiction were products of certain historical developments. The SF full of utopian ideas (the so-called “utopian charge”, a term coined by Italo Calvino) arose from the need to imagine alternatives to the state of the world after World War II. In the beginning, American SF rejected the left-wing notion of utopia and most SF authors “had become anti-socialists, and their SF depicted laissez-faire capitalism and individualism as the

natural order of the future. "(Csicsery-Ronay Jr., 2008, p. 115) This was a response to Cold War politics. SF authors of the time aligned with the American side, dismissing any attempt at writing a left-wing inspired SF narrative and linking the notion of utopia with the Eastern bloc: "The word 'utopian' became associated in the popular mind with Soviet communism, and SF of the immediate postwar period was dominated by anti-utopian themes." (Csicsery-Ronay Jr., 2008, p. 115) However, this changed in the 1960s, after the Civil rights movement and technological advancement. According to Csicsery-Ronay Jr. (2008), culture no longer sought to protect the interests of the bourgeois state:

Inspired by the civil-rights struggle and the sudden independence of many of the European colonies, and supported by unprecedented affluence and technological development in the capitalist democracies, an international contestatory culture set itself in opposition to the institutions and policies of the bourgeois state. The movement had an enormous diversity of goals, but they shared two characteristics relevant in this context: a respect for Marxist ideas and what Italo Calvino called 'a utopian charge', a powerful, unformed desire to rid the world of poverty, racism, sexual repression and economic exploitation – sins that Marxist thought had convincingly theorized as endemic and necessary aspects of bourgeois state-capitalism. (pp. 115-116)

Both in SF and Marxist theory, technology is one of the key ingredients to human liberation. Other ingredients include a change of socially acceptable norms, which would also impact empirical reality by reframing it and showcasing it from different perspectives. That is how known things are 'made strange'. According to Suvin, such reframing is crucial for SF:" Suvin argued that an SF text presents aspects of a reader's empirical reality 'made strange' through a new perspective implying a new set of norms. This recasting of the familiar has a 'cognitive' purpose, that is, the recognition of reality it evokes from the reader is a gain in rational understanding of the social conditions of existence" (Csicsery-Ronay Jr., 2008, p. 118) From such framing a novelty is born, a novelty which has the potential to change the state of things in empirical reality. This novelty can be a change in norms or a technological change which affects empirical reality and the lives of all people who start using it. In SF, such a novelty is called a novum. Istvan Csicsery-Ronay Jr. (2008) defines a novum as "the historical innovation or novelty in an SF text from which the most important distinctions between the world of the tale from the world of reader stem." (pp. 118-119) Much like innovations in the empirical world, nova change the way societies in SF texts function, impacting the setting and the plot of the narrative: "In practice, the novum appears as an invention or a discovery around which the characters and setting organize themselves in a

cogent, historically plausible way.” (Csicsery-Ronay Jr., 2008, p. 119) This was a condensed definition of novum, while Suvin’s more elaborate one will be discussed below.

Darko Suvin’s definition of a novum was influenced by Ernst Bloch. In his introduction to the first volume of *The Principle of Hope*, Bloch writes about the future and about venturing beyond the known. His ideas are rooted in Marxist philosophy, whose aim is to change the world instead of just explain it. For Bloch (1996), the past is a relic turned into a commodity and the world should try its best to move away from it, creating a new and improved world in the process. Marxist thinkers possess a materialist view of history as a process influenced by material conditions of a given moment in which commodification of the past is seen as ahistorical. In the same way, Bloch (1996) also describes a process of dialectic which is governed by Novum²:

The rigid divisions between future and past thus themselves collapse, unbecome future becomes visible in the past, avenged and inherited, mediated and fulfilled past in the future. Past that is grasped in isolation and clung to in this way is a mere commodity category, that is, a reified Factum without consciousness of its Fieri and of its continuing process. But true action in the present itself occurs solely in the totality of this process which is unclosed both backwards and forwards, materialistic dialectics becomes the instrument to control this process, the instrument of the mediated, controlled Novum. (pp. 8-9)

Istvan Csicsery-Ronay Jr. (2008) further explains that the novum for Bloch is “a moment of newness in lived history that refreshes human collective consciousness, awakening it from the trancelike sense of history as fated and empty, into awareness that it can be changed.” (p. 47)

It was this line of thinking that inspired Darko Suvin’s own definition of a novum. Suvin applied Bloch’s concept to literature. In his work *Metamorphoses of Science Fiction*, Suvin (1979) claims that the novum is what distinguishes SF from other literary genres: “SF is distinguished by the narrative dominance or hegemony of a fictional ‘novum’ (novelty, innovation) validated by cognitive logic.” (p. 63)

But what exactly is a novum in this context and why does it dominate SF narratives? For Suvin (1979), SF “novelty is ‘totalizing’ in the sense that it entails a change of the whole universe of the tale, or at least crucially important aspects of it.” (p. 64) Indeed, if one looks at the settings of SF narratives, it is visible that they are either completely new and made-up

² In Bloch's theory, Novum is juxtaposed by Factum and that is why the term is capitalized in this instance.

worlds or Earth, either technologically more advanced or recovering from an apocalyptic event. This new world created by SF narrative is something strange and alien to us.

This is what Suvin (1979) notices as well: “the essential tension of SF is one between the readers, representing a certain number of types of Man of our times, and the encompassing and at least equipollent Unknown or Other introduced by the novum.” (p. 64) When viewed from this angle, a novum becomes a more layered literary device. In order to make the narrative appear strange to us, the novum has to connect the narrative and the reader on several levels. It “bridges the gap between literary and extraliterary, fictional and empirical, formal and ideological, in brief from its unalienable historicity.” (Suvin, 1979, p.64) However, this makes it harder to define nova, i.e., to give a single, unalterable definition. Still, it is entirely possible to encompass its multi-dimensionality within a definition:

the postulated innovation can be of quite different degrees of magnitude, running from the minimum of the discrete new ‘invention’ (gadget, technique, phenomenon, relationship) to the maximum of a setting (spatiotemporal locus), agent (main character or characters), and/or relations basically new and unknown in the author’s environment. (Suvin, 1979, p. 64)

In accordance with this, there are many things that could be nova in an SF narrative. This makes sense because each of these elements is an important part of SF worldbuilding. If an SF narrative is defined by the technological advancement of its setting, gadgets and various phenomena certainly have a place in it. Examples of this would include lightsabres and the Millennium Falcon from Star Wars. New settings would also be the result of innovations and technological development. A good example of this would be worldbuilding in William Gibson’s *Neuromancer*, a seminal work of the cyberpunk genre. A large number of SF novels are set in the distant future or in universes in which Earth is barely even mentioned or simply does not exist anymore.

However, SF is not the only genre containing things that are strange and unknown to us. Fantasy, for example, is also filled with strange newness, like enchanted weapons, magic scrolls, fantastic creatures usually found in folklore etc. Would these also be considered nova? According to Suvin (1979), “the novum is postulated on and validated by the post-Cartesian and post-Baconian scientific method.” (pp. 64-65) This is exactly what differentiates fantasy from SF. Fantasy relies on magic systems (rules which regulate how magic is used and which effects it produces) applied to a certain setting in order to produce novelty. These systems vary

in complexity and are always shrouded in mystery, with the reader finding out little about the logic of their functioning. Conversely, the presence of the scientific method in SF does explain its logic in the narrative and it uses futuristic vision and technological advancement in order to construct new worlds and societies, parts of which might even become true in empirical reality. Gregory McNamee (2015) offers an explanation to this, claiming that science in SF is “replicable, depends on material laws, follows a rigorous logic” and uses this example to contrast the two genres: “If [fantasy’s] protagonists move across time and space, it is not because they have figured out wormholes in space-time, but because a grimoire figures in the arsenal somewhere.” (p. 287) This is similar to Suvin’s (1979) claims that

what differentiates SF from the ‘supernatural’ literary genres (mythical tales, fairy tales, and so on, as well as horror and/or heroic fantasy in the narrow sense) is the presence of scientific cognition as the sign or correlative of a method (way, approach, atmosphere, sensibility) identical to that of a modern philosophy of science. (p. 65)

Suvin (1979) concludes this by paraphrasing Robert M. Philmus, saying “that ‘naturalistic’ fiction does not require scientific explanation, fantasy does not allow it, and SF both requires and allows it.” (p. 66)

In this context scientific explanation becomes a crucial part of SF, as well as the novum. Still, it is rather difficult to prove this scientific explanation in a work of fiction. Suvin (1979) explains that

though such cognition obviously cannot, in a work of verbal fiction, be empirically tested either in the laboratory or by observation in nature, it can be methodically developed against the background of a body of already existing cognitions, or at the very least as a ‘mental experiment’ following accepted scientific, that is, cognitive, logic. (p. 66)

This culturally acquired logic is of great importance to Suvin. It is easier to imagine a novum based on the already known scientific cognition and that is what most SF narratives are based on. Suvin (1979) himself claims that he “would be hard put to cite an SF tale the novelty in which is not in fact continuous with or at least analogous to existing scientific cognitions”, but he still “would be disposed to accept theoretically a faint possibility of a fictional novum that would at least seem to be based on quite new, imaginary cognitions, beyond all real possibilities known or dreamt of in the author’s empirical reality.” (p. 66) These faint possibilities of change drive people to seek novelty in the first place, both in SF narratives and in empirical reality. According to Suvin (1979) “only in ‘hard’ or near-future SF does the

tale's thesis have to conform to a 'real possibility' - to that which is possible in the author's reality and/or according to the scientific paradigm of his culture." (p. 66) For him, this ideal logic is crucial for SF narratives: "the thesis of any SF tale has to conform to an 'ideal possibility,' as defined above." (Suvin, 1979, p. 66)

The presence of *novum* is crucial for the SF narrative. A *novum* is what differentiates it from other literary genres and what determines the logic of the entire narrative. Without the *novum*, the narrative cannot be classified as SF. In other words, it is "a fiction in which the SF element or aspect, the *novum*, is hegemonic, that is, so central and significant that it determines the whole narrative logic- or at least the overriding narrative logic- regardless of any impurities that might be present." (Suvin, 1979, p. 70) As a cultural norm, a *novum* also expands the language and norms of the narrative. The *novum* "intensifies and radicalizes [narrative logic] across the boundary of the semantic field" (Suvin, 1979, p. 70). While explaining this shift from the author's cultural norm, Suvin (1979) claims that the boundary of that semantic field in SF "is not iconic but allomorphic", further saying that "a transgression of the cultural norm is signified by the transgression of a more than merely cultural, of an ontological, norm, by an ontic change in the character/agent's reality either because of his displacement in space and/or time or because the reality itself changes around him." (pp. 70-71) This is another feature of *novum* which allows it to be a building block for the alternate reality produced by the SF narrative. Furthermore, this reality is not more real than empirical reality, "but an alternative on the same ontological level as the author's empirical reality." (Suvin, 1979, p. 71) Empirical reality and the author's reality are on the same level ontologically, meaning that they adapt to certain norms which are applied in them. That is where they differ: "one should say that the necessary correlate of the *novum* is an alternate reality, one that possesses a different historical time corresponding to different human relationships and sociocultural norms actualized by the narration." (Suvin, 1979, p. 71) This can also be viewed from a utopian perspective as an attempt at imagining a different and possibly better reality. Csisnery-Ronay Jr. (2008) claims that "the *novum* becomes even more important in this light", further explaining how "in it, scientific-rationalistic aspirations for a rational world and social visions of a just order intersect in a prefigurative knot." (p. 51)

To sum up, in this work, the following definition of *novum* will be used: a *novum* is any radically new invention or discovery, a setting and agent or a social relation in a certain SF narrative which is based on scientific cognition and determines the narrative logic of an SF text, creating a reality alternate to the empirical reality of the author.

2.2.) *Dune*: the universe

Frank Herbert's novel *Dune* was published in 1965 and it is the first instalment in the *Dune* saga. Its plot is set into the distant future and follows Paul Atreides, whose father, Duke Leto Atreides, accepts stewardship of the desert planet Arrakis. Arrakis is inhospitable, with most of its surface being a desert wasteland, but it is also a source of *melange*, a spice which enhances mental abilities and is crucial for space travel. As such, it is in high demand among the Empire's nobility and whoever controls Arrakis gains great power and influence in among the Great and Smaller Houses of the Empire. A number of different factions fight for Arrakis: the Atreides family, the Harkonnen family, their rivals, other Houses connected to the Padishah Emperor and the Fremen, nomadic natives of Arrakis.

As is mentioned above, *Dune* was published in 1965, which was "the era of first SF best-sellers" (Merrick, 2009, p.102). During this period, many SF classics were published. One of the reasons for this was the turbulence of the 1960s and the 1970s and the revolutionary potential they brought. Merrick (2009) claims that "the notion that one was "living in science-fictional times" had particular resonance in the 1960s and 1970s", further explaining that "this was a time of highly visible technological change, a playing out of many science-fictional hopes and fears: from nuclear power to computers, spaceflight, moon landings, and the inexorable growth of entertainment technologies fuelling the mass media (Levy 1995: 222–4)." (as cited in Merrick, 2009, p.103). Much like SF literature, this period was ripe with promises of social change and progress- There was hope that new, better conditions of life will arise, and that society as a whole will transform for good. The rise of new conditions and the transformation of known society is one of the key features of science fiction. It is also a foundation of SF world-building, an answer to the "what-if" question SF authors pose when they try to imagine new worlds and societies of their narratives. According to Gwyneth Jones (2009), the goal of SF is "the construction of a new world" (p.163)

Nova in *Dune* serve to build a world somewhat different in comparison to other SF worlds. Instead of a hyper-modern and technologically advanced city, the narrative is set on a desert planet, inhabited by nomads who use technology as means of survival. The institutions described in it are not based on any Western model. This is how Ken Macleod (2003) describes the worldbuilding of *Dune*:

The institutions of Herbert's galaxy are based on those of the Ottoman Empire, within which model the use of European feudal nomenclature is deeply misleading. His planetary viceroys are called dukes, and their domains fiefs, where satrap and satrapy would be the unvarnished truth. Here the link between

freedom and progress is confirmed in the negative. Progress has long since been halted by the Butlerian Jihad (a witty reference to Samuel Butler's *Erwhon*, 1872) which destroyed all computers and whose structure against making 'a machine in the likeness of a human mind' is still rigorously kept. Politics and religion are devoted to mass manipulation. The only progress that remains is evolutionary, and is achieved by the secret long-term breeding programme of the Bene Gesserit sisterhood and by the random mixing of genes in the bloody tsunami of the jihad. (pp. 236)

The estrangement of the *Dune* universe is already evident from this. Herbert's choice of inspiration influences all the elements of worldbuilding, nova included. However, the creation of the aforementioned institutions and factions is not what made *Dune* stand out from other SF novels. According to Jones (2009): "it is the arid terrain and its extraordinary wildlife that catches the reader's imagination, more than the fantasy power-politics of the plot" (p.169). Herbert's world is meticulously crafted in accordance with the findings of contemporary ecological science (*Dune* also happens to be dedicated to dry-land ecologists). It explains the struggles of the native Fremen, who are "the kind of human culture that scarcity produces" (Jones, 2009, p. 170), in great detail. Their customs and practices revolve around preserving water in any possible way. This also influences their technology, which is developed with the same goals in mind. Their way of life is influenced by their environment, which does not stand in opposition to their culture, but impacts it instead. According to Scholes and Rabkin, (1977) "their concern with survival, of course, has consequences for their science (they excel in engineering, especially of seals and nonpermeable materials), their customs (with the ritual uses of water) and their beliefs (with legends about free-flowing water)". (p. 146) Patrick D. Murphy (2009) calls this type of nature "non-artificial nature", claiming that in this relationship between nature and culture "culture and technology are designed and manufactured with, and on the basis of, nature." (p. 374) An example of this would be stillsuits, a special kind of suits that collect body moisture and convert it into drinkable water. Without this, life for Fremen would be impossible on Arrakis. The Fremen technology is also used to achieve the final goal of the Fremen civilization: the terraforming of Arrakis so their progeny could live prosperous lives. Terraforming has been a long-standing staple point of SF, especially in narratives revolving around humankind after the destruction of Earth. Terraforming was used as a response to changing climate and ecology: "Although ecological themes have fed into representations of terraforming since the 1930s, terraforming stories of the 1960s–1970s were premised on the emergence of new ecological landscapes that reflected a sense of environmental urgency." (Pak, 2016, p. 98) Still,

terraforming is not inconsequential: it can damage potentially good things found in the local ecosystem. In the case of Arrakis, terraforming could destroy the makers, worms who produce the spice melange. In words of Joan Slonczewski and Michael Levy (2003): “The Fremen, people native to Arrakis, face the dilemma of terraforming the planet to bring water, while avoiding extinction of the sandworms which produce the invaluable spice.” (p. 183) This could also apply to our contemporary world and our ever-growing consumption of resources which simultaneously damages our environment; in this sense, *Dune* seems eerily ominous; “ahead of its time, *Dune* foreshadows the agonizing struggles of the future between near-term utilization and long-term preservation of natural resources.” (Slonczewski and Levy, 2003, p. 183)

2.3) Neology and neosemes

As a genre, SF adheres to a certain set of conventions which have an influence on the reader’s expectations. SF readers expect something new and strange, something not found in empirical reality. In prose, neologisms are used to convey something new and strange. Istvan Csicsery-Ronay Jr. (2008) accentuates the importance of new words in SF: “readers of SF anticipate words and sentences that refer to changed or alien worlds.” (p. 13) SF is not the only genre which uses neologisms though. Fantasy frequently employs neologisms to make the world seem more esoteric. However, neologisms in SF have a slightly different role: “SF is distinct, in that its fictive neologies connote newness and innovation vis-à-vis the historical present of the reader’s culture. They are fictive *signa novi*, signs of the new.” (Csicsery - Ronay Jr., 2008, p.13)

Neologisms are not restricted to the literary realm. They are an important part of everyday life and everyday language use. Our ever-changing world teems with new inventions and discoveries, all of which need to be named. This is one of the primary tasks of neologisms: “they may name phenomena that until recently had no names—things and practices that have been newly discovered, invented, or imagined by a community.” (Csicsery -Ronay Jr., 2008, p. 14) This process happens in all languages and is vital for their development and, consequently, survival. Language is not immune to changes in the world and even if it were, it would soon die out as it would be rendered useless. Much like its users, language adapts to new circumstances. This is where neologisms come into play, as harbingers of linguistic change parallel to the societal one. Once people have a word for

something new in their vocabulary, that thing can more easily become a part of their daily lives. As Csicsery-Ronay Jr (2008). writes: “neology is consequently of central importance for modernizing societies, whose languages must be dynamic and flexible enough to permit new customs, concepts, and objects to become part of collective experience. If they are not so by tradition, they are made to be so.” (p. 14)

In SF, neologisms work in a similar fashion, meaning that “[i]n all cases, science fictional neologisms will represent the social-evolutionary powers that dominate that fictive world’s history.” (Csicsery-Ronay Jr., 2008, p. 18) Relations and societies in fiction are products of different developments that occurred within those fictional universes. Much like their real-life counterparts, characters in fictional worlds have developed their own neologisms. For readers, this creates an additional layer of newness in a work of fiction. Despite the reader’s knowledge of a language, SF manages to create new, strange references. Istvan Csicsery-Ronay Jr. (2008) describes these imaginary theologies as “knots of estrangement, drawing together the threads of imaginary reference with those of known language”, further explaining how

science-fictional neologies are double-coded. They are prospectively anachronistic and, more than most anachronisms, they are chronoclastic. They embody cultural collisions between the usage of words familiar in the present (a neologism’s “prehistory”) and the imaginary, altered linguistic future asserted by the neology (p. 19)

In SF, a neologism can be a word whose meaning has been altered, whose referents have shifted in a new environment. These are called neosemes and are described as “semantic shifts of words and sentences that remain familiar in structure and appearance but have been appropriated by imaginary new social conditions to mean something new.” (Csicsery-Ronay Jr., 2008, p. 19). According to Csicsery-Ronay Jr. (2008), there is a certain pleasure in reading neosemes. To readers, neosemes are familiar and yet very interesting when put into new and unexpected contexts. Thus, Csicsery-Ronay Jr (2008). concludes that “The pleasure of reading them lies in inferring surprising, and often humorous, pseudo-evolutionary connections between the familiar and the imaginary new meanings. Science-fictional neosemes correspond to SF-extrapolation; they are imaginative extensions of historical and current linguistic practice.” (p. 19)

Another type of a neologism is neologism in the strong sense. These are completely new words, unknown to the reader, dependent on the referents in the new environment of the

fictional universe. They have their own etymologies and no history of use in living languages, which means that readers have no previous experience with these words. The only familiar thing about them would be possible analogies with strange words in living languages, words that usually appear in the language of a foreign culture. In Csicsery-Ronay Jr.'s (2008) words:

The intelligibility of such words does not depend on social changes in usage, but in their ability to evoke imaginary differences of culture and consciousness. SF neologisms are constructed on analogy with strange words in natural languages, on the model of normal speakers encountering the language of newly discovered foreign cultures. (pp. 19-20)

Here lies the main difference between neologisms and neosemes: neologisms evoke completely new connotations and images. They do not need to be related to the reader's language and are, to an extent, distant: "Radically new words, in contrast with neosemes, give a sense of distance and otherness; the reader does not participate in generating linguistic innovation." (Csicsery-Ronay Jr., 2008, p. 20) On the other hand, neosemes prioritize the reader and their language. Their main purpose is to evoke the feeling of change, indicating that the newness can come from the reader's own discourse. As Csicsery-Ronay Jr. (2008) put it: "neosemes also privilege readers' familiar discourse. Along with the inevitability of mutations, they evoke a certain containment of change. They keep language "in the family," as if to say that the reader's language is capable of accommodating the novums to come. "(p. 20) These strategies are not mutually exclusive and SF authors use both in their work. That is how they create unique language styles which are important for SF worldbuilding: "A characteristic style has much to do with how an author combines these two aspects of imaginary neology. Most SF neologies are playful combinations of arbitrary poetic connotations and established techniques of making new words out of old ones." (Csicsery-Ronay Jr., 2008, p. 20)

Both concepts create so called 'semantic shifts', which are "subtle and unmarked" and which "invite readers to supply the missing links themselves." (Csicsery Ronay Jr., 2008, p. 22) This creation of links perpetuated by the reader is another thing what differentiates SF and other literary genres. Csicsery-Ronay Jr. (2008) refers to Samuel R. Delaney and explains how

it is precisely this challenge to readers to infer a given SF milieu from specific semantic implications that distinguishes the genre from what he calls "mundane fiction." SF readers expect to construct a world by

supplying motivation and rationales for unfamiliar signs. Readers understand realistic stories of everyday terrestrial life by recognizing references to known experience. SF readers, by contrast, actively supply imaginary new referents that will give rational meaning to the implied science-fictional neosemes. (p. 22)

The present is easy to describe. Most of the words that would be used for this endeavour already exist and more can be invented if needed. However, describing the future is much harder since it is filled with uncertainty. To evoke concepts from the future, one needs a language of the future; a language different to the one we have. This neological difference is crucial for envisioning the future, as Csicsery-Ronay Jr. (2008) puts it:” The evocation of future difference from the present requires another kind of neological difference, as well: disjunctive neologisms, which signify extrapolative discontinuity, the qualitative mutation of language into something different when it is submerged by unfamiliar referents; that is, the transformation of common discourse into a foreign language.” (p. 29) This is combined with the efforts to make this unfamiliarity appear normal and natural in the context of the SF work. From this arise the two poles of SF, the thinking pole, and the dreaming pole. This is how Csicsery-Ronay Jr. (2008) describes their interplay:

At its “thinking” pole, extrapolative SF strives to create impressions of maximum plausibility and naturalness by using the rhetoric of common sense, plain style, scientific universality, and the megatext of ideological commonplaces. The opposite, metaphoric “dreaming pole” constructs radically alien words. This *xenoglossia* relies on the knowledge that languages and cultures take diverse evolutionary routes, not only in terms of reference, but of the material means of making signs. In dreaming SF, the gap between the alien words of extraterrestrial/mutant cultures and the reader’s mundane present is arced by intuitive, often overtly lyrical, leaps (p. 33)

The reader’s capacity for imagination is important here. Without either of these poles it would be more difficult for readers to imagine new concepts presented in SF media.

One of the elements of plausibility of new SF languages is the class of words being introduced as new. Here SF languages follow patterns of natural languages: most neologisms are nouns. Whenever a new concept appears, a noun will be the first word coined to describe it, while verbs and adjectives are usually derived from that noun. In his own essay on neology, William C. Spruiell “approaches SF as a way to study neology in a relatively pure form, unaffected by the number and structure of morphemes in actual use that dominate a speaker’s sense of available combinations.” (as cited. in Csicsery-Ronay Jr., 2008 p. 37) Most of the

neologisms he studied were nouns, while adjectives and verbs were rarer and more specific in use. According to Spruiell, “Most neologistic adjectives are honorifics; the SF reader does not need to know what they mean, only how they function synonymously with English honorifics. They are “phonetic neologisms,” whose only new aspect is their sound (448, as cited in Csicsery-Ronay Jr., 2008, p. 37). Verbs on the other hand “are rare, and they too mainly act as phonic neologisms, often as euphemisms for well-known concepts.” (Csicsery-Ronay Jr., 2008, p. 37) This mirrors the neological processes of natural languages. Furthermore, Spruiell presents further arguments in favour of nouns.

In the real world, most borrowed words are nominals, and in this sense at least the preponderance of neological nouns imitates usage. Another reason might be that less cognitive effort is required from the author to make up nouns. Nouns also enjoy an early advantage in child development. Further, Spruiell notes, the discrimination of objects from their environment and the attendant formation of object-concepts may be hardwired in the human brain. Ease of learning may be related to ease of literary creation. Finally, novel nouns may disrupt the reading process less than novel verbs. If readers follow the principle of least effort in their reading, assuming the familiarity of the fictional world until they are forced out of it by the need to make sense of new information, neological nouns allow the narrative syntax to remain familiar, while creating the impression of exotic detail. (as cited in Csicsery-Ronay Jr., 2008, p. 37)

By linking the neological process in SF to the one in real life, Spruiell provides a lot of ground for the following hypothesis: most nova will be nouns and in the target language their translation equivalents will be nouns.

2.4.) Neology in dune

Dune is a curious novel, even in the SF context. Its unique setting was built upon many different nova and its language consists of many neologisms and neosemes. Herbert drew a lot of inspiration from human cultures. This is true for both the Empire and Arrakis: while the Empire is reminiscent of the old European feudal system, the culture of the Fremen, the nomadic dwellers of Arrakis, is based on Arabic nomadic tribes. The unity of these different cultural impacts is what makes this novel stand out. The Empire might seem familiar to most of the readers, but the world of the Fremen readers, but the world of the Fremen is probably alien to them, as well as the cultural practices developed for living on a planet on which water is a luxury. This is what Csicsery-Ronay (2008) agrees with: “it [Dune] displayed a new sense of the organic unity of SF setting and action by showing the interactions of the elaborately

detailed environment of the desert planet Arrakis and the cultural practices of its native inhabitants.” (p. 39) However, this is only visible at the first glance, and upon further inspection it is clear that the world-building is heavily oriented towards Arrakis and the Fremen. This is especially clear in the language surrounding them, all the neologisms and neosemes used to describe the environment they inhabit and their customs. This creates a disjunction which makes it harder for the reader to imagine the world of *Dune* as a unified whole:

Much of the novel depends on the arbitrary importation of linguistic and literary devices unrelated either to eco-holism or to the Fremen plot. This disjunction is shown nowhere better than in the many imaginary neologisms of the novel that appear in the foregrounded action and continually challenge the reader’s ability to construct a comfortable, unified imaginary world. (Csicsery-Ronay Jr., 2008, p. 39)

Herbert’s universe is filled with known languages that sound different, alien to some degree. All of them are used in different types of discourse that are a part of Herbert’s world-building. According to Csicsery-Ronay Jr. (2008), “these discourses are not actually neosemic, as neither biological nor technological differences are linked to earlier terrestrial usage.” (p. 39). In addition to that, Csicsery-Ronay Jr (2008). claims that “each domain has its specific terms, pastiched from certain human languages” and that they can be divided into three classes: “(a) names and terms referring to the politics and culture of the Galactic Empire; (b) the names and terms characteristic of the mystic sodality of the Bene Gesserit; and (c) the barely displaced Arabic terms of the Fremen language.” (p. 39) Different known languages are pastiched in different domains, which also means that the neological variety among them will be greater.

Herbert’s Galactic Padishah Empire is based on the feudal system of the Middle Ages. Hierarchically, it consists of the Padishah Emperor and various higher and smaller lords, each of which has their own domain. This is reminiscent of the ruling system which was in power in most of Europe and Asia. In addition to that, the Empire is also multicultural: it encompasses the entire Known Universe. With a multitude of cultures comes a multitude of languages. Here Herbert displays further European influence. The language of the empire is a mixture of various Indo-European languages, with Herbert himself labelling it as “Indo-Slavic”. Csicsery-Ronay (2008) explains this further and even offers a possible reason why this is so in the novel:

Herbert’s imperial language is a pastiche of English transpositions (lasguns, filmbooks, chrysknife) or derivations from other dominant Indo-European languages: from Latin and occasionally Greek (Bene Gesserit, Galacia, Salusa Secundus, chemavit, ornithopter, Missionaria Protectiva, Mentat), from Sanskrit

(prana, bindu), German (Landsraad) and French (melange). Herbert motivates this in his appendix by defining Galach, the language of the Galactic Empire, as specifically “Indo-Slavic,” which implies that the Galaxy was settled by a terrestrial diaspora that included only Europeans and Arabs, and that did not encounter any other significantly powerful civilized species in its expansion. (p. 39)

This language can also be viewed as a lingua franca of the entire Empire and can be compared to Esperanto, which was created as a lingua franca for the world and was also an amalgamation of several known languages. With this in mind, the Galactic Empire is further allegorized as Europe.

On the other hand, the language of the Fremen is not based on Indo-European languages. Given the descriptions of the Fremen, their customs and their culture, the reader almost expects something else, something Other. And that is the point of their language:

Words associated with the Fremen and their names for Arrakeen phenomena (Fremen, stillsuits, sandworms, the Shadout Mapes, crysknife, sietch, wormsign, sipwells) are imaginary in the uncomplicated sense that the reader is expected to imagine that they are not English words, but are derived by the Fremen from the lingua franca of the Empire. (Csicsery-Ronay Jr., 2008, p. 39)

This, however, can only be applied to words which denote secular contents. For everything related to their religion they use a language rooted in Arabic. Terms related to the Bene Gesserit and the messianic religion whose prophecies they spread “are all taken from the Arabic of our own history, and most are familiar to students of Islam (Muad’Dib, Usul, Shari-a, Lian al-Gaib, tahaddi al-bushan, ayat, Kitab al-Ibar, Shaitan, taqwa, djihad, Sayaddin, dar al-hikman, jinn, Azhar, and so forth)”. (Csicsery-Ronay Jr., 2008, p. 39) The language is a tool that further differentiates these two civilizations locked in a struggle for survival. This might not be author’s intention, but “it is clear that Herbert constructed two domains of loan-based neologisms: the Fremen’s, derived literally from Arabic, and the Galactic, derived from the power languages of Europe. (Csicsery-Ronay Jr., 2008, p. 40) In conclusion, the neologisms and neosemes of *Dune* are derived from different sources and serve different purposes. However, both the language of the Galactic Empire and the language of the Fremen are used to differentiate these two factions and enhance world-building.

3) Previous research

There has not been much research done on the translation of nova in SF. However, there is a considerable amount of research dealing with translation of neologisms, especially in SF and fantasy literature. Since neologisms are an important part of this work, it will be useful to look into this.

In a paper titled *Translation of neologisms and culture-bound items based on The Witcher*, Aneta Daniel (2016) deals with neologism and culture-bound items from Polish and their translation into English. This is an interesting angle because it deals with another Slavic language, but the SL and TL are reversed: in this case, a Slavic language is being translated into English. Daniel (2016) concludes that the target text is poorer than the source text, noting that “. Sapkowski (2014) often uses words which have no English equivalents; in effect, the target text is not as rich as the source text.” (p. 15) She also notes that most of the Polish names are translated literally, apart from some more exotic ones. In the case of the names of places, “the source text neologisms are often either translated literally or by means of the process of borrowing.” (Daniel, 2016, p. 15) It would seem that the translator tried to keep the foreign feel of the text but was not completely able to due to differences between Polish and English.

Marinda Kolev’s (2016) paper deals with translation of Terry Pratchett’s *Small Gods* into Afrikaans. The excitement of the foreign is one of the most important parts of the novel, meaning that the same excitement must be found in the target text too. In Kolev’s (2016) work “It was found that the translator could domesticate the text to a certain extent when translating the proper nouns and neologisms, which have a specific meaning in the source text, to ensure that the meaning is retained in the target text” and in conclusion “the target text was foreignised.” (2016, p. 177) For the most part Kolev deals with the translation of proper nouns and neologisms, concluding that literal translation was the most used translation procedure. This runs contrary to one of the hypotheses of this work, which is that neologisms will be translated with another neologism.

In *Sailing between comprehensible forms*, Ida Klitgård (2018) studies Herman Melville’s neologisms (also called Melvillisms) and how they were translated into Danish. Scandinavian languages, like Danish, build neologisms easily and many even insist on building neologisms from their own morphology instead of importing a foreign loanword directly. This is mostly true for Icelandic and the language of the Faeroe Islands, which are relatively small languages, but in some cases other Scandinavian languages will repeat this pattern. The

translations Klitgård (2018) studies show an unusual pattern: neologisms were translated into non-neologisms. Other neologisms “translated into either Danish neologisms or maintained in their original form follow suit” (Klitgård, 2018, p. 69) The author gives importance to Melville’s coinages, claiming that they “have found their way into our dictionaries and must be revered accordingly in foreign language translations.” (2018, p. 69) This is an interesting way of solving translation problems and it further proves that things might not always be as obvious as they seem. Different translators will focus on different things and therefore produce different translations of the same text. The Danish translators of *Moby Dick* have chosen their respective equivalents for different reasons, and all go against the expected hypothesis that the translation equivalent of a neologism is a neologism in a target language. This is another interesting turn which might predict the outcome of our own research.

4) Aims and hypotheses

The aim of this work is to analyse how *nova*, defined above, are translated from the language of the original into Croatian. As a work of science fiction, *Dune* is full of world-building *nova*, which have an estranging effect on the readers. This means that the translation should be able to produce the equivalent level of estrangement as the original. Since *nova* demand some creativity from the writer, one could expect that the translator would have to be equally creative in their translation, producing their own neologisms. This will be the foundation of the first hypothesis of this work: all *nova* from the source text will be translated with lexical neologisms in the target text.

Since nouns are the most common products of neology in languages of empirical reality, one could expect that the same pattern will appear in languages of SF narratives. The second hypothesis will deal with word class: most neologisms will be nouns and will be translated with another noun in the target text. The same will happen with neosemes.

The division between neologisms and neosemes will be used further in the text and will be the backbone of the third hypothesis: neologisms from the source text will mostly be translated by borrowing from the source text. On the other hand, neosemes will be translated with the use of literal translation.

5) Methodology

As was stated before, the aim of this paper is to examine the translation procedures used in a new Croatian translation of Frank Herbert's *Dune*. Vinay and Dalbarnet's model was used for this purpose. According to Jeremy Munday (2016), "the two general translation strategies identified by Vinay and Darbelnet (2000:84-93) are **direct translation** and **oblique translation**" (p. 56, emphasis in original). These strategies encompass seven procedures: borrowing, calque, literal translation, transposition, modulation, equivalence and adaptation. As Pavlović (2015) notes, "it is important to emphasise that, no matter the names theorists use to describe ways to establish equivalence, they in fact do not describe the procedures or strategies themselves, but the *results* these procedures yield in the texts they study." (p. 56)³ Borrowing, calque and literal translation fall under the strategy of direct translation. This is how they are defined:

Borrowing: "the SL word is transferred directly to the TL" and those words are often used to "fill a semantic gap in the TL" (Munday, 2016, p. 89) The examples include Russian words *glasnost* and *perestroika* in English, as well as many terms from technical fields such as *computer* or *internet* which were introduced to other languages from English. Pavlović (2015) further adds that borrowing "is the simplest procedure, with which a hitherto unknown term or a local flavour of the source culture into the target language." (p. 58)

Calque: a type of borrowing "where the SL expression or structure is transferred in a literal translation." (Munday, 2016, p. 89) It is also described as "a special type of borrowing in which a language loans a certain phrase from another language, and later literally translates each of its parts." (as cited in. in Pavlović, 2015, p. 58) Vinay and Dalbarnet list *science-fiction* as a calque from French into English.

Literal translation: also known as "word-for-word translation" (Munday, 2016, p. 89) and is "most common between languages of the same family and culture." (Munday, 2016, p. 89) This means that a word from SL is used as an equivalent in the TL. This is a basic translation procedure. However, "the translator may judge literal translation to be 'unacceptable' for what are grammatical, syntactic or pragmatic reasons." (Munday, 2016, p. 89)

³ This and other citations from this book were translated from Croatian by the author of this paper.

The rest of the procedures, transposition, modulation, equivalence, and adaptation, fall under the strategy of oblique translation. Here is how they are defined

Transposition: “a change of one part of speech for another (e.g. noun for verb) without changing the sense.” (Munday, 2016, p. 90) It can be either obligatory or optional and according to Munday (2016), Vinay and Darbelnet “see transposition as ‘probably the most common structural change undertaken by translators.’” (p. 90)

Modulation: “changes the semantics and point of view of view of the SL. “(Munday, 2016 p. 90) Just like transposition, it can also be either obligatory or optional. Munday (2016) quotes the purpose of modulation according to Vinay and Darbelnet: “modulation is a procedure that is justified ‘when, although a literal, or even transposed, translation results in a grammatically correct utterance, it is considered unsuitable, unidiomatic or awkward in the TL.’” (p. 90)

Equivalence: also known as idiomatic translation, this term is used to “refer to cases where languages describe the same situation by different stylistic or structural means. (Munday, 2016, p. 91) This is useful in translating proverbs and idioms.

Adaptation: “involves changing the cultural reference when a situation in the source culture does not exist in the target culture.” (Munday, 2016, p. 91) This involves replacing a certain event or a thing which exists in the source culture with an event or a thing of similar cultural connotation or importance in the target culture.

In addition to that, supplementary translation procedures will also be noted if possible. According to Vinay and Dalbernet, these include amplification, false friend, loss, gain, compensation, explicitation and generalization (Munday, 2016, pp. 92-93) This is how they are defined:

Amplification: “the TL uses more words, often because of syntactic expansion.” (Munday, 2016, p. 92) An example of amplification Munday lists is *the charge against him* > *the charge brought against him*.

False friend: “a structurally similar term in SL and TL which deceives the user into thinking the meaning is the same.” (Munday, 2016, p. 92) An example would include a French word *librarie* which means *bookstore* rather than *library*.

Loss, gain, compensation: these three can be interconnected. Every translation entails a certain degree of loss, “since it is impossible to preserve all the ST nuances of meaning and structure in the TL.” (Munday, 2016, p. 92) This can be compensated for “by introducing a gain at the same or another point in the text.” (Munday 2016, p.92)

Explicitation: “implicit information in the ST is rendered explicit in the TT.” (Munday, 2016, p. 92) This can be done on several different levels such as on the level of grammar, pragmatics, semantics, or discourse.

Generalization: “the use of a more general word in the TT.” (Munday, 2016, p. 93) If a ST uses a very specific word such as *ecstatic* which is translated as *happy* in the TT, this is an instance of generalization.

The table with nova (found in the Appendix) was divided into two parts: nova which are linguistically neologisms and those which are linguistically neosemes. Each of these tables was analysed separately in order to establish which translation procedures (both primary and, where applicable, secondary ones) were the most used for translating neologisms and neosemes in the novel. Note that this paper focuses only on the most recent translation of *Dune* by Stanislav Vidmar. While other older translations exist, they will not be the focus of this research. The last two columns of each table indicate word class of the novum in question in both the source and the target text.

6) Results

In total 219 nova have been identified in the novel. Linguistically speaking, 117 of these were neologisms, while 102 were neosemes. For the most part, they were translated using methods of overt translation, with borrowing (used 76 times in total) and literal translation (used 127 times) being the most frequently used methods. All the nova listed were linguistically noun phrases, as were most translation equivalents. Some neosemes were explained through full clauses and explanations.

6.1.) Neologisms

As shown in Table 1, the translation procedure used the most for translation of neologisms was borrowing, which was employed 52 times. The second most used was literal translation, employed 49 times. Four calques were identified. Overall, the strategy of direct translation was employed more frequently. Strategies of oblique translation were not used as much: modulation was used seven times, equivalence once, adaptation three times and transposition was not used at all.

Table 1. Translation procedures used for translation of neologisms

Translation procedure	Number of times used	Percentage
Borrowing	52	44%
Literal translation	49	41%
Calque	4	4%
Modulation	7	6%
Equivalence	1	1%
Adaptation	3	3%
Transposition	0	0%
Total	117	100%

Many neologisms that were translated with borrowing were culturological items of both the Fremen culture and the Empire. Many of them have undergone an orthographical adaptation in the translation. The ones that remained the same in both the source text and the target text either denote places related to the Empire (Salusa Secundus, Ecaz, Richese, Ix) or titles (Bene Geserit, Lisan al-Gaib, Kwisatz Haderach). Some neologisms that denote objects and places related to the Fremen have undergone adaptation, like ‘faufreluches’, ‘faufrelučes’, ‘ornithopter’, ‘ornitopter’, ‘kanly’, ‘kanli’, ‘Sietch Tabr”, ‘Tabr Sieč’. However, some neologisms that should follow this pattern in the translation do not do so. An example would be gom jabbar, a meta-cyanide poisoned needle. This neologism is borrowed into the translation without any orthographical adaptation. On the other hand, ‘chukka’ is translated as ‘čukka’, meaning the morphological adaptation was only partial. The ‘kk’ is not common in Croatian and it is not clear why the translator opted for this equivalent. The same can be said

for the case of morpheme ‘jj’ in ‘sajjadina’, which is the translation equivalent of ‘sayyadina’. These inconsistencies in morphological adaptation do not seem to have a foregrounding pattern, which can in turn be confusing for the reader. Some of the borrowings were not clear-cut borrowings, but actually hybrids. This means that one part of the phrase was borrowed (and morphologically adapted if possible) while the other was literally translated. Examples include ‘rachag stimulant’, ‘crysknife’, and ‘jubba-cloak’, whose equivalents are ‘račag stimulants’, ‘kris-nož’ and ‘juba-ogrtač.’

Literal translation was mostly used for technological terms and some occupations. This encompasses the terms related to both the Fremen and the Empire. Translation equivalents are straightforward and make sense in the context of the novel. While borrowing was used to deal with a number of terms related to the Fremen, literal translation was used for many terms related to the Empire, which is culturally much closer to an average member of the target audience. It also makes sense that technological terms were translated using this procedure. Technology is of vital importance in the novel and its names and use must be properly rendered in the target text.

Supplementary translation procedures (Table 2) were not used as often. For translation of neologisms, they were used 25 times. The most used supplementary procedure was explication, used 9 times. The second most used one was amplification, used 8 times. These were used to further explain technology in the novel. This is more economical than writing longer paragraphs of explanation or adding a lot of footnotes which break the reader’s immersion and ruin the overall experience (and are also not that common in a literary text). On the other hand, some generalizations that were used seem to run contrary to this conclusion. For example, “burnoose”, which denotes a special type of cloak used in a desert is simply rendered as “plašt”, a very general term in Croatian. Supplementary translation procedures were mostly used in addition to the use of modulation in order to further clear things up for the reader.

Table 2. Supplementary translation procedures used for translation of neologisms

Supplementary procedure	Number of times used	Percentage
gain	1	4%
generalization	6	24%

explicitation	9	36%
amplification	8	32%
loss	1	4%
false friend	0	0%
compensation	0	0%
Total	25	100%

6.2) Neosemes

The most commonly used translation procedure in translation of neosemes was literal translation (Table 3). With 68 instances it surpasses all others, with the second most common procedure, borrowing, counting only 24 instances. Two calques were identified, as well as one instance of adaptation, five of modulations, two of equivalences and no instances of transpositions. Similarly to the translation of neologisms, the strategy of direct translation was used the most to translate neosemes. Another similarity is that most of the literally translated neosemes denote terms related to technology and customs. In addition to that, one of the neosemes was an adjective phrase.

Table 3. Translation procedures used for translation of neosemes

Translation procedure	Number of times used	Percentage
literal translation	68	67%
borrowing	24	24%
calque	2	2%
adaptation	1	1%
modulation	5	5%
equivalence	2	2%
transposition	0	0%
Total	102	100%

Borrowings are mostly related to the Fremen culture and customs, and many of the neosemes used in the novel indeed come from Islamic culture and Arabic language. For example, “bashar”, which is a military title in the novel, comes from an Arabic proper name

Bashar. “Jihad”, “aql” and “Tahaddi” all come from Quran. Many of these borrowings have gone through orthographical adaptation in the target text. It would seem that the terms that the Croatian audience might be more familiar with (such as ‘jihad’, ‘Shah’ etc.) are morphologically adapted. Others, such as ‘taqwa’ or ‘hajra’ were directly borrowed. The Fremeni were inspired by nomadic desert peoples and this type of borrowing keeps that flavour in the translation. The similar line of reasoning might lie behind the decision to morphologically adapt the Emperor’s name, Padisah. Its equivalent is ‘Padišah’. This equivalent is easier to pronounce in Croatian, thereby making the Galactic Empire closer to Croatian culture. Another unexpected equivalent was “wali”, which was the translation equivalent of “vali”. This seems like an odd choice considering that “w” is not in the Croatian alphabet.

Two borrowings were hybrid borrowings. “Bindu-nervature” and “prana-musculature” are both rooted in Sanskrit (which was another influence on Herbert). Their Croatian equivalents have kept the Sanskrit part of the words and literally translated the rest. The Sanskrit parts did not go through any kind of morphological adaptation. Both terms are related to the Bene Geserit powers and are simultaneously foreignized and made clearer to the target audience.

Literal translation was mostly used to translate technological terms related to both the Galactic Empire and the Fremeni. There were not many translation equivalents that could be considered wrong or odd. Some other more interesting neosemes translated literally include “tithe” and “fief”. These are related to the Middle Ages and the social organization of that era, but here they are put into a new context and imbued with additional meaning. In the target text, they were literally translated into their Croatian equivalents, “desetina” and “vlasništvo” respectively. One interesting example was the rendering of “Bill of Particulars”. It was translated as “obaveza da pred Landsraadom...” [obligation in front of Landsraad]. The target text equivalent does not give as much importance to the term, since it seems like this bill is not that different from any other bill that is presented in front of Landsraad.

Modulation was used on some very interesting examples. “Byzantine corruption” was translated with the clause “Misliš da smo bizantski ološ.” [You think we are Byzantine scum]. At first glance it could seem that Byzantine corruption refers to the fall of the Byzantine Empire, which does not seem plausible since Earth is not relevant in the book’s universe. The adjective “Byzantine” has a secondary meaning, “of, relating to, or characterized by a devious and usually surreptitious manner of operation.” This meaning is much more fitting. Merriam-

Webster notes that, when used in this sense, the word “Byzantine” is often not capitalized. It is capitalized in the novel which might have led to some confusion, but this is still a case of oversight on the translator’s part.

Supplementary translation procedures were used less often when translating neosemes, in comparison to the translation of neologisms (Table 4). Only 8 instances were counted. The most used procedures were generalization and explication, often employed with modulation or literal translation. Both instances of equivalence in translation of neosemes have been aided by supplementary translation procedures. “Tone poems” were translated as “melodija” with the use of generalization. “Atomics” was rendered as “atomsko oružje” with explication.

Table 4. Supplementary translation procedures used for translation of neosemes

Supplementary procedure	Number of times used	Percentage
amplification	2	25%
false friend	0	0%
loss	0	0%
gain	1	13%
compensation	0	0%
generalization	3	38%
explication	2	25%
Total	8	100%

7) Discussion

The nearly even distribution of neologisms and neosemes is not surprising and it shows that Herbert knew how to employ both in his world-building. This also testifies to the aforementioned influence of European languages and Arabic in Herbert’s writing. To find out the meaning of many of these, it was useful to look them up in the Dune fandom wiki.⁴ This is an unofficial, fan-made source, but it was useful in distinguishing between the actual nova

⁴ https://dune.fandom.com/wiki/List_of_Dune_terminology

and expressions which might look like nova to an average reader.⁵ Herbert uses a lot of language related to ecology and geology which might sound strange, but do not actually denote anything new. In such cases the translator needs to be aware of this difference in order to produce a proper translation. For the most part, this translator was successful.

The first hypothesis of this work has not been confirmed. Nova from the source text are not just neologisms; they are also neosemes. Even if we restrict ourselves to just neologisms in the strict sense, most of them were translated with the technique of borrowing which does not entail lexical innovation.

The second hypothesis has proven to be mostly true. All neologisms in the source text were noun phrases, and the same is true for their translation equivalents. On the other hand, all neosemes are noun phrases, but not all were translated with a noun phrase. One of them was translated with a clause, using modulation.

The third hypothesis has been proven to be true. Borrowing was the most frequently used procedure for translating neologisms and literal translation was the most frequently used procedure for translating neosemes. Borrowing was used to translate 44% of neologisms in the strict sense. Literal translation was used to translate 67% of neosemes.

7.1) Some interesting examples

Some of the more interesting examples of translation solutions are discussed below. These could serve as starting points for future research or things to consider while producing a new translation.

In the source text, the term '*melange*' is italicised. The same is done in the target text. While it can be argued that this is due to the item's importance in the novel's universe, it can also be said that this was done to indicate that it is a foreign word with original spelling. The term comes from French and is thus pronounced differently than its Croatian spelling. The borrowings in this translation were used to make the textual elements related to the Fremmen stranger and less familiar, but inconsistencies in morphological adaptation could be confusing to the reader.

A curious example of a translation solution are all the all the solutions of “weirding”. There is no one-to-one translation of this term as it is quite context-dependent. Weirding is the name of the physical and psychological training of the Bene Gesserit, which Paul later masters. The translation equivalent in the target text is quite generalized. Two of its elements are emphasised in this translation: its magical aspects and its strangeness, or better, weirdness. “Weirding Way” is translated as “čarobnjačka vještina”, meaning “magical skill”. “Weirding Woman” has a similar equivalent: “čarobnica”. On the other hand, “weirding room” is translated as “čudna soba.” This can also be viewed as a form of adaptation. It could be said that this concept was divided into two separated (yet still related) concepts as a form of adaptation, but that would disregard the other meaning of “weird” in English. As a noun, weird can either mean “fate, destiny, ill fortune” or “soothsayer.” Both of these meanings make sense in the context of the Bene Gesserit. Using *melange*, this secretive order tries to achieve superhuman abilities in through physical and mental conditioning. Once Paul masters the Weirding Way, he realizes that in the future he will have to use his powers to lead the Jihad, which he cannot accept as his destiny. On the other hand, the Bene Gesserit possess other abilities which might describe them as soothsayers. They use their powers to guide humanity and they have an extensive breeding program whose goal is to produce Kwisatzs Haderach, a Bene Gesserit super-being. This is a case of oversight on the translator’s part. With these things in mind, the translator would be able to produce a more accurate translation of this concept. That is not to say that the translator’s equivalents are entirely incorrect, but they are still more general in their meaning and stripped off another dimension of mystery that could have been added to the Croatian translation. It can thus be concluded that this was a mistranslation.

The fact that most borrowed terms are related to the Fremen further reinforces the allegory that the central conflict of the novel is analogous to the conflict between the West and the Orient. While terms related to the Galactic Empire are for the most part translated in a way that makes them familiar to the reader, various borrowings from the Fremen culture make these people more exotic, more “othered”.

Some terms related to Paul’s mystical powers that were capitalized in the source text were not capitalized in the target text. One of the examples is “Awareness”, a special type of awareness experienced after taking the Truthtrance. It is not clear as to why this is not capitalized in the target text since it is clearly differentiated from regular awareness. On the

other hand, ‘the Voice’, one of the Bene Gesserit powers used to control others, is translated as ‘Glas’, which is capitalized. The reason behind this discrepancy is not clear.

7.2.) Slavic-speaking Fremen?

While there are many expressions in the Fremen language which are derived from Arabic, there is an instance in the novel in which they speak a Slavic language. During the funeral procession for one of the Fremen, Jamis, a chant is heard: “Ima trava okolo! I korenja okolo!” (Herbert, 2015, p. 359) This chant in Bosnian/Croatian/Serbian is the only instance of the Fremen language that is not rooted in Arabic, which makes it even more exotic to readers. Seeing a Slavic language in the context of the desert people is unexpected. According to the fan-made Wikipedia on Dune, this is Chakobsa language, used by hunters and warriors. It is “a portmanteau of French, Romani, Hebrew, Slavic, Greek and heavily altered Persian, Turkish, Sanskrit and Arabic.”

In the original, Bene Gesserit Jessica translates this as “There are ashes! And these are roots!” It is unclear how much Frank Herbert knows about Slavic languages, but “trava” is not “ashes.” This could be rendered in such a way due to the fact that Arrakis is a desert planet with poor vegetation, thus making something dry like ashes a more common sight than grass. The adverbial of place “okolo” is left out Jessica’s translation, possibly to keep the metric of the chant equal in the target text.

The Croatian translation kept the original chant and stayed true to the original rendering of Jessica’s translation. In the target text, Jessica says “Ovo je pepeo.”, which is a direct translation of Jessica’s original translation. The translator notes that this chant is originally in this Slavic language (instead of English) and that the author translated “trava” as “ashes”. This is the simplest and possibly the best translation solution for this conundrum. Even though Croatian readers understand the chant, keeping Jessica’s translation equivalents in the target text preserves the estrangement and mystery of the Fremen. That is, for Croatian readers at least. Fremen terminology is probably not as elusive in Arabic translations of the novel.

8) Conclusion

This work analysed which translation procedures were used when translating nova in science fiction based on the Croatian translation of *Dune*. The study intended to uncover which translation strategies and consequently which translation procedures were most often used in Stanislav Vidmar's translation. Another aim was to see if novelties in worldbuilding would result in linguistic novelties i.e. if nova will be described with lexical neologisms.

Findings have shown that nova were described with both neologisms and neosemes. Both were translated using the strategy of overt translation, but the frequency of used translation procedures differed. Neologisms were mostly translated using borrowing, while neosemes were mostly translated using literal translation. This was done so in order to keep the foreign feel of the setting and properly construct the cultures represented in the novel.

Translating a novel is a daunting task, with many details to keep in mind. It is even harder when one has to reconstruct a culture which does not exist in the empirical world and is alien to both the source and the target culture. That is the main challenge one encounters when translating SF literature. Herbert's *Dune* is a fusion of different influences which ultimately create new and foreign cultures. Stanislav Vidmar's task was to recreate that culture in Croatian. For that, he relied on literal translation and borrowing as the main translation procedures. Literal translation was used to familiarize the readers with technology and some customs of the settings, while borrowing was used to keep it foreign and strange. In these types of translation there is a fine line between completely familiarizing the new culture and making it completely foreign and incomprehensible. The Croatian translation walks this line finely thanks to the procedures the translator used. However, this research is conducted upon one SF novel and its results cannot be applied to other SF books, or the genre in general. For that purpose, more research based on other novels will have to be conducted.

References

- Bloch, E. (1996). *The Principle of Hope, vol. 1*. (N. Plaice, S. Plaice & P. Knight, Trans.). The MIT Press. (Original work published 1954.)
- Bould, M., Butler, A. M., Roberts, A. & Vint, S., (Eds.). (2009). *The Routledge Companion to Science Fiction*. Routledge.
- Csicsery-Ronay Jr., I. (2008). *The Seven Beauties of Science Fiction*. Wesleyan University Press.
- Daniel, A. (2016). Translation of Neologisms and Culture-Bound Items Based on *The Witcher*: A Sample Introductory Analysis. *Styles of Communication*. 8, (1), 7-15
- Herbert, F. (2019). *Dina*. Translated by (S.Vidmar, Trans.) Egmont, (Original work published 1965)
- Herbert, Frank. (2015) *Dune 50th Anniversary Edition*. Hodder.
- James, E. & Mendlesohn F. (Eds.). (2003) *The Cambridge Companion to Science Fiction*. Cambridge University Press.
- Klitgård, I. (2018) Sailing between ‘comprehensible forms’: The Danish translations of neologisms in Herman Melville’s *Moby Dick*. *Nordic Journal of English Studies*. 17, 50-70.
- Kolev, M. (2016). *Strategy and procedures for translating proper nouns and neologisms in Terry Pratchett’s fantasy novel Small Gods into Afrikaans*. [MA Dissertation, University of Pretoria]. JSTOR.
- McNamee, G. (2015.) Science Fiction vs. Fantasy. *The Virginia Quarterly Review*, 91 (3) University of Virginia, 287.

Munday, J. (2016). *Introducing Translation Studies: Theories and Applications*. Routledge.

Pak, C. (2016) Ecology and Environmental Awareness in 1960s–1970s Terraforming Stories. *Terraforming: Ecopolitical Transformations and Environmentalism in Science Fiction*. Liverpool University Press, Liverpool, 98–136.

Pavlović, N. (2015). *Uvod u teorije prevođenja*. Leykam International.

Scholes, R. and Rabkin, E. S. (1977). *Science Fiction: History, Science, Vision*. Oxford University Press.

Suvin, D. (1979) *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre*. Yale University Press.

Touponce, W. F. (1988). "Herbert's Reputation". *Frank Herbert*. Boston, Massachusetts: Twayne Publishers imprint, G. K. Hall & Co, 1988, pp. 119.

Appendix 1: Nova in *Dune*

novum- izvornik	novum- prijevod
Bene Geserit	Bene Geserit
Padishah Emperor	Car Padišah
suspensor lamp	suspenzorska svjetiljka
baliset	baliset
Kwisatz Haderach	Kwisatz Haderach
gom jabbar	gom jabbar
CHOAM Company (Combine Honnete Ober Advancer Mercantiles)	Kompanija CHOAM
melange	<i>melange</i>
Houses Major	Velike Kuće
glowglobe	sjajne kugle
faufreluches	faufrelučes
caid	<i>caid</i>
bashar	<i>bašat</i>
Imperial Regate	Carski Popisi
Truthsayer	Istinozborka
Space Guild	Svemirski Ceh
the Voice	Glas
musky	muski
aumas	aumas
Butlerian jihad	Butlerijanski džihad
Orange Catholic Bible	Narančasta katolička Biblija
Mentat	Mentat
truthtrance	Trans istine
filmbook	filmska knjiga
kanly	kanli
verite	verite
semuta	semuta
kindjal	Kindjal
Sardaukar	Sardaukar
Holtzman effect	Holtzmanov učinak
Imperial Conditioning	Carska Uvjetovanost
Landsraad	Landsraad
Reverend Mother	Časna Majka
tone poems	melodija
ornithopter	Ornitopter
groundcar	površinsko vozilo
Fremen	Slobodnjaci
Salusa Secundus	Salusa Secundus
bodkin	bodež
defensive field	obrambeno polje
force-shield bubble	opna zaštitnog polja

Giedi Prime	Giedi Jedan
Suk School	škola Suk
sandworm	pješčani crv
Ecaz	Ecaz
Richesse	Richesse
Ix	Ix
atomics	atomsko oružje
Heighliner	Astrobrod
Awareness	svijest
canto	canto
respondu	respondu
Shari-a panoplia prophetics	Šari-a
Broken Land	Ispucala zemlja
stillsuit	Pustinjsko odijelo
poison snooper	detektor otrovs
spice hunter	lovac na začín
Dark Things	tamne stvari
ways of the Great Mother	putovi Velike Majke
maker	tvorac
crysknife	kris-nož
shai-hulud	šai-hulud
hunter-seeker	lovac-tragač
lasgun	laserski revolver
Weirding	čudna soba (weirding room)/čarobnica (weirding woman) čarobnjačka vještina (weirding way
palm lock	brava na dlan
wakeshot	injekcija za buđenje
airlock	zračna komora
servok	servok
School Injunction	Zapovijed Škole
radiograph	radiogram
Judge of the Change	Arbitar Promjene
rachag stimulant	račag stimulans
spice liquor	začinsko piće
tithe	desetina
fief	vlasništvo
sandcrawler	pješčani gusjeničar
carryall	leteći transporter
harvester-factory	žetelica-tvornica
solido	solido
sietch	sieč
transceiver	komunikator
the Voice from the Outer World	Glas iz Vanjskog Svijeta
filmclip	filmklip
dew gatherer	sakupljač rose
dew collector	kolektori rose
Lisan al-Gaib	Lisan al-Gaib

filmbase	filmska vrpca
planetologist	planetolog
heat exchange filament	vlakno za izmjenu topline
salt precipitator	taložnik za sol
emergency transmitter	odašiljač za slučaj opasnosti
truthsense	osjetilo za istinu
wormsign	znak crva
sandcloud	pješčani oblak
factory crawler	tvornica-gusjeničar
chaumurky	čaumurki
chaumas	čaumas
richece	laskavci iz bogatih obitelji
House Troop	kućna garda
Guild Bank	Cehovska banka
cepeda	cepeda
aplomage sirian	sirijski aplomage
chukka	čukka
pot-a-oie	pot-a-oie
field C.P.	astrodrom
pongi rice	pongi riža
spice beer	začinsko pivo
star-searcher	istraživač zvijezda
antifatigue pill	tableta protiv umora
belt switch	prekidač štitnika
shield generator	generator štitnika
dartgun	pištolj za izbacivanje strelica
shaitan ('s bargain)	vražja pogodba
peg tooth	umjetni zub
krimskell	krimskel
suspensor-buoyed	suspensorski poduprta
Colonel Bashar	brigadir bašar
stilltent	pustinjski šator
communintent	prijamnik
literjon	litražon/litrenjača
micro-manual	mikropriručnik
glowtab	svijetli kvadrant
energy cap	energetska kaciga
sandsnork	pumpa za ubacivanje zraka
stillsuit repkit	kutija s rezervnim dijelovima za pustinjsko odijelo
recath	cijev za otpadne materijale
baradye pistol	pištolj za obojenu prašinu
sinkchart	sink-karta
filt-plug	nosni filtar
paracompass	parakompas
maker hooks	tvorčeve kuke
thumper	udarač

fire pillar	vatreni stup
Fremkit	slobodnjački omot za opremu
ayat	ajat
burhan	burhan
al-Lat	al-Lat
mating index	indeks križanja
jihad	džihad
phosphor tubes	fosforne cijevi
watertube	vodna cijev
sphinchter	zatezni ventil
compaction tools	statički kompresor
Byzantine corruption	"Misliš da smo bizantski ološ"
wire gridex plains	koordinatne ravnine
field generator	uređaj za generiranje polja
proximity detector	detektor blizine
spice coffee	Začinska kava
Bill of Particulars	"obaveza da pred Landsraadom..." pg 262
doorfield	polje vrata
regent-siridar	namjesnik-siridar
catchtube	sabirna cijev
bindu-nervature	bindu ustrojstvo
prana-musculature	prana-muskulatura
space frigate	svemirska frigata
viewscreen	videoekrani
spice lighter	transporter začina
cutteray burner	plameni rezač
neuro-enticement	neurozavođenje
burnoose	plašt
jubba cloak	juba-ogrtač
moisture precipitator	sabirnica vlage
windtrap	sabirnica vjetra
vali	wali
fai	fai
cielago	cielago
taqwa	taqwa
ijaz	ijaz
karama	karama
sietch Tabr	Tabr Sieć
maula pistol	maula pištolj
kerchief of the bakka	rubac bakka
aql	ispit aql
doorseal	hermetička vrata
sayyadina	sajjadina
dar al-hikman	dar al-hikman
timesense	vremensko osjetilo
tahaddi	tahaddi (izazov)

watermaster	vodar
Shah-Nama	Šah-nama
garvarg	garvarg
race consciousness	svijest rase
drachm	drahm
decaliter	dekalitar
na-Baron	na-barun
ecru	ekru
houris	hurija (pg 375)
sound-deadening field	polje za izolaciju zvuka
Cone of silence	Kupola tišine
Houses Minor	Male Kuće
servo-motor	servo-motor
semishield	poluštitićnik
fete	slavlje
hypno-ligation	hipno-vezanje
out-freyn	strana
erg	erg
yali	jali
time-awareness	vremenska svijest
hajra	hajra
hajj	hadž
hornspout	cijev vodne mješine
cheops	Keops
glowtube	svijetleća cijev
alam al-mithal	alam al-mital
Water of Life	Voda života
Fedaykin	Fedajkin
nezhoni	nezhoni rubac
graben pyon	grabenski pion
tau	tau
crawler	gusjeničar
shigawire	šiga žica
message cylinder	cilindar za poruku
field pad	poljski madrac
fanmetal tent	"čudna lepezasta građevina..."
attitudinal jet	visinske raketne mlaznice
servo-receiver	servo-prijamnik
water-recovery team	ekipa koja skuplja tjelesnu vodu
burseg helmet	burseška kaciga

Appendix 2: Neologisms- ST term, TT term, methods

source text	target text	main procedure	supplementary procedure	word class ST	word class TT
Fremen	Slobodnjaci	adaptation	gain	n ⁶	n
bodkin	bodež	adaptation	generalization	n	n
Bene Geserit	Bene Geserit	borrowing		n	n
baliset	baliset	borrowing		n	n
Kwisatz Haderach	Kwisatz Haderach	borrowing		n	n
gom jabbar	gom jabbar	borrowing		n	n
melange	<i>melange</i>	borrowing		n	n
faufreluches	faufrelučes	borrowing		n	n
caid	<i>caid</i>	borrowing		n	n
Mentant	Mentant	borrowing		n	n
aumas	aumas	borrowing		n	n
kanly	kanli	borrowing		n	n
verite	verite	borrowing		n	n
semuta	semuta	borrowing		n	n
kindjal	kindjal	borrowing		n	n
Sardaukar	Sardaukar	borrowing		n	n
Landsraad	Landsraad	borrowing		n	n
ornithopter	Ornitopter	borrowing		n	n
Saluna Secundus	Salusa Secundus	borrowing		n	n
Ecaz	Ecaz	borrowing		n	n

⁶ N= noun phrase

Richesse	Richesse	borrowing		n	n
Ix	Ix	borrowing		n	n
canto	canto	borrowing		n	n
respondu	respondu	borrowing		n	n
Shari-a panoplia prophetics	Šari-a	borrowing	loss	n	n
shai-hulud	šai-hulud	borrowing		n	n
servok	servok	borrowing		n	n
solido	solido	borrowing		n	n
sietch	sieč	borrowing		n	n
Lisan al- Gaib	Lisan al-Gaib	borrowing		n	n
chaumurky	čaumurki	borrowing		n	n
chaumas	čaumas	borrowing		n	n
cepeda	cepeda	borrowing		n	n
chukka	čukka	borrowing		n	n
pot-a-oie	pot-a-oie	borrowing		n	n
cielago	cielago	borrowing		n	n
sietch Tabr	Tabr Sieč	borrowing		n	n
sayyadina	sajjadina	borrowing		n	n
dar al- hikman	dar al-hikman	borrowing		n	n
garvarg	garvarg	borrowing		n	n
ecru	ekru	borrowing		n	n
servo- motor	servo-motor	borrowing		n	n
Fedaykin	fedajkin	borrowing	explicitation	n	n
nezhoni	nezhoni rubac	borrowing	explicitation	n	n
tau	tau	borrowing		n	n
krimskell	krimskel	borrowing		n	n

paracompass	parakompas	borrowing		n	n
selamlık	selamlık	borrowing		n	n
račag stimulant	račag stimulant	borrowing/hybrid borrowing		n	n
crysknife	kris-nož	borrowing/hybrid borrowing		n	n
Giedi Prime	Giedi Jedan	calque		n	n
regent-siridar	namjesnik-siridar	calque		n	n
hypnoligation	hipno-vezanje	calque		n	n
glowtab	svijetli kvadrant	equivalence	explicitation	n	n
glowglobe	sjajne kugle	literal translation		n	n
Truthsayer	Istinozborka	literal translation		n	n
truthtrance	Trans istine	literal translation		n	n
filmbook	filmska knjiga	literal translation		n	n
groundcar	površinsko vozilo	literal translation		n	n
sandworm	pješčani crv	literal translation		n	n
heighliner	Astrobrod	literal translation		n	n
stillsuit	Pustinjsko odijelo	literal translation	explication	n	n
lasgun	laserski revolver	literal translation		n	n
wakeshot	injekcija za buđenje	literal translation	amplification	n	n
sandcrawler	pješčani gusjeničar	literal translation		n	n
harvester-factory	žetelica-tvornica	literal translation		n	n
filmclip	filmklip	literal translation		n	n
filmbase	filmska vrpca	literal translation		n	n
truthsense	osjetilo za istinu	literal translation	amplification	n	n

wormsign	znak crva	literal translation	amplification	n	n
sandelcloud	pješčani oblak	literal translation		n	n
aplomage syrian	sirijski aplomage	literal translation		n	n
pongi rice	pongi riža	literal translation		n	n
star-searcher	istraživač zvijezda	literal translation		n	n
antifatigue pill	tableta protiv umora	literal translation		n	n
dartgun	pištolj za izbacivanje strelica	literal translation	amplification	n	n
stilltent	pustinjski šator	literal translation	explicitation	n	n
communint ent	prijamnik	literal translation	generalization	n	n
micro-manual	mikropriručnik	literal translation		n	n
literjon	litražon/litrenjača	literal translation		n	n
energy cap	energetska kaciga	literal translation		n	n
stillsuit repkit	kutija s rezervnim dijelovima za pustinjsko odijelo	literal translation	amplification	n	n
baradye pistol	pištolj za obojenu prašinu	literal translation	amplification	n	n
sinkchart	sink-karta	literal translation		n	n
filt-plug	nosni filter	literal translation		n	n
catchtube	sabirna cijev	literal translation		n	n
viewscreen	videoekran	literal translation		n	n
burnoose	plašt	literal translation	generalization	n	n
neuro-enticement	neurozavođenje	literal translation		n	n
moisture precipitator	sabirnica vlage	literal translation		n	n
windtrap	sabirnica vjetra	literal translation		n	n

maula pistol	maula pištolj	literal translation		n	n
timesense	vremensko osjetilo	literal translation		n	n
watermaster	vodar	literal translation		n	n
decaliter	dekalitar	literal translation		n	n
semishield	poluštitičnik	literal translation		n	n
sound-deadening field	polje za izolaciju zvuka	literal translation		n	n
Cone of silence	Kupola tišine	literal translation		n	n
time-awareness	vremenska svijest	literal translation		n	n
hornspout	cijev vodne mješine	literal translation		n	n
glowtube	svijetleća cijev	literal translation		n	n
Water of Life	voda života	literal translation		n	n
Judge of the Change	Arbitar promjene	literal translation		n	n
burseg helmet	burseška kaciga	literal translation		n	n
na-Baron	na-barun	borrowing		n	n
shigawire	šiga žica	literal translation borrowing		n	n
factory crawler	tvornica-gusjeničar	calque		n	n
jubba cloak	juba-ogrtač	borrowing		n	n
Weirding (Way)	čudna soba (weirding room)/čarobnica (weirding woman) čarobnjačka vještina (weirding way)	literal/adaptation	generalization	n/ad j	n/ad j
carryall	leteći transporter	modulation	explicitation	n	n
transceiver	komunikator	modulation	explicitation	n	n

richece	laskavci iz bogatih obitelji	modulation	amplification	n	n
field C.P.	astrodrom	modulation	generalization	n	n
sandsnork	pumpa za ubacivanje zraka	modulation	explicitation	n	n
out-freyn	strana	modulation	generalization	n	n
water-recovery team	ekipa koja skuplja tjelesnu vodu	modulation	explicitation	n	n
Fremkit	slobodnjački omot za opremu	adaptation	amplification	n	n

Appendix 3: Neosemes- ST terms, TT terms, procedures

source text	target text	main procedure	supplementary procedure	word class ST	word class ST
recath	cijev za otpadne materijale	adaptation	explicitation	n	n
bashar	bašar	borrowing		n	n
musky	muski	borrowing		n	n
ayat	ajat	borrowing		n	n
burhan	burhan	borrowing		n	n
al-Lat	al-Lat	borrowing		n	n
jihad	džihad	borrowing		n	n
fai	fai	borrowing		n	n
taqwa	taqwa	borrowing		n	n
karama	karama	borrowing		n	n
ijaz	ijaz	borrowing		n	n
aql	ispit aql	borrowing	explicitation	n	n
tahaddi	tahaddi	borrowing		n	n

Shah-Nama	Šah-nama	borrowing		n	n
drachm	drahm	borrowing		n	n
erg	erg	borrowing		n	n
yali	jali	borrowing		n	n
cheops	keops	borrowing		n	n
hajra	hajra	borrowing		n	n
hajj	hadž	borrowing		n	n
alam al-mithal	alam al-mital	borrowing		n	n
Colonel Bashar	brigadir bašar	calque		n	n
graben pyon	grabenski pion	calque		n	n
tone poems	melodija	equivalence	generalization	n	n
atomics	atomsko oružje	equivalence	explicitation	n	n
space frigate	svemirska frigata	literal translation		n	n
Padisah Emperor	Car Padišah	literal translation		n	n
suspensor lamp	suspenzorska svjetiljka	literal translation		n	n
Houses Major	Velike kuće	literal translation		n	n
Imperial Regate	Carski popisi	literal translation		n	n
Space Guild	Svemirski ceh	literal translation		n	n
the Voice	Glas	literal translation		n	n
Butlerian jihad	Butlerijanski džihad	literal translation		n	n
Orange Catholic Bible	Narančasta katolička Biblija	literal translation		n	n
Holtzman effect	Holtzmanov učinak	literal translation		n	n
Imperial Conditioning	Carska Uvjetovanost	literal translation		n	n

Reverend Mother	Časna Majka	literal translation		n	n
defensive field	obrambeno polje	literal translation		n	n
force-shield bubble	opna zaštitnog polja	literal translation		n	n
Suk School	škola Suk	literal translation		n	n
Awareness	svijest	literal translation		n	n
Broken Land	Ispucala zemlja	literal translation		n	n
poison snoop	detektor otrova	literal translation		n	n
spice hunter	lovac na začini	literal translation		n	n
Dark Things	tamne stvari	literal translation		n	n
ways of the Great Mother	putovi Velike Majke	literal translation		n	n
maker	tvorac	literal translation		n	n
hunter-seeker	lovac-tragač	literal translation		n	n
palm lock	brava na dlan	literal translation		n	n
airlock	zračna komora	literal translation	gain	n	n
School Injunction	Zapovijed Škole	literal translation		n	n
radiograph	radiogram	literal translation		n	n
spice liquor	začinsko piće	literal translation		n	n
tithe	desetina	literal translation		n	n

fief	vlasništvo	literal translation		n	n
the Voice from the outer world	Glas iz vanjskog svijeta	literal translation		n	n
dew gatherer	sakupljač rose	literal translation		n	n
dew collector	kolektori rose	literal translation		n	n
planetologist	planetolog	literal translation		n	n
heat exchange filament	vlakno za izmjenu topline	literal translation		n	n
salt precipitator	taložnik za sol	literal translation		n	n
emergency transmitter	odašiljač za slučaj opasnosti	literal translation		n	n
House Troop	kućna garda	literal translation		n	n
Guild Bank	Cehovska banka	literal translation		n	n
spice beer	začinsko pivo	literal translation		n	n
belt switch	prekidač štitnika	literal translation		n	n
shield generator	generator štitnika	literal translation		n	n
shaitan ('s bargain)	vražja pogodba	literal translation	generalization	n	n
peg tooth	umjetni zub	literal translation		n	n
suspensor-buoyed	suspensorski poduprta	literal translation		adj	adj
maker hooks	tvorčeve kuke	literal translation		n	n
thumper	udarač	literal translation		n	n

fire pillar	vatreni stup	literal translation		n	n
mating index	indeks križanja	literal translation		n	n
phosphor tubes	fosforne cijevi	literal translation		n	n
watertube	vodna cijev	literal translation		n	n
sphincter	zatezni ventil	literal translation		n	n
field generator	uređaj za generiranje polja	literal translation		n	n
proximity detector	detektor blizine	literal translation		n	n
spice coffee	Začinska kava	literal translation		n	n
bindu-nervature	bindu ustrojstvo	borrowing/hybrid borrowing		n	n
prana-musculature	prana-muskulatura	borrowing/hybrid borrowing		n	n
spice lighter	transporter začina	literal translation		n	n
vali	wali	borrowing		n	n
kerchief of the bakka	rubac bakka	literal translation		n	n
race consciousness	svijest rase	literal translation		n	n
houris	hurija	literal translation		n	n
Houses Minor	Male Kuće	literal translation		n	n
fete	slavlje	literal translation		n	n
crawler	gusjeničar	literal translation		n	n
message cylinder	cilindar za poruku	literal translation		n	n

field pad	poljski madrac	literal translation		n	n
attitudinal jet	visinske raketne mlaznice	literal translation		n	n
CHOAM Company	Kompanija CHOAM	literal translation		n	n
Bill of Particulars	"Kad duboko zagazi u krivnju, neka se suoči s obvezom da pred Landsraadom polaže račun."	literal translation	generalization	n	clause
duke	vojvoda	literal translation		n	n
servo-receiver	servo-prijamnik	hybrid borrowing		n	n
Byzantine corruption	"Misliš da smo bizantski ološ"	modulation	amplification	n	clause
compaction tools	statički kompresor	modulation		n	n
wire gridex plains	koordinatne ravnine	modulation		n	n
cutteray burner	plameni rezač	modulation		n	n
doorseal	hermetička vrata	modulation		n	n