EDICIONES COMPLUTENSE

Estudios de **Traducción**
ISSN: 2174-047X

MISCELÁNEA

The translation of fictive neology through the decades: a case study

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https://dx.doi.org/10.5209/estr.98213 Recibido: 3 de octubre de 2024 / Revisado: 28 de enero de 2025 / Aceptado: 20 de febrero de 2025

Abstract. Neologisms are a key factor of science fiction and world building, and their proper translation is essential if the complexity of the genre, with its usually multi-layered plot, is to be fully understood in the target language. However, the perception of science fiction and its characteristic futuristic, technological worlds may have changed in last decades due to the breakthroughs in technology and science experienced by societies all around the world. This study extracts the neologisms related to technical and scientific breakthroughs found in four English-written science fiction novels and in their translation and retranslations into Spanish, creates a contrastive corpus and analyses if the approach to their translation has evolved. The novels used are *Brave New World* (Aldous Huxley, 1932); *Nineteen EightyFour* (George Orwell, 1949), *Fahrenheit 451* (Ray Bradbury, 1953) and *Do Androids Dream of Electric Sheep?* (Philip K. Dick, 1968).
Keywords. Neology, neologism, translation, retranslation, science fiction

ES La traducción de los neologismos ficcionales a través de las décadas: estudio de caso

Resumen. Los neologismos son un elemento clave en la ciencia ficción y en la construcción de mundos ficticios. Por ende, es imprescindible traducirlos de manera correcta para que la peculiaridad de este género, con sus múltiples capas de creación, se entienda por completo en la cultura de destino. Por su parte, la percepción de la ciencia ficción y sus planteamientos futuristas, donde la tecnología suele desempeñar un papel fundamental, puede haberse alterado en las últimas décadas como consecuencia de los avances en ciencia y tecnología que ha experimentado la sociedad. Este estudio extrae los neologismos que refieren avances científicos y tecnológicos presentes en cuatro novelas de ciencia ficción cuya lengua original es el inglés y en todas sus traducciones y retraducciones hacia el español, crea un corpus contrastivo y analiza si el enfoque de su traducción ha sufrido cambios con el paso del tiempo. Las novelas originales son *Brave New World* (Aldous Huxley, 1932), *Nineteen Eighty-Four* (George Orwell, 1949), *Fahrenheit 451* (Ray Bradbury, 1953) y *Do Androids Dream of Electric Sheep?* (Philip K. Dick, 1968).
Palabras clave. Neología, neologismo, traducción, retraducción, ciencia ficción

1. Introduction and objectives

Science fiction and fantasy are literary genres which depend on neology, since terms created specifically for imaginary worlds and concepts are the binding agent of alternative realities and provide fictive storytelling with logic, solidness, and plausibility. Therefore, the task of correctly translating said neology acquires an essential role if the complexity of the fictive work is to be fully understood in the target language.

Science fiction literature can be considered a hybrid genre in which literary creation and scientific speculation are intertwined (Szymýslik 2018: 90), since science and technology play an essential role in

fictive storytelling. It is even suggested that science fiction paves the way for real scientific breakthroughs (Szymýslik 2018: 90), thus enhancing the bond between this literary genre and scientific innovation.

During the last decades, scientific, technological, and digital innovations have been especially fruitful and have transformed drastically our daily lives. Technology is currently perceived in a way different to the 40s or 50s, and many invented concepts which appear in science fiction novels from that time do resemble devices which are widely used today. These fictive neologisms are today very close to reality, and this *closeness* might affect the way in which they are perceived and, therefore, translated.

This paper seeks to observe how the translation of fictive neology has been (and is) approached through the decades and to verify if the passing of time and, therefore, the breakthroughs society has experienced in science and technology, has affected the strategies used when fictive neologisms are translated, as is expected by the author. To fulfil this objective, after a brief bibliographical review on the available literature about Retranslation and Neology, a linguistic corpus has been gathered using the technological and scientific neologisms found in the science fiction novels *Brave New World* (Aldous Huxley, published in 1932), *Nineteen Eighty-Four* (George Orwell, 1949), *Fahrenheit 451* (Ray Bradbury, 1953) and *Do Androids Dream of Electric Sheep?* (Philip K. Dick, 1968) as well as their translations and retranslations into Spanish. All the original novels, which are considered by many as science fiction classics, were originally written in English, count on at least three translated texts in Spanish and concede great importance to neology.

The words gathered in this corpus, which was previously used in Sánchez López 2024, have been classified according to the technique used to render them into Spanish and have been displayed according to the year of their translation, in order to draw percentages of use of each strategy throughout the years since their first translation and the present day. The methods are described in more detail in the section *Methods of analysis*, which is followed by the results and the conclusions.

2. Fictive neology and its importance in science fiction

Neologisms have typically been defined as new words or meanings in a language and appear usually as a response to the *need* to name new realities, facts or entities (Casado Velarde 2015: 23). The covid-19 pandemic in 2020 sets a good example of such need, when new words such as *safety distance* or *antigen test* found their way into the daily talk. However, humankind often experiences not only the need, but also the *wish* to name newly created realities (Casado Velarde 2015: 23), where human imagination is the main trigger to word-creation: literature, cinema, TV shows, and even simple word games inhabit our daily lives and constitute a perfect breeding ground for neologisms. Just to add some examples, cat-lovers have a *purrfect* day when they spend an evening chilling with their furry friends; the main characters in the TV show *Friends* pick the first ones in *bunny up* to join their football team[1]; and each September 1st a whole lot of wizards and witches take the *Hogwarts Express* to start their new *schoolyear* (being this word a neologism itself, since it does not refer any common school).

Spanish neologisms are usually divided according to two criteria: the most traditional one minds the reason behind the creation of new words (that is, the aforementioned *need* or *wish* to create a neologism), and divides neologisms into "necessary or denominative" and "literary or stylistic" (see Guerrero Ramos 1995, Alvar Ezquerra 2007, Casado Velarde 2015 or Freixa 2022 for further information). The second one is related to the word formation process of each new term, thus separating "formal" and "semantic" neologisms (see Guilbert 1975, Guerrero Ramos 1995, Newmark 1999, Verdegal 2005, Cabré 2006, Alvar Ezquerra 2007, Giraldo Ortiz 2016, Freixa 2022 or Vega Moreno 2022). Those authors define *formal neologisms* as those created using the common wordcreation processes of a language, such as derivation, blending, composition, etc., as happens in the words *Eurasia, Eastasia, Ingsoc* or *speak-write* found in Orwell's novel *Nineteen Eighty-Four*. In turn, *semantic neologisms* are those who keep their form but add a different meaning, as can be seen in the words *apparition*[2] and *Grim*[3] in the context of the *Harry Potter* saga.

Among the multiple genres to be found in literature, cinema, etc., according to Aksoy & Söylemez (2023: 109), "[s]cience-fiction can be considered as the most suitable setting to invent new words, it 'distinguishes its fictional worlds to one degree or another from the world in which we actually live' (Roberts 2006: 1)". Neology is, indeed, one of the "genre-defining literary elements" (Aksoy & Söylemez 2023: 109) of science fiction, and is considered one of the "seven beauties of science fiction" by Csicery-Ronay. This author, in fact, states the following:

> Readers of SF anticipate words and sentences that refer to changed or alien worlds. All fantastic genres make some use of fictive neology (...) 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 (Csicery-Ronay Jr. 2008: 13).

Neology or, as Csicery-Ronay Jr. puts it, *fictive neology* acquires thus an essential role in science fiction and fantasy literature. Besides establishing a first distinction between the *real* world and the imagined one, as Roberts (2006: 1) mentioned, those new terms "allow new concepts to become real and turn the novel into something substantial and steady [our translation]"[4] (Szymýslik 2018: 91). Science fiction readership is

1 *Friends* 3x09, 1996.
2 The ability of magically disappear and reappear in a different location.
3 Death omen which takes the shape of a big, black dog.
4 Original quote: "Permiten materializar conceptos novedosos que aportan solidez a las obras".

predisposed to encounter neologisms along the reading and to accept them as a way of creating fiction; neologisms, in turn, act as binding agent within the story and entitle it with solidness and plausibility.

Szymýslik states that science fiction "constitutes a hybrid genre, since it assembles features of both sheer literary creation and scientific speculation [our translation]"[5] (2018: 19) and highlights that fictive neology must be carefully translated in order to "be able to render all the creative layers which underlie this translative field [our translation]".[6] (Szymýslik 2018: 90).

Given its importance in world and story building, translating fictive neology is far from an easy task. As expressed by Martínez Fernández,

> Science fiction literature displays an essential feature which differentiates it from so-called 'general' literature: the appearance of words and ideas which belong to a future which is (or is not) foreseeable in our reality or even in alternative ones, be they human or not [our translation][7] (2020: 17).

The translation of neologisms has been paid little attention in Translation Studies; however, some works need to be taken in consideration. Peter Newmark's *Textbook of Translation* (1988) presents some strategies commonly used when translating neologisms, which are in turn summed up by Martínez Fernández (2020: 119-120), such as literal translation, wordby-word translation or transposition. Delabastita (2004: 884), who also proposes strategies such as borrowing or blending (among others), draws a line between translation strategies based on the result of the translation process (for instance, cases in which an original neologism is rendered with a resulting neologism in the target language), and stresses that

> translation aiming at a NEOLOGISM – NEOLOGISM rendering and wanting to limit semantic shifts will have to consider, among other things, the exact meaning range of the source-text neologism as well as the linguistic mechanisms underlying it.

In this line, both Verdegal (2005) and Sánchez Ibáñez (2013) consider the word-creation processes inherent to the target language as a suitable way to translate neology, not forgetting that the result of said translation will be in most cases a neologism itself. According to Sánchez López (2024: 424), who analysed the same corpus used in the present research, fictive neologisms translated into Spanish usually mimic the creation processes of the original English ones excepting the cases in which the neology gets lost during the translation process. Examples of this are the translation of the vast majority of semantic neologisms, such as *pornographic* in *Brave New World* as *pornográfico*[8]; *firefighter* in *Fahrenheit 451* as *bombero*[8]; and the majority of words created by suffixation (*Controllership* as *Inspectorado*[9] in *Brave New World*), prefixation (*nonkipple* as *no-kipple*[10] in *Do Androids Dream of Electric Sheep?*), blending (*sporticopter* as *deporticóptero*[9] in *Brave New World*) and composition (*vid-lens* as *videolentes*[10] in *Do Androids Dream of Electric Sheep?*), among others. More information on this regard can be found in Sánchez López 2024.

3. Retranslation and the possible ageing of translated science fiction

Retranslation is a rather new research line within Translation Studies and has not been applied before to science fiction literature neither to any sort of neology. Berman stated its first definition in 1990 in the journal *Palimpsestes*: "Every translation made after the first translation of a text is a retranslation [our translation]"[11]. It can be inferred from this work of Berman that the concept of retranslation applies to later translations of previously translated texts (from now on, TT) into the same target language (from now on, TL); however, several authors propose new ideas which intend to open this definition. One of them, on the one hand, is Alevato do Amaral, who affirms that any later translation of an already-translated text, regardless of the TL, can be regarded as a retranslation since it can be influenced by said previous translations (2019: 240-241). On the other hand, by considering different genres as different ways of expression —that is, different *languages*—, a new line of research opens which considers as retranslation the adaptation of literary works to other modes such as comic strip, cinema, or TV shows.

Those statements, although they give a more precise idea of what the concept of retranslation could mean, lie beyond the scope of the present study, in which we will refer exclusively to translations into the same target language when we mention the word *retranslation*, in line of works such as Chaume (2007: 49), Gürçağlar (2009: 232), Cetera (2009: 104), Evans (2014: 200), Cadera (2016: 5) or Cadera & Walsh (2022: 5), among others who do not explicitly mention, but point to the same limitation, such as Collombat (2004: 3), Venuti (2004: 25), Zaro Vera (2007: 21) or Desmidt (2009: 670).

There are several reasons to newly translate into the same TL a text which has been rendered into that language before. One of them, studied by Chaume (2007), has to do with diatopical varieties of languages and points to retranslation as a way of adapting, in this case, audiovisual works to different pronunciations and accents in Spanish. Some authors mention the continuous seek of a *grande traduction*, or "great

5 Original quote: "Constituye un género híbrido, pues posee componentes propios de la creación literaria pura y la especulación científica".
6 Original quote: "Poder transmitir a los lectores todas las capas de las creaciones que conforman este campo traslativo".
7 Original quote: "La literatura de ciencia ficción tiene una característica fundamental que la diferencia de la literatura llamada "general": la aparición de vocablos e ideas propios de un futuro que ya se vislumbra (o no) en nuestra realidad o incluso en otras realidades, ya sean humanas o no".
8 In every Spanish translated text.
9 In the first translation (1947).
10 In the second retranslation (2015).
11 Original quote: "Toute traduction faite après la première traduction d'une oeuvre est donc une retraduction".

translation", as a motivation to continuously retranslate pieces of literature, mainly classic works (for further information, see Berman 1990 or Cadera 2022). The marketing strategy of publishing houses is also likely to hire new retranslations of already translated texts (Koskinen & Paloposki 2003, Susam-Sarajeva 2003), and some translators may as well choose to translate a work due to personal likeness or closeness to its author (Fontcuberta 2007: 276).

For the scope of this study, the most interesting motivation to retranslate a text is the *ageing* of previous translations, be it linguistic or cultural. According to Sánchez López (2024: 78),

> Although nowadays we are lacking a system to empirically measure the ageing of translations, it is clear that the need to modernize the language and adapt texts to the present day is one of the most frequent causes of retranslation, albeit not the only one, according to Van Poucke (2017: 101) [our translation][12].

Traces of linguistic ageing can be found, for instance, in Thomas Hardy's *Tess of the d'Urbervilles,* whose latest retranslation into Spanish in 1994 presents significant differences (surnames, verb conjugation, etc.) with the previous one, made in 1924 (Braga Riera 2017). On the other hand, it is certainly easy to find differences between the Spanish translations and retranslations of classical pieces of literature such as Charlotte Brontë's *Jane Eyre,* or different works by Jane Austen, since the translations made during the Spanish fascist dictatorship between the years 1936 and 1975 tried to meet the society's expectations of the time and are quite different from modern renderings. After all, as stated by Pérez Vicente (2018: 66), "the need to substitute an outdated, antique or even mistaken language; [or] the re-read of a text under the light of new, critical interpretations [our translation][13]" are two of the main causes of retranslation.

According to Peeters & Van Poucke (2023: 10-11),

> What is at stake here, even if the metaphor of "age" used is a biological one, is not the passing of time as a linear, empirical, mechanical or biological given, nor is it a strictly translation-inherent and teleological logic that would bring all translations, except the "major" (or "great") ones, to "die". Ageing is a socio-cultural, socio-ideological construct, a "cultural representation" (Massardier-Kenney 2015: 76), as Bourdieu (1993) already argued, which, in the case of translations, is determined by all kinds of possible evolutions in the target language and culture (Collombat 2004, Van Poucke 2017), and not only the linguistic ones which are the main subject of the majority of literary reviews.

Similar traces of linguistic and cultural ageing can be found in the novels and neologisms which will be later used in the study corpus. On the one (linguistic) hand, for example, there is an evolution of the translation into Spanish of the original neologism *andys*[14] in *Do Androids Dream of Electric Sheep?* from *andrillos* in 1981 to the loan word *andys* in the newest retranslation (issued in 2015). On the other (cultural) hand, since the 1940s society has experienced a huge leap forward in technological matters, not to mention the digital revolution, which may have caused us to perceive the fictive neology found in science fiction works in a clearly different way. Items and devices which were rare, futuristic and innovative during the 40s, 50s or 60s are perceived today as quite normal, daily objects which are most times taken for granted, and their literal translation may be perceived as exaggerated or directly strange. After all, according to Peeters & Van Poucke, "it is not so much the translation itself that is ageing as our relationship with it, i.e. our reading of it" (2023: 7).

4. Corpus description and layout

The novels chosen as a basis for this research, as was stated in the introduction, share some common features:

- they were originally written in English and are considered as *classics* of dystopic science fiction;
- they concede great importance to futuristic technology and consequently to fictive neology;
- they were written before the major technological and digital breakthroughs happened; and
- they count on at least three translated texts (one translation and two retranslations) in Spanish.

Said novels are:

First, Aldous Huxley's *Brave New World*, published in 1932. Its neologisms add up to 276, of which 99 are related to scientific development and technological devices. This novel was first translated into Spanish in 1947 by Luys Santa Marina. Besides this first translation, two retranslations have been made: the first, by Ramón Hernández in 1963; the latest, by Jesús Isaías Gómez López in 2013[15].

Second, George Orwell's *Nineteen Eighty-Four*, published in 1949, presents a total of 91 neologisms, only 9 of them being related to (in this case) technological advances. This novel is, by far, the most retranslated into Spanish in this corpus: the first translation, made in 1952 by Rafael Vázquez Zamora, is followed by nine retranslations: José Laín Entralgo, 1983; Olivia de Miguel, 1998; the company Babel, 2000, 2003; Miguel Temprano García, 2013; Juan Pascual Martínez Fernández, 2020; Arturo Bray, 2021; Ariel Dilon, 2021; León Arsenal, 2021; and María José Martín Pinto, 2022. The huge quantity of retranslations published during the year 2021 is probably caused by the expiration of the novel's copyright, which was due in 2020.

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12 Original quote: "Aunque hoy en día aún se carezca de un sistema que permita estudiar el envejecimiento de las traducciones de manera empírica, sí está claro que la necesidad de modernizar el lenguaje y de adaptar los textos al presente es una de las causas de retraducción más frecuentes, si bien no es la única, como afirma Van Poucke (2017: 101)."

13 Original quote: "la necesidad de sustituir un lenguaje desfasado, anticuado o incluso errado; la realización de una relectura del texto a la luz de nuevas interpretaciones críticas."

14 Abbreviation or colloquial use which refers to humanoid androids.

15 The information regarding every translation and retranslation (translator and publication date) was found in the archives of the Spanish National Library (Biblioteca Nacional de España). The latest consultation date was April 2024.

Third, Ray Bradbury's *Fahrenheit 451*, published in 1953, contains 72 fictive neologisms, 38 of them related to science and technology. It was first translated into Spanish in 1966 by Francisco Abelenda and retranslated in 1974 by Alfredo Crespo and again in 2021 by Marcial Souto.

Last, Philip Kindred Dick's *Do Androids Dream of Electric Sheep?*, published in 1968, presents 153 general neologisms, more than a half of them (82) related to scientific and technological breakthroughs. Its first translation into Spanish dates from 1981 and was made by César Terrón. Besides, it has been retranslated twice: first by Miguel Antón in 2012, and later by Julián Díez in 2015. It is remarkable that both retranslations were published very close in time, being the latest TT only three years younger than the previous one.

The reception of these four works is superb, as is proven by the great number of reedited books and published sequels as well as the adaptation of them to various genres such as comic stripes, cinema, TV shows, and even musical and theatre plays. Many of those adaptations were made in recent years, which proves the livingness of those stories.

The first step to spot the neologisms in the original novels has been to thoroughly read and analyse all four works, noting down all suspected neologisms which name either new technological devices, futuristic scientific innovations and techniques, or the result of using science of technology (for instance, enriched or altered food or artificial materials). Afterwards, their meaning and number of appearances have been checked in various dictionaries and specialised databases. It is important to note that some words, such as *ink-pencil,* were neologisms when the novels were published, since they name objects which were still not invented or really innovative at that time but have currently found their way into our daily lives, even when their signifier remains different. When the number of appearances was very low, or when the meaning attributed to them in specialized media was different to that found in the novel (as it happens, for example, with the term *thermogene*[16] in *Brave New World*), the word was noted as neologism and added to the corpus.

The total amount of scientific and technological neologisms found in all four novels adds up to 228. Their translated pairs in Spanish have been arranged in a table and set in chronological order, starting with the oldest translation (*Brave New World* in 1947) and finishing with the latest one (*Do Androids Dream of Electric Sheep?* in 2015). The translated texts published during the current decade (from 2020 onwards) have been excluded from the study.

To ease the identification of each translated text within the table, they have been coded as follows, in a very similar way to the system used in Sánchez López 2024:

1. Short tag to identify the source text of each translation: BNW stands for *Brave New World*; 1984 for *Nineteen Eighty-Four*; Fht for *Fahrenheit 451*; and Andys for *Do Androids Dream of Electric Sheep?*
2. Order of translation
3. Year of publication. The years which belong to the XX century are marked with an apostrophe (').

The code *Andys 2/12*, for instance, indicates that the text we are looking at is a second translation (or first retranslation) of *Do Androids Dream of Electric Sheep?* published in 2012. The first corpus layout, then, looks as follows:

BNW 1/'47	1984 1/'52	BNW 2/'63	Fht 1/'66	Fht 2/'74	Andys 1/'81	1984 2/'83
1984 3/'98	1984 4/03	Andys 2/12	BNW 3/13	1984 5/13	Andys 3/15	

Table 1. Translated texts included in the corpus.

The software used to create the table and analyse the data was Microsoft Excel. The TTs which appear in the Table 1 are set in only one line, with their corresponding neologisms arranged in columns underneath.

5. Method of analysis

After arranging the Spanish neologisms in chronological order according to their translation or retranslation date, they have been classified according to the technique used in each case as is shown in Figure 1 (below). For that purpose, an *ad hoc* classification system has been designed, inspired in the works of Vinay and Darbelnet 1995, Toury 1995, Newmark 1999 and Hurtado Albir 2001, on general translation techniques; Verdegal Cerezo 2005, Delabastita 2004, Sánchez Ibáñez 2013, and Guerrero Ramos & Pérez Lagos 2020, on the translation of neologisms; and Szymýslik 2018, Szymýslik 2019 and Moreno Paz 2019 on the translation of fictive neology.

All the techniques mentioned in those references have been summarized into six different categories, thus easing the analysis of the corpus. These six categories focus specifically on the result of the translation process, following the line set by Delabastita (2004: 884): we find, then, "neologism – neologism" translations; translations which lose their neological characteristics during the rendering (neologism – no neologism); neologisms which remain untranslated or are omitted in the TT; and translations which do not fit any of these categories, labelled simply as "others".

In neologism – neologism translation, two categories or techniques are set apart: literal translation and discursive creation.

16 Which has, according to the *Oxford English Dictionary*, fewer tan 0.01 occurrences per million words in modern written English. Its meaning, according to the Dictionary, is "heat producing", whereas in the novel *thermogene* refers to a special wrap made with sow's peritoneum which is used to protect artificially made embryos.

In this study, literal translation, in the very sense expressed by Vinay & Darbelnet (1995), occurs when the creative process of a neologism in the original language is mimicked in the TL. This can be seen for instance in Orwell's *speak-write*, rendered as *hablascribe* in most TTs in Spanish, in the same way that a *skyscraper* becomes a *rascacielos*. When the neologism consists of more than one lexical unit, as it happens in K. Dick's *mood organ*, both units are directly substituted by matching units in the TL, such as *órgano de ánimo,*

Discursive creation appears where neologisms are translated by creating a new neologism in the TL but through techniques other than literal translation, as it happens in the same *speak-write* when it was translated as *parlógrafo*[17] in 2021. The name of this category is borrowed from Delisle 1993. It brings together techniques such as Vinay & Darbelnet's amplification, transposition, or modulation (1958) among others.

When the neology is lost in translation, the rendering is usually done by one of the following techniques or methods, which have been specifically created and named for the present research and are not found in any of the consulted references:

- Banalization, when neologisms lose their *neology* during the translation process and are thus rendered as ordinary, simple words. For instance, the historical *Great Economical Collapse* in *Brave New World* turns into just a *colapso económico* in the first translation into Spanish, with no sign of fictive historical connotations.
- Explanation, for neologisms which are substituted by an explanation of their meaning. For instance, we can see the *antheads* in *Do Androids Dream of Electric Sheep?* being rendered into Spanish by formulae such as *especial muy deteriorado*, which simply explain the meaning of the original.

When neologisms remain untranslated or are omitted in the TT, they are classified according to the following two techniques:

- Loan words: neologisms which keep the same form and meaning in the translated texts, as is seen in *Brave New World's* drug *soma* or in brands such as Dick's *Mountibank*.
- Omission: neologisms which have been intentionally omitted in the TT, such as the games *'chicken'* and *'knock-hub caps'* found in *Fahrenheit 451*. This does not apply to larger fragments of text which have been omitted, since it might be due to editorial or censorial reasons.

Lastly, neologisms that have been rendered in a way which do not fit any of the prior categories, with usually surprising or unexpected results, are classified as "others". An example can be seen in the translation of *mercerite*, one of the followers of the religion of Mercer in *Do Androids Dream of...?*, as *mercenario* (meaning *mercenary*) into Spanish in 1981.

The corpus layout, which displays the translated neologisms in chronological order and their classification according to the aforementioned translation categories, is shown in Figure 1:

	A	B	C	D	E	F	G	H	I	J	K
1	BNW 1/'47				1984 1/'52				BNW 2/'63		
2	Traducción	Procedimiento de formación	Técnica de traducción	Comentarios	Traducción	Procedimiento de formación	Técnica de traducción	Comentarios	Traducción	Procedimiento de formación	Técnica de traducción
3	pelota centrífuga	FSINT	Traducción literal		«¡El vapor!»	S	Traducción literal		pelota centrífuga	FSINT	Traducción literal
4	aparato de música sintética	FSINT	Traducción literal		fortalezas flotantes	FSINT	Traducción literal		máquina de música sintética	FSINT	Traducción literal

Figure 1. Sample of corpus layout.

After arranging and classifying each translated neologism, the number of usages of each technique in each translated text has been counted using the counting feature of Microsoft Excel. Since each novel counts on a different number of neologisms, the result of the counting has been turned into a percentage which allows us to compare different translated novels.

The translated texts that are unique in their decade, such as BNW 1/'47 or Fht 2/'74, are taken as sample of said decade. In decades which have seen more than one of these texts published, as it happens in the 60s with BNW 2/'63 and Fht 1/'66, or in the 2010s with Andys 2/12, BNW 3/13, 1984 5/13 and Andys 3/15, the

17 Instead of using the logical Spanish equivalent verbs *hablar* ("to speak") and *escribir* ("to write"), the translator chose to use the late-Latin root *parl-,* "to speak", and the Ancient Greek *γράφω* [*grápho*], "to write", avoiding the direct process typically found in literal translations.

average percentage of each category has been calculated. This way, a sample percentage of the most used techniques for translating fictive neology in each decade from the 40s until the 2010s can be drawn:

- 1940s: BNW 1/'47
- 1950s: 1984 1/'52
- 1960s: BNW 2/'63 + Fht 1/'66
- 1970s: Fht 2/'74
- 1980s: Andys 1/'81 + 1984 2/'83
- 1990s: 1984 3/'98
- 2000s: 1984 4/03
- 2010s: Andys 2/12 + BNW 3/13 + 1984 5/13 + Andys 3/15

The purpose of using decades as a separating criterion is to pave the way for further research on the translation and retranslation of neology in science fiction, which might add longer lapses or extra language combinations, so that the arranging of used techniques and the drawing of comparative lines is eased.

6. Results

The percentage of usage of each translation technique in each decade is shown in the following table:

	Literal translation	Discursive creation	Banalization	Explanation	Loan words	Omission	Others
1940s	69.7 %	11.11 %	3.03 %	10.1 %	1.01 %	0	4.04 %
1950s	100 %	0	0	0	0	0	0
1960s	59.24 %	7.18 %	13.55 %	9.8 %	0.5 %	0.3 %	4.65 %
1970s	47.36 %	15.78 %	18.42 %	18.42 %	0	0	0
1980s	78.65 %	4.26 %	6.09 %	6.7 %	0.6 %	0.6 %	1.82 %
1990s	55.55 %	33.33 %	11.11 %	0	0	0	0
2000s	100 %	0	0	0	0	0	0
2010s	60.14 %	16.85 %	10.05 %	10.70 %	0.86 %	0	1.11 %

Table 2. Percentages of usage of each translation technique per decade.

To ease the understanding of the evolution of how each translation technique has been used in every decade to render originally English fictive neology into Spanish, the data displayed on Table 2 is presented in the linear graphic that follows:

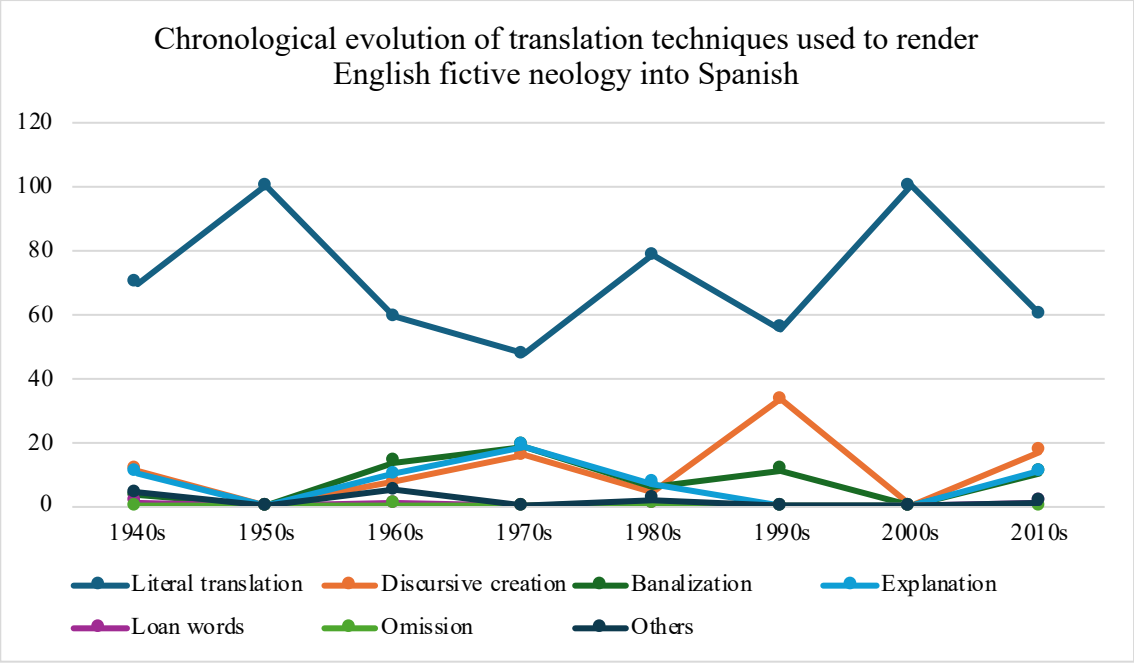

Figure 2. Chronological evolution of translation techniques used to render English fictive neology into Spanish.

As can be observed at first sight, the most used technique in all decades is by far the literal translation: it reaches its peak for the first time with an absolute 100% of usage, during the 1950s, decreases to a half during the 1970s, and experiences some ups and downs until it reaches again its 100% during the 2000s. While loan words, omissions and "other" techniques remain almost completely unused throughout the whole lapse, discursive creation and the neologism – no neologism techniques draw a mirroring line to that of literal translation. Discursive creation reaches its maximum during the 1990s while banalization and explanation rise during the 1970s, exactly when literal translation finds itself at its lowest.

7. Conclusion

The aim of this study was to verify if the increasing presence of technology and the scientific developments which shape our society nowadays have had an impact on how technological and scientific neologisms found in science fiction novels have been translated and retranslated from English into Spanish, given that the perception on the earlier translations of such words might have changed in the course of time. Therefore, after an extensive bibliographical review on retranslation and the role played by fictive neology in this literary genre, a corpus has been gathered including neologisms found in four futuristic science fiction novels written originally in English which have been translated and retranslated into Spanish and least twice. The units integrated in the corpus have been arranged in chronological order and classified according to an *ad hoc* system which focuses on the translation technique used in each case.

Results show that the most used technique in every decade was invariably the literal translation, even though its usage experiences certain fluctuations throughout the decades. Interestingly enough, during the 1940s and the 1950s, where the first translations appeared, literal translation was nearly the only technique used to render the studied neologisms into the TL, which might be due to the scarcity of most of the utilities we take for granted today such as pens (or *ink-pencils*), screens (be it in computers, TVs, or any other device), recording devices, etc.

This tendency changes between the 1950s and the 1960s, after the World Wars, when the pop culture and the first technological devices started to grow popularity in Europe, as well as in the target culture. Society began to get used to the first cars, TVs, telephones, and even new writing materials such as pens. Technological innovations and research started to gain importance and presence in the society; in fact, mobile telephones and computers were invented shortly after, in 1973 and 1981 respectively. Science fiction films as important as *Star Wars* appeared during the 70s as well, which shows the increasing presence of high technology in society and also the growing importance of science fiction.

This might have affected the way that fictive scientific breakthroughs and technology were perceived and, therefore, translated, albeit this statement would need further verification. However, it is not strange that fictive neology referring mostly this sort of devices becomes highly banalized or explained (losing thus its neological features). That fact itself might be a sign of a changing perception and, therefore, a different approach to the translation of some of these words: the increased use of banalization and explanation to render those neologisms during the 60s, 70s and 80s might not be entirely casual. The trend continues during the 1980s and 1990s, experiencing some increases and decreases, and changes completely again during the 2000s, when the so-called "digital revolution" started to grow stronger.

It would be too naïve to affirm categorically these conclusions: after all, although the quantity of analysed neologisms is not small for a study this size, no general lines can be drawn after studying only four novels in only one pair of languages. To confirm the theory exposed in this paper, it would be necessary to add novels, languages, authors and decades to the study corpus, as well as perception and reception studies, this way opening several new research lines which could help us understand how our perception to science fiction, particularly neological, innovative technological and scientific devices has evolved, and how the translation trends have responded.

References

Primary references

Bradbury, Ray (1953). *Fahrenheit 451*. HarperCollins Publishers.
Bradbury, Ray (1966). *Fahrenheit 451* (Translated by Francisco Abelenda). Minotauro 1953.
Bradbury, Ray (1974). *Fahrenheit 451* (Translated by Antonio Crespo). Plaza & Janés 1953.
Dick, Philip Kindred (1968). *Do Androids Dream of Electric Sheep?* Gollancz.
Dick, Philip Kindred (1988). *¿Sueñan los androides con ovejas eléctricas?* (Translated by César Terrón). Edhasa 1968.
Dick, Philip Kindred (2012). *Blade Runner: ¿sueñan los androides con ovejas eléctricas?* (Translated by Miguel Antón). Booket 1968.
Dick, Philip Kindred (2015). *¿Sueñan los androides con ovejas eléctricas?* (Translated by Julián Díez). Cátedra 1968.
Huxley, Aldous (1932). *Brave New World*. Longman Group Ltd.
Huxley, Aldous (1947). *Un mundo feliz* (Translated by Luys Santa Marina). José Janés 1932.
Huxley, Aldous (1963). *Un mundo feliz* (Translated by Ramón Hernández). G. P. 1932.
Huxley, Aldous (2013). *Un mundo feliz* (Translated by Jesús Isaías Gómez López). Cátedra 1932.
Orwell, George (1949). *Nineteen Eighty-Four*. Penguin Books.
Orwell, George (1952). *1984* (Translated by Ramón Vázquez Zamora). Editorial Planeta-Destino 1949.

Orwell, George. (1983). *1984* (Translated by José Laín Entralgo). Salvat 1949.
Orwell, George. (1998). *Mil novecientos ochenta y cuatro, 1984* (Translated by Olivia de Miguel). Galaxia Gutemberg – Círculo de Lectores 1949.
Orwell, George. (2003). *1984* (Translated by Babel 2000, S. A.). Jorge Mestas 1949.
Orwell, George. (2013). *1984* (Translated by Miguel Temprano García). Debolsillo 1949.

Secondary references

Aksoy, Özge & Söylemez, Ayşe Selmin (2023). Translation of Neologisms in Science Fiction: The Textual Reality or Unreality of the Target Text. *İstanbul Üniversitesi Çeviribilim Dergisi - Istanbul University Journal of Translation Studies, 18*, 107-122. https://doi.org/10.26650/iujts.2023.1255932
Alevato do Amaral, Vitor (2019). Broadening the notion of translation. *Cadernos de Traduçao*, *39*(1), 239-259. http://dx.doi.org/10.5007/2175-7968.2019v39n1p239
Alvar Ezquerra, Manuel (2007). El neologismo español actual. In L. Luque Toro (Ed.), *Léxico español actual* (pp. 11-36). Cafoscarina.
Berman, Antoine (1990). La retraduction comme espace de la traduction. *Palimpsestes, 4,* 1-7. http://palimpsestes.revues.org/596
Braga Riera, Jorge (2016). Thomas Hardy's dialect in Spanish translation: the reception of *Tess of the D'Urbervilles*. *Status Quaestionis. A Journal of European and American Studies, 11,* pp. 17-41. https://doi.org/10.13133/2239-1983/11
Cabré Castellví, María Teresa (2006). La clasificación de neologismos: una tarea compleja. *Alfa: Revista de Lingüística 50*(2), 229-250. https://periodicos.fclar.unesp.br/alfa/article/view/1421/1122
Cadera, Susanne M. (2016). Literary Retranslation in Context: A Historical, Social and Cultural Perspective. In Susanne M. Cadera & Andrew S. Walsh (Eds.), *Literary Retranslation in Context* (pp. 5-18). Peter Lang.
Cadera, Susanne M. (2022). Canonical Translation and Retranslation. The Example of Franz Kafka's Metamorphosis in Spain. In Sisanne M. Cadera & Andrew S. Walsh (Eds.), *Retranslation and Reception* (pp. 66-87). Brill.
Cadera, Susanne Margret & Walsh, Andrew Samuel (2022). Retranslation and Reception – a Theoretical Overview. In Susanne. M. Cadera & Andrew S. Walsh (Eds.) *Retranslation and Reception* (pp. 1-20). Brill.
Casado Velarde, Manuel (2015). *La innovación léxica en el español actual*. Síntesis.
Cetera, Anne (2009). Translating the Translated: The Evergreen Classics Storm the Publishing Market Again. *Brno Studies in English 35*(1), 103-114. https://hdl.handle.net/11222.digilib/105120
Chaume, Frederic (2007). La retraducción de textos audiovisuales. In Juan Jesús Zaro Vera & Francisco Ruiz Noguera (Eds.) *Retraducir: una nueva mirada. La retraducción de textos literarios y audiovisuales* (pp. 49-63). Miguel Gómez Ediciones.
Collombat, Isabelle (2004). Le XXIe siècle: l'âge de la retraduction. *Translation Studies in the New Millennium: An International Journal of Translation and Interpreting, 2*. https://hal-univ-paris3.archives-ouvertes.fr/hal-01452331f
Csicsery-Ronay Jr, Istvan. (2008). *The Seven Beauties of Science Fiction*. Weslean University Press.
Delabastita, Dirk (2004). Literary Style in Translation: Archaisms and Neologisms. In Harald Kittel (Ed.), *Übersetzung. Ein internationales Handbuch zur Übersetzungsforschung*. 1. Teilband (pp. 883-888). Walter de Gruyter GmbH.
Delisle, Jean (1993). *La traduction raisonnée: Manuel d'initiation à la traduction professionnelle*. Les Presses de l'Université d'Ottawa.
Desmidt, Isabelle (2009). (Re)translation Revisited. *Meta. Journal des traducteurs / Translators' Journal 54*(4), 669-683. https://doi.org/10.7202/038898ar
Evans, Jonathan (2014). Translation as a Critical Practice: Using Retranslation when Teaching Translation. *Quaderns. Revista de Traducció 21*, 199-209. https://ddd.uab.cat/record/1188
Fontcuberta, Joan (2007). Retraducciones. El caso Zweig. In Juan Jesús Zaro Vera & Francisco Ruiz Noguera (Eds.) *Retraducir: una nueva mirada. La retraducción de textos literarios y audiovisuales* (pp. 225-232). Miguel Gómez Ediciones.
Freixa, Judit (2022). El proceso neológico. In E. Bernal, J. Freixa & S. Torner (Eds.), *La neología del español: Del uso al diccionario* (pp. 51-72). Iberoamericana Vervuert.
Giraldo Ortiz, John Jairo (2016). La neología: indicador de la vitalidad de una lengua y su cultura. *Revista Interamericana de Bibliotecología, 39*(1), 39-46. https://doi.org/10.17533/udea.rib.v39n1a06
Guerrero Ramos, Gloria (1995). *Neologismos en el español actual*. Cuadernos de Lengua Española.
Guerrero Ramos, Gloria & Pérez Lagos, Manuel F. (2020). Terminología, Neología y Traducción. ¿Es necesaria la traducción de neologismos? In Gloria Guerrero Ramos & Manuel Fernando Pérez Lagos (Eds.) *Terminología, Neología y Traducción* (pp. 141-154). Comares.
Guilbert, Louis (1975). *La creativité lexicale*. Librairie Larousse.
Gürçağlar, Şehnaz Tahir (2009). Retranslation. In Mona Baker & Gabriela Saldanha (Eds.) *Routledge Encyclopedia of Translation Studies* (second edition, pp. 233-236). Routledge.
Hurtado Albir, Ampar (2001). *Traducción y Traductología.* Cátedra.
Koskinen, Kaisa & Paloposki, Outi (2003). Retranslations in the Age of Digital Reproduction. *Cadernos de Tradução 1*(11), 19-38. https://dialnet.unirioja.es/servlet/articulo?codigo=4925837

Martínez Fernández, Juan Pascual (2020). La traducción de neologismos dentro de literatura de ciencia ficción: algunos ejemplos de la obra de Philip K. Dick. In Giovanni Caprara & Victoria García Alarcón (Eds.), *Estudios interdisciplinares en traducción literaria y literatura comparada* (pp. 117-128). Comares.

Moreno Paz, María del Carmen (2019). *La traducción de los particulares ficcionales en la literatura fantástica: los* irrealia *en la obra de J. R. R. Tolkien y su traducción en las versiones en francés y en español* [Doctoral thesis, Universidad de Córdoba]. https://helvia.uco.es/xmlui/handle/10396/19086?locale-attribute=en

Newmark, Peter (1999). *Manual de traducción* (Translated by V. Moya). Cátedra.

Peeters, Kris & Van Poucke, Piet (2023). Retranslation, thirty-odd years after Berman. *Paralelles, 35*(1), 3-25.

Pérez Vicente, Nuria (2018). ¿Las traducciones envejecen? *Manolito Gafotas* y sus dos versiones italianas. *Estudios de Traducción, 8*, 65-79. https://dx.doi.org/10.5209/ESTR.60746

Roberts, Adam (2006). *Science fiction*. Routledge.

Sánchez Ibáñez, Miguel (2013). *Neología y traducción especializada: claves para calibrar la dependencia terminológica español-inglés en el ámbito de la enfermedad del Alzheimer.* [Doctoral thesis, Universidad de Salamanca]. https://gredos.usal.es/handle/10366/123060

Sánchez López, Ana Cristina (2024). *Neologismos y retraducción literaria (inglés-español): La novela de ficción entre 1930 y 1970*. [Doctoral thesis, Universidad Complutense de Madrid]. https://www.researchgate.net/publication/382002298_Neologismos_y_retraduccion_literaria_ingles-espanol_La_novela_de_ficcion_entre_1930_y_1970

Susam-Sarajeva, Şebnem (2003). Multiple-entry Visa to Travelling Theory. Retranslation of Literary and Cultural Theories. *Target 15* (1), 1–36. https://doi.org/10.1075/target.15.1.02sus

Szymyślik, Robert (2018). Estudio de la traducción de neologismos relacionados con la medicina en la literatura de ciencia ficción. *Panace@: Revista de Medicina, Lenguaje y Traducción XIX*(47), 89-95. https://www.tremedica.org/wp-content/uploads/n47-tribuna-3.pdf

Szymyślik, Robert (2019). *Estudio de los problemas de traducción vinculados a mundos ficticios:* Fahrenheit 451 *de Ray Bradbury* [Doctoral thesis, Universidad Pablo de Olavide]. https://rio.upo.es/xmlui/handle/10433/7037

Toury, Gideon (1995). *Descriptive Translation Studies and Beyond*. John Benjamins.

Van Poucke, Piet (2017). Aging as a motive for literary retranslation. A survey of case studies in retranslation. *Translation and Interpreting Studies, 17*(2), 91-115. https://doi.org/10.1075/tis.12.1.

Vega Moreno, Érika (2022). *Caracterización léxica de los procesos de creación de palabras*. Iberoamericana Vervuert.

Venuti, Laurence (2004). Retranslations: The Creation of Value. *Bucknell Review, 47*(1), 25-38.

Verdegal Cerezo, Joan Manuel (2003). La traducción de neologismos. *Puntoycoma 83,* 7-20. https://ec.europa.eu/translation/spanish/magazine/documents/pyc_083_es.pdf

Verdegal Cerezo, Joan Manuel (2005). El permanente conflicto del neotraductor: antecedentes, riesgos y limitaciones. *Hermēneus. Revista de Traducción e Interpretación, 7*, 193-219. https://recyt.fecyt.es/index.php/HS/article/view/6182

Vinay, Jean-Paul & Darbenlet, Jean (1995). *Comparative stylistics of French and English: A methodology for translation.* John Benjamins.

Zaro Vera, Juan Jesús (2007). En torno al concepto de retraducción. In Juan Jesús Zaro Vera & Francisco Ruiz Noguera (Eds.) *Retraducir: una nueva mirada. La retraducción de textos literarios y audiovisuales* (pp. 21-34). Miguel Gómez Ediciones.