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FACULTAD DE FILOLOGÍA



TESIS DOCTORAL

El papel de la terminología en la traducción de tres novelas de ciencia ficción y sus implicaciones en el estudio de los *irrealia*

The Role Of Terminology In The Translation Of Three Science Fiction Novels
And Its Implications In The
Study Of *Irrealia*

MEMORIA PARA OPTAR AL GRADO DE DOCTOR

PRESENTADA POR

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STUDY OF *IRREALIA*

Memoria presentada para optar al Grado de Doctor

Presentada por

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1. Foreword and abstract

1.1. Main goals of the thesis

This foreword revolves around the nature of science-fiction works and the definition of to what extent made-up concepts are translatable to other languages. When translating such a piece of literature, one of the main challenges a translator is faced with is discerning the thin boundary between reality and fiction: where does real science end, and where does fantasy begin? Being able to tell reality and fiction apart is paramount to achieve our goal, since *realia* (concepts that have equivalent referents in the physical world) and *irrealia* (made-up ideas) have to be tackled by using wildly different translation strategies: real terms must be translated in accordance with the real-world referents that they represent, whereas *irrealia* allow us to let our imagination run riot and use creative translation techniques. A number of noteworthy authors will also be thoroughly mentioned as regards different approaches to professional translation, featuring forefront scholars such as Eugene Nida, Itamar Even-Zohar, Lubomír Doležel or Anton Popovič, among others.

Besides this highly demanding challenge, this work also intends to showcase all the additional hurdles that a text of this nature poses to any given translator: the selected works, for instance, feature semantical fields that are tangentially related to the realm of botany, even if many recurring keywords may not be explicitly ascribed to botanical science: for instance, medical terminology often features a wide array of plant-related items which are used to manufacture substances and medicines, and sea plants may be mentioned in a maritime environment. All of these have to be carefully translated in order to faithfully convey the meaning of every single word accurately and preserve the spirit of the original text.

As closure, I wish to thank my tutors and university for offering me the chance to look into this thrilling topic over the last four years, during which I have developed my competences in many scholarly fields while writing this dissertation as a compendium of all the knowledge that I have garnered throughout this period.

ABSTRACT

El papel de la terminología en la traducción de tres novelas de ciencia ficción y sus implicaciones en el estudio de los *irrealia*

La presente tesis se configura con la hipótesis principal de corroborar la traductibilidad de los *irrealia* (términos ficticios sin un significante en el mundo real) en el ámbito de la literatura de ciencia ficción, con un enfoque especial en el uso de la terminología botánica, ignorada a menudo pero con un papel fundamental en muchas obras representativas de dicho género, a través de un corpus compuesto por tres novelas en inglés seleccionadas para cubrir un espectro literario, social y diacrónico lo más amplio posible.

Dichas obras son, de la más antigua a la más reciente, las siguientes:

- *El día de los Trífidos* (título original *The Day of the Triffids*, 1951), del escritor británico John Wyndham, escogida por ser una de las obras pioneras del género, así como por su gran repercusión en el mundo de la cultura popular, ya que cuenta con numerosas adaptaciones audiovisuales.
- *El crisol del tiempo* (título original *The Crucible of Time*, 1983), de John Brunner, seleccionada por su enfoque de “saga en miniatura”, con una trama que describe una civilización extraterrestre a lo largo de varios siglos y múltiples generaciones, y la gran importancia que los *irrealia* desempeñan en su desarrollo.
- *Seeders* (2014), de A. J. Colucci, escogida por su enfoque moderno del género del terror y la ciencia ficción, que recoge problemáticas como el cambio climático y la violencia machista, y por carecer, hasta la fecha, de traducción al español, lo que aporta una perspectiva distinta cargada de retos desde una perspectiva traductológica.

El trabajo se basa en un estudio cuantitativo y empírico desde el punto de vista de la traducción: tomando como referencia una extensa selección de términos y extractos representativos de las tres novelas, clasificados por campo semántico y relacionados de forma directa o indirecta con el campo de la botánica (es decir, además de la propia terminología botánica se incluyen vocablos o fragmentos de naturaleza médica, científica o ficticia relacionados con dicho ámbito), se analiza de forma comparativa cómo cada elemento se ha transferido al español en

una traducción publicada y representativa de dicha obra, y después se provee una traducción propia en la disertación. Posteriormente, también se comparan las traducciones publicadas y las sugeridas, anotando las similitudes y diferencias entre ambas, y extrayendo las conclusiones oportunas acerca de las técnicas traductológicas que resultan más oportunas en cada caso concreto.

La tesis cuenta, asimismo, con un marco teórico previo que describe el estado actual del panorama literario de la ciencia ficción y su influencia en la cultura popular, de la traducción y las técnicas y enfoques propuestos por diversos expertos, de los problemas particulares que entraña la traducción de tal nicho de literatura, y de la botánica como campo científico y lingüístico que desempeña un papel relevante en las obras seleccionadas para el desarrollo de esta tesis.

Finalmente, los resultados extraídos se representan de forma gráfica, y se extraen las conclusiones: en este caso, se corrobora la hipótesis inicial, que proponía que la terminología específica (con un enfoque especial en la botánica) en la literatura de ciencia ficción es traducible del inglés al español sin perder matices de significado, aseverando acerca de las técnicas de traducción que resultan más eficientes para la traducción de términos botánicos (o relacionados con dicho campo) en el campo de las cosmogonías ficticias de la literatura de ciencia ficción. Se exponen posibles vías futuras de investigación, seguidas de la bibliografía oportuna y los anexos (que incluyen tablas comparativas de traducción de los términos escogidos de las tres obras seleccionadas).

Palabras clave: Traducción, botánica, ciencia ficción, *irrealia*, análisis comparativo.

The role of terminology in the translation of three science fiction novels and its implications
in the study of *irrealia*

This dissertation is presented with the main hypothesis of unraveling the translatability of *irrealia* (fictional linguistic items without a reference in the real world) in the scope of science-fiction literature, laying a special focus on the use of botanical terminology, which is often overlooked but nevertheless plays a fundamental role in many relevant works pertaining to said

genre, by means of a corpus comprising three novels originally written in English, all of which have been selected with the aim of covering a literary, social and diachronic gamut as wide as possible.

The chosen works are, ranging from the oldest to the most recent one, as follows:

- *The Day of the Triffids* (1951), by British author John Wyndham. This piece of literature was chosen owing to the fact that it pioneered the science-fiction genre, as well as due to its far-reaching implications in pop culture, since it has been repeatedly adapted into audiovisual formats (including movies, graphic novels and TV shows) throughout several decades.
- *The Crucible of Time*, (1983), by John Brunner, selected because of its unique perspective, conceived as a “miniature saga”, featuring a plot describing an extraterrestrial civilization spanning several centuries and countless generations, not to mention the fact that *irrealia* play a vital role in its unfolding.
- Finally, *Seeders* (2014), by A. J. Colucci, which has been chosen because of its modern take on the horror and science-fiction genre, taking stock of issues such as climate change or gender violence, and also because of the fact that, to this day, it has never been translated into Spanish, which adds a different and valuable viewpoint to its linguistic study, posing new challenges.

This dissertation is grounded on a quantitative and empirical study from the perspective of translation: an extensive selection of representative items and excerpts from the three aforementioned novels has been selected for reference purposes, all of which have been classified by semantic field, whether they relate directly or indirectly to the field of botany (that is, besides botanical terminology itself, other items or fragments pertaining to the fields of medicine, science or fictional cosmogonies are also included), and they are later analyzed through a comparative model, ascertaining how each element has been translated into Spanish in a given published translation, chosen for its professionalism and representativity, and then an alternative translation is provided in the dissertation. Following this, the published and proposed translations are duly compared, noting all similarities and differences between them, and drawing all due conclusions as to which translation techniques are most suitable in each given case.

This PhD essay also features a prior theoretical framework describing the current state of science-fiction literature and its undeniable influence in pop culture, as well as the broader field of translation, mentioning the techniques and models propounded by a number of scholars, noting the particular problems that translation poses within said literary genre, and also delving into botany as a scientific and linguistic field of study that plays a pivotal role in the selected works for the development of this dissertation.

Finally, the obtained results are portrayed by means of pie charts, and the final conclusions are drawn, as *irrealia* are deemed translatable within the scope of this work, and the most efficient translation techniques are laid out in each case, considering the nature of botanical terminology (and other fields linked with it) in the wider frame of fictional cosmogonies in science-fiction literature. Future lines of research are introduced, followed by bibliography and appendixes (featuring tables which compare how the selected items from the three chosen novels have been convened).

Keywords: Translation, botany, science fiction, irrealia, comparative analysis.

1.2. Overall structure and methodology

The main hypothesis to be proved (or refuted) is that *irrealia*, or science-fiction concepts, can be successfully translated without tarnishing the original content if appropriate translation techniques are applied, placing a focus on the analysis and translation of botanical terminology in several key works pertaining to different eras and backgrounds, in a bid to prove that such terminological field plays a unique role in the development of science-fiction literature throughout its modern history, and that convening such lexical items into Spanish may provide a valuable glimpse of the cultural and societal differences faced by both the source and the target readership. This also calls for a very precise definition of the science fiction genre, as well as an extensive knowledge of some subjects discussed in the text, as well as their terminology. Anyone working on such a task should also be acquainted with a series of translation techniques that must be put to use in different contexts.

As this PhD thesis requires an extensive knowledge of the science fiction genre and its implications, a comprehensive series of essays and academic articles tackling the definition of this kind of literature has been thoroughly examined, as well as its main defining characteristics and the most useful translation techniques that may be applied when handling this kind of texts. Since the featured works in this thesis rely heavily on botanical and biological terminology, the current research encompasses a wide variety of scientific essays regarding this field of expertise with the goal of acquiring at least a basic understanding of modern botany, translation sciences and literary context (in the specific frame of science-fiction) which would enable the researcher to properly translate the given terminology.

All of this will eventually lead to a series of conclusions that will hopefully shed light on how science-fiction *irrealia* can be accurately translated from one language into another (from English into Spanish, in this case) while respecting the spirit and scientific concepts of the original work. In the end, new lines of research will be proposed in accordance with the conducted work and its due results, concerning both literary studies and translation techniques applicable to the mentioned terminological niche which will be tackled in this dissertation, posing all questions that may arise after wrapping up this PhD essay. Additionally, a number of proposals will be made as to how the present research may be applied in didactic and educational environments. All the bibliographical references, translations (either own proposals or already published versions) and books researched for the completion of this PhD thesis will be provided as an appendix at the end of the paper.

These steps are organized and will be carried out in accordance with the principles of quantitative research. According to diverse authors (Albert, 2007; Latorre, Rincón and Arnal, 2003; Mateo and Vidal, 2000, all of whom are compiled by Rodríguez Gómez and Valldeoriola Roquet, 2014), this sort of research is characterized by its positivist, tangible and objective perspective, lays its focus on observable phenomena, attempts to generalize results from representative samples and runs on empirical evidence.

Quantitative studies are also recognizable for the low degree of control that the researcher exerts on the object of study, typically assuming a passive attitude. These studies also take place in real, natural environments (rather than artificial or engineered situations). Therefore, they would be opposed to qualitative methods, which are based on a participative and collaborative approach to case studies (Rodríguez Gómez and Valldeoriola Roquet, 2014).

In turn, these methodologies can be broken down into three diverging sub-categories: experimental, quasi-experimental and ex-post-facto; according to the guidelines laid down by Rodríguez Gómez and Valdeoriola Roquet (2014), this dissertation would fall into the latter. As stated by the aforementioned authors, ex-post-facto (also known as non-experimental) methodologies are marked by the fact that the researcher has no power over the independent variables composing its corpus. This approach, in turn, has four different sub-varieties with different nuances (Rodríguez Gómez and Valdeoriola Roquet, 2014):

- Descriptive studies
- Developmental studies
- Comparative-causal studies
- Correlational studies

Then again, this dissertation would fit in the third sub-type, comprising comparative-causal studies, since it will draw comparisons between a series of excerpts in their original English form with their counterparts in Spanish, thus analyzing how the translation has been conducted in each case. Now, let us point out that the Latin denomination ex-post-facto literally means *what was done before* (González Sanmamed, 2004), hence showing that this methodology is primordially based on analyzing prior knowledge or research that has already been carried out in the past, and then asserting how such work in the past affects and conditions the current state of affairs.

Regarding the methodology to be followed, the first step to be taken was to define the corpus to be tackled throughout this PhD dissertation, hence choosing three different novels covering a wide array of diachronic, stylistic and narrative variations within the science-fiction genre, with a special focus on the use of botanical terminology. Afterwards, it will be necessary to compile a thorough list of all remarkable terms and expressions (either regarding botanical science, medicine and science-fiction, or other fields of expertise linked directly or indirectly with the wider realm of botany and its implications) that can be found in the three selected novels that comprise the scope of this dissertation: *The Day of the Triffids*, *The Crucible of Time*

and *Seeders*. Having solved that, a list featuring the proposed translations for all of these terms was provided, and then compare those translated expressions with published equivalents in Spanish.

It is also of paramount importance to underline and further justify the selection of the three novels comprising the main corpus in this dissertation: all three of them bear all the hallmarks of a science-fiction story (thus intertwining real science with entirely fictional concepts, extrapolating their implications in a hypothetical context which poses a significant challenge to overcome), all three of them prominently feature botanical terminology as a key player in their respective plots (be it as a force to be reckoned with, a threat or an integral part of the characters in the story) and, however, each one of them was devised in a unique context, which thus provides variation to assess how the science-fiction genre and the role of botanical terminology within it may be shaped depending on the author, the time when it was written and the surrounding (cultural and societal background).

Therefore, *The Day of The Triffids*, conceived during the early days of science-fiction literature, presents the readers with a harrowing plant enemy to be averted or fought, in an action-packed, post-apocalyptic story that also reflects on the philosophical issue of building a new human society from scratch. *The Crucible of Time*, however, is presented as a saga that depicts a plant-like, sentient species as it develops through several centuries in an alien, often hostile planet. Finally, *Seeders*, being the most modern novel in the corpus, portrays a somber story in which nature itself, seeing humankind as an existential threat, finds a way to fight back; the novel is thus devised as an environmental plea with a heavy scientific and botanical component, while also tackling other issues such as mental trauma or gender violence.

Additionally, it must also be stressed that the aforementioned novels have been analyzed by means of a quantitative approach, hence collecting representative terminological samples for each novel and lexical category (botanical or other field linked with it, such as medical or novel-specific items), comparing them with their respective counterparts in published Spanish translations and also providing alternative proposals for each given sample. Different translation techniques and approaches will be used and specified to duly classify the assorted examples and discern which translational model is best suited in each case. The results will also be quantified and portrayed visually as charts.

To bring this chapter to a close, it can be concluded that the main aim of this dissertation is to delve into the linguistic, cultural and societal implications that the translation of science-fiction literature bears in a number of diverging backgrounds, with a particular focus laid on the fundamental role that botanical terminology plays in certain key works in this literary niche, and how such role may be accurately portrayed in Spanish as a target language without distorting the meaning and nuances envisaged by the original authors of the selected pieces. This will be carried out by means of a contrastive analysis of a compilation of excerpts from said novels with their respective translations, both published and proposed in this very paper, once the prior theoretical framework has been set in order to provide an adequate background for the chosen corpora. Precisely, the next chapter will revolve around said context, offering a deeper insight into the novels that will be later analyzed.

2. Prior theoretical framework

2.1. Introduction

When tackling these works, efforts will be made to follow a chronological order, starting with the most recent story (*Seeders*, published in 2014), then turning to *The Crucible of Time* (written in 1983), to finish this dissertation commenting on *The Day of the Triffids* (being by far the oldest work in the corpus, dating back to 1951). Providing this glimpse from the newest work to the oldest, it will be easier to delve into the very origins of the science-fiction genre, analysing how it came into existence, and then evolved into the thriving literary niche that it is today. This should enable the researcher to obtain a comprehensive perspective, in hindsight, on how the science fiction genre has evolved since the mid-20th century to the present day, besides the particular literary features pertaining to each author. The chronological study of these three selected works can also serve the historical and sociological purpose of analyzing the main taboos, societal rules and concerns of each era, some of which are clearly interwoven with the underscored issue of botanical terminology, whereas others are only tangentially linked with it, but are still of interest from a literary and linguistic viewpoint: as an example, in *The Day of*

the Triffids, being the earliest work out of the three in this corpus, we can notice that female characters are approached in a remarkably sexist and patronizing way (the women in the story are depicted as uncultured, naïve, dependent on men to *rescue* them and tell them what to do, and absurdly worried about their physical appearance in the midst of the collapse of human civilization). This greatly contrasts with *Seeders*, the newest novel, which presents us with a female heroine who is emotionally damaged due to her toxic relationship with her abusive husband and, later on, also with the deranged doctor; however, she eventually grows into a strong character who plucks up the necessary courage to stand up to the male antagonists in the story. As for *The Crucible of Time*, even though it depicts characters portrayed as male and female, owing to the fact that the plot takes place in an alien planet, inhabited by an eerie alien species, such dichotomy is not really tackled in a significant way. We can also see other contemporary concerns both in *Seeders* and also in *The Crucible of Time*, such as the issue of climate change or the advancement of science, both of which play a decisive role in these novels.

2.2. The *Skopos* theory

When setting the theoretical foundations for a dissertation in the present field of expertise, that is, a work thoroughly based on the empirical analysis of translation and its resounding implications in a very particular niche of study, it seems overriding to comment on the main theories pertaining to the such realm: the main one is arguably the *skopos* model, which developed throughout the later decades of the 20th century, giving rise to a series of guidelines and approaches that are still widely used as a benchmark for translators throughout the world to this day.

First of all, the *skopos* theory can be broadly defined as a bundle of theoretical and translational approaches devised with the aim of convening the underlying function or purpose of the source text into the target language, rather than translating it literally on a more superficial, merely linguistic level. This will be discussed in further detail later in this dissertation, in the wider

context of its prior theoretical framework, along with other potential strategies in the field of translation and applied linguistics.

The term *skopos* literally means *purpose* in Greek, and it was propounded as a school of thought by a number of scholars during the late 60s and, more explicitly, as of the early 70s; such forefront founder chiefly include Hans Josef Vermeer (1930-2010), Katharina Reiss (1923-2018) and Christiane Nord (1943-), among others, as ascertained by Jettmarová (2005):

While the communicative function was incorporated in Nida, Catford, the Skopos and text-type theory suggested by Reiss and Vermeer, Newmark or by Hatim and Mason, cultural functions of translation were gradually discovered in the late 60s – early 70s by the Polysystem School, and during the 70s – 80s by the Manipulation School. The fourth category of functions – that of the dynamics of cultures-in-contact, had to wait for its discovery until the post-modern 90s, reviving the old Romantic dichotomy of the self and the other, however in rather a static way, and combined with ideologism, of quite a radical kind, at times. (p. 17)

Thus, as it can be seen, the *skopos* theory later interweaves with other translational approaches, such as the aforementioned Polysystem and Manipulation School, which also share some of its main features (namely the will to modify the source text on a superficial level in order to preserve its deeper meaning).

Moreover, this theory argues that proper translation of the content and information of the source text is not feasible without properly convening said text's form into the rules and conventions enforced in the target culture. Or, in other words “fluency is impossible to achieve with close or “verbal” translation, which inhibits the effect of transparency, making the translator's language seem foreign”(Venuti, 1995, p.58)

This means that transparency is only achievable if both the content and the form of the source text are tackled by the translator approaching it, since a foreignizing-reading translation will strike the target readership as opaque or outlandish.

Therefore, it can be reckoned so far that the *skopos* theory is based on the foundation that the translator is expected to abide by both the original message and the target one, and the translated

text serves a specific purpose addressed to a specific audience (Botirova, 2021). This introduces the ever-present concept of *adequacy*, which allows for non-literal approaches towards translation as long as such manipulations are justified on the grounds of delivering an appropriate, accurate meaning to the target public.

Chesterman also raises a point regarding the *skopos* school of thought, stressing the concept of *equivalence* and noting that, even if the *skopos* or purpose of the source text is accurately conveyed into the target text, the latter may still be assessed as inadequate, “as far as lexical, syntactic, or stylistic decisions on the micro level are concerned” (Chesterman, 1994, p.153).

As it can be seen so far, the *skopos* approach often entails a significant change to the original text so that it fulfills its intended purpose in the source audience. This school of thought is also deeply interwoven with other kindred-spirited theories, such as the aforementioned *polysystem school*, which heralds that translation plays a main role in shaping the literary and historical corpus of a culture or country, and translators are therefore legitimated to use whatever strategies or techniques are needed to convey the original text into the target cultural environment (Álvarez & Vidal, 1996):

Central to the polysystems approach were certain key assumptions about translation, most crucial of which was the recognition of the role played by translation in shaping the literary polysystem. Far from being considered a marginal activity, translation was perceived as having played a fundamental part in literary and cultural history. Translation could be documented as having been at various moments subversive, innovative or radical. (p. 13)

As a final note, it can be concluded, as a brief introduction to the theoretical principles of the *skopos* theory, that it sets the foundations for a modern approach in the world of translation, laying the focus on the underlying meaning and nuances of the original work, rather than its strictly linguistic aspects, such as grammar, syntax or vocabulary.

This allows, therefore, for a high degree of liberty to tweak or adjust the source text so that it complies with the cultural or fluency norms of the target readership, thus observing the concept of *adequacy*, as commented before in this section. However, such changes should always be justified, and are carried out bearing in mind with the ultimate goal of conveying the core meaning of the source work into a different set of societal, linguistic and cultural values.

It can also be seen that the *skopos* theory does not exist in a void since, after it was initially propounded, it intertwined and shares values with other kindred models and approaches in the field of translation studies and linguistics. Overall, it can be wagered that this theory plays a vital role in the field of present-day translation, and its main postulates and guidelines will be applied throughout the practical chapter in this dissertation.

2.3. Translating literature

Considering the nature of this dissertation and the works comprising its empirical corpus, it is overdue to provide an introductory glimpse into the translation of literature, how it functions and its current state, before delving into the more specific issue of translating science-fiction.

Let us begin by asserting that, at least until fairly recent times, the translational activity was looked down on as a rather mechanical task that was not deserving of much recognition and could be carried out by virtually anyone with basic training and proper language knowledge (van den Broeck, 1994). This patronizing perception extended to all kinds of translation, hence including literature of all genres, and thus literary translators were also dismissed as mere craftspeople who only devoted their efforts towards replacing strings of words in a mechanical, almost automatic endeavor (as advocated by von Flotow, 2011, among others).

This negative view seems to have shifted dramatically over the last few decades (Hermans, 1996), chiefly owing to the rise and worldwide spread of new technologies which allow countless readers and users from all walks of life to easily access an endless gamut of texts and pieces of literature in virtually all existing languages, which has given rise to a renewed interest in the creation of *pop* literary genres (including science-fiction and fantasy literature, alongside their counterparts in other means of artistic expression, such as cinema or videogames) and its far-reaching implications, therefore encompassing its translation from a source into one or more target languages (Martín Párraga, 2013). This brings us to the topic of how literary translation is understood and approached. A number of scholars (such as van den Broeck, 1994) lament that the science of literary-related translation has been pitifully neglected throughout the centuries, just like translation and translators themselves. Furthermore, he also decries that most

of the scarce essays on the matter are often naïve and simplistic, failing to address the underlying challenges present in the translation of literature in full detail. For instance, some studies (Panou, 2013) seem to overly focus on the distinction between the *product-oriented* approach towards translations and the *process-oriented* study of the translational practice, which are indeed real, but their authors seem oblivious to the fact that one is the direct consequence of the other. In asserting this, van den Broeck enlists newer generations of translators to innovate and come up with an effective model to address translational challenges in the framework of literature.

Thus, an effort will be made in this chapter to show that there is a novel perspective into literary translational models. But firstly, the aforementioned author (van den Broeck, 1994) looks back in a quest to identify the earliest translational procedures ever devised. As he underlines, the oldest formalized approaches harken back to the 40s and 50s, when the concept of *strings of words* (also coined as *lexical items*) was introduced. That is, this brought up the idea that a given text should not be translated word by word, but rather looking at a whole sentence or semantic unit and taking grammatical or contextual aspects into consideration. On a more recent note, Wright (2016) asserts how literary translation projects may be kicked off in different ways, depending on the context and the available resources: for instance, a publishing house may commission a number of translators to carry out such a project, or journal editors may get in touch with an array of professionals to put together a compilation of stories. He goes on to define literary translation as a mediated work that relies on the nature of the target culture and audience.

Most importantly, these newly arising models partitioned the translational process into three distinct, clearly structured steps: a first stage consisting of a prior analysis, followed by the so-called *kernel-level transfer* (*kernel* being defined as core meaning by van den Broeck, 1994) and, finally, a restructuring phase in order to align the resulting text with the linguistic rules and conventions of the target readership.

Van den Broeck asserts at last that the translation and comprehension of literary texts happens in two simultaneous planes: a *serial* and a *structural* one. The former entails a sentence-based perspective in which a string of lexical units is laid out in order for the reader to gradually assimilate as the text progresses, whereas the latter refers to an abstract picture defined by the author as *a mental conception*, that is, the overall impression of the work that sinks in when its

reading is finally complete, and the takeaway message intended by the original author is understood as a whole by the reader. Both sides or planes are complementary throughout the text, and therefore should be considered altogether by the translator when conveying such information from one language into another.

Other authors also provide a helpful insight into the study of literary translation, such as Loponen (2019, p.130), who claims that said modality “is rarely about translating single words, sentences, or paragraphs, but rather about translating the meanings conveyed by the source text”. He thus falls in line within the principles of the *skopos* theory, advocated by scholars such as Hans Josef Vermeer or Katharina Reiss, underlining the importance of the intention or goal envisaged by the original author, rather than laying the focus on smaller lexical units. He goes on to ascertain that it is up to the literary translator to choose which linguistic tools and strategies are fit to tackle each particular challenge that a literary text may pose from a translational viewpoint.

Moving on to more recent takes on how to tackle literary translation, it can be noted that most translators have shifted towards the conveyance of purpose and goal, rather than word-by-word, as it was previously mentioned, and the issue of this translational shift and how it can be studied by means of different models and perspectives will be further discussed in the theoretical framework of this dissertation. As ascertained by Botirova (2021), novel translation models have adopted a *situational-denotative* and *transformational-semantic* approach. This entails that the translator approaching a given literary text has to account for the text’s wider context, considering the work’s extralingual and intertextual implications, and apply all due changes on a linguistic and semantic level in order to convene the core meaning intended by the original author.

Quoting Komissarov (1990), five different levels of equivalence or adequacy can be established depending on how the source and target texts correlate, thus unfolding as follows:

- **Goal of communication**, intended to convey the purpose, goal or emotions that were originally expressed by the source author.

- **Description of the situation**, serving a chiefly narrative and descriptive purpose.
- **Utterance**, which refers to the syntactic structures present in the source text and how they can be portrayed on a translation.
- **Message**, referring to the core information and content carried by the text and how it can be faithfully conveyed.
- **Language signs**, which is finally concerned with the semantic aspects of both the source and the target texts.

Such claims and points indicate that literary translation is fundamentally different from other disciplines, given that it has to consider stylistic and artistic aspects that are not relevant or even present in other text typologies. Still quoting Botirova (2021), literary translation is defined as a *dynamic* and *mobile* endeavor, which means that a piece of literature can have several diverging but equally valid translations, depending on how the author's artistic impression is conveyed into the target language. Botirova regards the literary text as a reflection of reality that is built from a unique perspective, shaped by the author's both personal and cultural background. Therefore, such a text should be translated with the aim of preserving such perception of reality, rather than merely focusing on syntactic or lexical issues. It is overriding to convey this artistic and aesthetic impression of the world so that the target reader can fully appreciate it, and this will inevitably call for a number of linguistic shifts and adjustments, given how every language uses different tools and resources to express reality.

Other authors have also signaled translation as an inherently dynamic and transformational endeavor. For instance, Levy (1963), and later Popovič (1975) established a translatability scale for texts on the basis of dynamic socio-semiotic categories. That is, they acknowledged the idea that the activity of translating involves not only merely linguistic and grammar descriptors, but also depends on the wider, shifting societal and connotative background in which it takes place; this is, in turn, deeply interwoven with the creation of literature in diverse contexts and periods.

Both authors also defined the sheer concept of translatability as the *salience* of with foreign elements in form or content, as perceived by the receiver.

Still in the same vein, Botirova (2021) points towards what she coins as *translation transformations* as the most appropriate model to tackle literary translation and its challenges. The author defines such approach as a way of *replacing regular correspondences with contextual correspondences*. That is, translation transformations lay the focus on the wider context or socio-cultural background in which the text to be translated is produced, rather than just addressing said work from a lexical viewpoint. As the author herself states, the gist here is to increase equivalence, to elicit a target text that is in compliance with the norms and conventions of its potential audience. This includes overcoming translational hurdles such as puns, speech figures or culturally charged items in order to convene a semantic and artistic impression as close as possible to the one devised by the source author.

Other authors, such as Lojonen (2006) also pinpoint the specific translational challenges found in literary texts, laying the focus on the pressing issue of culturally-charged metaphors, and how such items can be domesticated and conveyed into the target language. He states that not all culture-specific references can be maintained, as this may prevent target readers from understanding key nuances that would feel alien to them. In a similar vein, Lotman (1990) ascertains that any given text is inherently interwoven with the culture it is created in and, in turn, a culture is made of all the texts and literary creations that compose it. Therefore, translation is also a cultural activity, and the translator must decide which aspects and hues are to be adapted, and which ones can be left untouched, so that the target readership can fully understand the original meaning of the translated work.

This also leads up to the notion that there are necessarily untranslatable items in the original text which simply cannot be conveyed into its translated counterpart, and therefore will have to be either adapted or omitted in order to preserve the viability of the target text. Hence, which terms can be classified as, indeed, untranslatable? It can be reckoned that it is the lexical items which are unequivocally bound to a particular culture or society that are inherently untranslatable. This category would encompass dialects, culturally-charged jargon and a number of figures of speech relying on phonetics or rhymes, all of which cannot be possibly transferred into the target text without a considerable semantic or formal shift. In chapter 4, regarding this dissertation's methodology, several approaches will be considered as to how such

challenging items can be tackled by a professional when translating a literary work into any given target language.

This brings the attention to yet another important point: how to assess whether a literary translation meets the required standard of quality. It may be wagered that such a translation can be deemed successful if it evokes the same feelings and reactions amongst the target readership that the original work elicited in its original readers, in its original language. This would entail that the scope of the source work has been accurately conveyed into the target language, and both texts are indeed equivalent as far as content and purpose goes (Moreno Paz, 2019).

To bring matters to an end, it can be concluded that literary translation poses unique challenges concerning its artistic nature, ranging from the use of rhetoric figures of speech to the representation of meaning. When tackling a literary text, the translator has to bear in mind at all times that the conveyance of the purpose, or scope, present in the source text is paramount.

2.4. The science-fiction genre

The science-fiction genre has become highly popular with the rise of modern technology throughout the 20th century and mainly stems from the expectations of what humankind might achieve, should the pace of scientific breakthrough follow an exponential growth. One of the main themes of science-fiction stories consists in depicting advanced technology as a double-edged sword: progress could bring about unprecedented prosperity, but also cause the unexpected downfall of humankind if the forces it is playing with are underestimated. Far from being shallow, childish stories, science-fiction tales often convey deep concepts and can be used as a mirror to reflect the dark side of our present-day society (Mossop, 1996).

And yet, some scholars and literature experts (as underlined by Lojonen, 2019) still dismiss science-fiction as a lesser genre, relegated to a young audience that, allegedly, seeks nothing more than amusing tales to distract them from reality. A good part of this criticism comes down to the fact that science-fiction authors often generate hordes of *fans* who treat their favorite stories with religiously-like zealotry, and aggressively reject any kind of criticism. These so-

called *fandoms* or fan communities (understood as groups of admirers of a certain author or work who meet in order to share their common preferences and generate further content based on the literary works that they enjoy) have eventually become a subculture of its own that also creates new artistic contents: hardcore fans gather to re-enact their favorite stories, draw pictures depicting their heroes and heroines, and even write *fanfiction*, non-canonical texts that further explore the fictional universes they admire (that would be, for instance, the case of *fansubbing*; admirers of a certain TV show or movie who create amateur-made subtitles for it in their native language).

However, having said this, one question arises: what can be truly classified as science-fiction? Where is the boundary that draws this genre apart from other pieces of literature, such as non-fiction? As Martín Párraga (2013, p.88) argues: [...] the first difficult task the translator of a science fiction text has to tackle before initiating the translation process is to answer the always complex question, *what does the science fiction tag exactly stand for?*

Many scholars seem to agree that the main defining trait of science-fiction works is that it foreshadows what the future might bring, based on their contemporary reality. This entails that science-fiction authors do not come up with fictional cosmogonies out of the blue, but rather take a close look at the world they live in, and then speculate as to how it may have evolved, given enough time. George E. Slusser (1986) conveys this as follows:

We might think of science fiction as a literature in love with the future. For it is alone in possessing this dimension, alone in seeking to imagine, as things to come, realms that, in a maximum way, seem to respond to our sense of wonder. And yet, if we heed some of SF's most famous texts, and increasing numbers of its commentators, the very opposite is true. Seen in this light, SF's future imaginations are dominated instead by terror. (p. 3)

It may seem shocking to think that science-fiction is actually closer to the present than it is to the future, but it makes sense once we realize that it is often used as a warning of what may become of our world if we do not fix our mistakes and shortcomings. In this way, more often than not, science-fiction has a heavy social and political component, as it warns us about the

dangers of the modern human societies, and how they could degenerate into dystopias if people let their guards down. This perspective is shared by a number of scholars, including Thomas D. Clareson (1971), who singles out science-fiction as the only literary genre combining philosophy, sociology, psychology and history without tarnishing its value as an inherently fictional and artistic work, but rather creating *outsized images* of the problems faced by real-life society.

This is one of the main features that sets science-fiction apart from fantasy, even though the latter can also sometimes convey social criticism, it is not one of its vital traits; Loponen (2019, p.48) points out that science-fiction texts are typically devoid of supernatural elements that, on the contrary, are ever-present in fantasy tales: this may include wizards or magicians, all-powerful divinities that actively shape the world or the presence and use of magic, among other fairytale-like features.

However, both fantasy and science-fiction literature do share some common traits, chiefly their tendency to speculation and portraying the impossible: Miéville and Bould (2002) argue that science-fiction literature creates a mental space bearing the power to *redefine* what is impossible and what is not.

On the other hand, we can also find definitions such as the one proposed by Martín Párraga (2013, p.90), who in turn quotes the Columbia Encyclopedia (2000, p.42692) to define science-fiction as a literary genre in which a background of science or pseudoscience is an integral part of the story. The aforementioned Párraga also resorts to world-known author and scientist Isaac Asimov, who goes on to assert that science-fiction is that branch of literature which is concerned with the impact of scientific advances upon human beings (1977, p.29). As, one may expect, scientific and technological breakthroughs play a main role in all science-fiction works.

It is also interesting to ponder when science-fiction arose as a well-established literary genre. Apparently, it seems to be a fairly recent phenomenon, brought about by the advent of the Industrial Revolution and the subsequent fear that a rapid technological development may prove too much too handle, as humankind may not be able to adapt to a world that changes by the day and offers a never-ending straw of inextricable contraptions, resulting in an overwhelmed society in which people serve machines, and not the other way around. However, some earlier

pieces of literature can be found that could arguably be considered as science-fiction or, at the very least, its direct ancestor (Martín Párraga, 2013).

[...] even if we have to go back in time till the sixteenth century in search of the first texts that could be considered as “proto-science fiction”, the vast majority of experts don’t hesitate to affirm that the modern version of the genre is not only representative of the modern period but also an heir from it. (p. 90)

That is, even though the science-fiction genre, as we know it presently, may be quite recent, its origins can be traced back much further in the past; for instance, Tomas Moro’s *Utopia*, which harkens back to the early 1500s, already displays most of the literary features that are commonly attributed to science-fiction stories, featuring heavy political, social and economic implications about how the world could be.

However, science-fiction as we currently know it (including futuristic technology and dystopian-like social aspects), did not truly appear until the late 1800s or early 1900s (Loponen, 2019 and Drewniak, 2016). Loponen ascribes the rise of science-fiction as a popular literary genre to American pulp magazines (that is, pertaining to the realm of pulp literature, including fantasy or fast-paced action stories that became highly popular throughout the 20th century), which became widespread during that period, but also underscores that there are much earlier precedents of science-fiction works bearing all the hallmarks and recognizable traits that characterize this genre. For instance, he mentions the *voyages extraordinaires* (ENG *extraordinary voyages*) written by Jules Verne throughout the second half of the 19th century, as well as H.G. Wells’ so-called *scientific romances*, also written during the late 19th century (this category comprises acclaimed and renowned novels such as *The War of the World*, published in 1898).

There is also a discussion as to whether the origins of science-fiction reside in pulp or non-pulp literature. While some authors (including Evans, 2009) claim that the genre was born in the shape of short stories published in American or British pulp magazines, other literature scholars (Attebery, 2013) assure that many well-established writers already produced science-fiction stories well before that. Drawing on the different models of science-fiction and fantasy worlds, both Attebery (2013) and Loponen (2019) argue that the main distinction between them might

be established on the grounds of pulp vs. non-pulp literature. That is, different models of fictional worlds will revolve around diverging types of social identities.

As it can be seen in the aforementioned quotation, science-fiction also encompasses a wide variety of subgenres, including both pulp and non-pulp topics and spanning across countless stories and registers. However, as it has been stated at the beginning of this chapter, science-fiction literature also has hell-bent detractors. Sometimes, it is believed that the science-fiction genre does not even exist, and it is nothing but a marketing strategy to lure clueless youths into buying costly merchandising: Martín Párraga (2013, p.91) quotes the late Nickianne Moody (2000, p.179), who claimed that science-fiction is, in earnest, a commercial brand, rather than an artistic or literary genre, and went as far as to assert that “science fiction is whatever is sold as science fiction”.

2.4.1. The translation of science-fiction

Having settled the particularities that define science-fiction as a literary genre, considering different perspectives and insights from a number of authors acquainted with literary studies, it is now time to explore how such literature can be translated from English into a different target language bearing in mind the traits and characteristics that are unique to this kind of works. First of all, it is important to note, as it has been mentioned, that science-fiction detractors often dismiss this literary genre as *lesser* by arguing that it creates *fans*, rather than admirers: according to them, science-fiction *fandoms* blindly worship their favorite author or saga and are unable to judge any possible shortcomings that it may bode. This widespread skepticism among scholarly circles adds to the fact that science-fiction poses unique translation problems due to the bountiful use of made-up expressions and backgrounds that have no corresponding referents in the real world. This is sometimes largely overlooked by some translation scholars (especially those from the early-to-mid 20th century, such as Ezra Pound or Willard Quine) who, again, dismiss science-fiction (and horror or fantasy) as a *lesser* genre (Loponen, 2009):

[...] translation problems related to literature genres such as science fiction, fantasy, horror and weird fiction have been largely ignored in translation studies, or have been handled as peripheral issues. However, texts belonging to the aforementioned genres are deeply rooted in their source cultures and commonly discuss their source cultures critically through metaphor, analogy and mimetic allusions. (p. 3)

This, therefore, concludes that science-fiction is inherently culture-bound, as it channels, be it overtly or covertly, the underlying taboos, fears, yearnings or passions of the culture it is written in into a fictional world that mirrors real life. This inevitably brings up the challenge that translating science-fiction from one language into another also entails conveying a given culture into a different one. Therefore, when approaching the source text, translators have to come to terms with the fact that, at one point or another, they will need to apply cultural or adaptative translational techniques involving metaphors, similes or literary allusions, as pointed out in the preceding quote.

Some authors (including Venuti, 1995) also underpin that the translational approaches to adopt in each case may depend on the degree of complexity present in a given fictional cosmogony: that is, some fantasy worlds may be simpler, smaller, more trite or closer to real life, and this would enable the translator to convey such cosmogonies into the target language by means of more literal or straightforward techniques. However, some other fantasy or science-fiction stories feature much deeper and richer settings, brimming with fictional cultures, species or entire worlds imagined and contrived from scratch. In these cases, the professional translator must assume a radically distinct approach and resort to different, more adaptative strategies to express such an extensive, imagined world in accordance with the language resources and cultural conventions inherent to the target readership. As underscored by Loponen (2009), “for limited and simple fictional worlds, the method could be considered to be excessively cumbersome. However, for more complex fictional worlds, it might be able to provide a new venue for both translating fictional worlds and for analyzing already translated worlds”.

Additionally, it is important to note how the aforementioned author pinpoints that the study of science-fiction translations is not only paramount to tackle novel, untranslated works, but also

to reflect on how already published texts in other languages have fared in channeling the essence and purpose of their original counterparts. This proves overriding to the consecution of the present dissertation, in which a selection of well-established translations for different science-fiction novels will be assessed and compared in order to discern their strengths and weaknesses in each case, as well as asserting how the latter could be improved in the light of modern translational approaches, such as *skopos* theory.

Moving on to assess the underlying nature of science-fiction translation, it is generally agreed among contemporary scholars that it is an undeniably semiotic field (Loponen, 2009; Doležel, 1998). This means the practice of translating fiction is culture-bound, even more so than language-bound. When an author writes a brand-new fictional story set in a made-up world, what they are actually doing is creating a cultural sphere, a *semiosis*, based upon the environment in which they live and have been raised, but distorted or reshaped by adding unreal features or mixing real traits from diverging cultural realities. Thus, in turn, what the translator is entrusted to do is nothing less than convey said *semiosis* into the canons and conventions of the target culture, keeping the story exotic and unreal, but applying all necessary changes and adaptations wherever they are due. As stated, once again, by Per Qvale (2000, p.1), translation “is an inherently semiotic discipline. Both the source and the target texts, as well as their authors, publishers, translators, and readers, exist within specific cultural frameworks which are penetrated by the translation process”.

In this case, the author brings up several possible strategies to apply in order to tackle science-fiction translation and bridge the culture gap between the source and the target texts: in the end, it all comes down to choosing between two opposed approaches: either the original text is *domesticated* into the rules and norms of the target readership, or it is *foreignized* even further in order to highlight its unreal nature. This choice will depend on a number of varying factors, like the nature and abundance of figures of speech present in the source texts. For instance, a profusion of tropes such as allusions or metaphors may entail more domesticating translation strategies, since many of said idioms are commonly steeped in cultural implications that will inevitably have to be adapted into the mindset and folklore of the target culture (Venuti, 1995).

However, it must be borne in mind that there will always be a handful of unavoidable situations in which the translator will be forced to apply more innovative or adaptative strategies in order to preserve the underlying scope and aim of the original story whilst modifying it on a more

superficial level. This includes, as it may be noted throughout this dissertation, the adaptation of culture-bound items that will inevitably appeal to different realities in the source and target languages (something that can be frequently seen in the denominations of certain plant species, just to name a particularly relevant example to the purpose of this essay), or the preceding translation of slang terminology, which will be expressed by means of different figures of speech and markers depending on the language. As stated by Leppihalme (p. 126) “in the broad sense then, references to realia may include not only references to material items (machete, sari, gravad lax) but also culture-bound notions and phenomena, such as religious or educational concepts, taboos, values, institutions, etc.”

That is, not only *irrealia*, which will be amply discussed in the coming paragraph, can prove problematic to the professional translator, *realia*, understood as its opposite, i.e., items which are anchored in the real world and have a tangible counterpart in our own, existing environment, also pose challenges from a linguistic and translational viewpoint, and require utmost care when conveyed from one language into another, as they can also bear complex cultural implications, deeply rooted in the source text which, in turn, will have to be uprooted, explained, or left untouched in a display of foreignization, depending on whatever the translator opts for.

The quoted author thus lists several categories of *culture bound notions and phenomena* that are subject to such nuances, chiefly including religious and educational ideas, which in exchange encompass virtually all possible, conceivable cultural nuances that may put up a linguistic challenge, such as the aforementioned taboos, moral values and existing institutions.

This leads us to one final issue that is unique to the realm of (science) fiction translation and will be tackled in greater detail in later chapters: the translation of *irrealia* (singular *irrealis*), that is, fictional terms and expressions concocted to designate fictional concepts defining and shaping fantasy cosmogonies. As proposed by Lojonen in his aforementioned essay (2019):

When translating fantastic fiction, the translator is faced with additional translation questions in comparison to translating fiction situated in the real world or its equivalents. The translator has two major additional translation problems: (1) how to translate *irrealia*, and (2) how to cope with *irrealia* that have previously been rendered into the target language – and for which the earlier renditions may no longer be fully usable (resulting from, for example, a different perception of the target audience). (p. 33)

It can thus be concluded that the translation of *irrealia* is central to the study of many pieces of science-fiction literature, in particular those involving very specific lexical fields, such as botany, and this is something to bear in mind carefully when approaching a text pertaining to this genre. Once again, the research on *irrealia* is not only useful to translate such items in a novel text, but also to assess how said terms and expressions have been conveyed in already finished translations, deeming whether the choices made before are still valid or may be improved in order to bolster the faithfulness of the translation or update it in accordance with newly arising circumstances.

In the same vein, many literary experts criticize sternly the sectarianism of these so-called fandoms. But what is a fandom, exactly? Paulina Drewniak (2016) provides a thorough definition on this issue:

In the narrow sense of the word, the fandom is an organized network of dedicated science fiction and fantasy societies, publishing houses, online portals, and the convention movement. In the broad sense, it is the entirety of the modern *geek/nerd culture*, encompassing not only the oldest 'core' of volunteer-based fantasy and science-fiction (F&SF) fan organizations, but also a number of sub-fandoms and communities (both offline and online) that have grown from it, including media fans (interested predominantly in the fantastic in film and television), gamers (video games, tabletop RPGs, battle games, board games), cosplayers, LARPers, medieval re-enactment groups, or indeed any combination of these. Most importantly, the roots of this fan culture rest firmly in American soil; the community has formed organically in American society, around American works of fiction. (p. 3)

It seems quite apparent, then, that the sheer concept of *fandom* is deeply rooted in American pop culture and how it was exported to the rest of the world throughout the 20th century. This particular worldview and way of understanding admiration towards fantasy stories harkens back to the earlier years of the past century, far older than many people would expect: Drewniak (2016) traces the origins of this social phenomenon back to the times of Hugo Gernsback, who started printing the magazine *Amazing Stories* in 1926 as a way to honor the legacy of virtuous authors such as Jules Verne, Edgar Allan Poe or H.G. Wells, all of whom Gernsback adored and whose works he would label as *scientificiton* (literally intended as a contraction of *science fiction*).

These groups of enthusiasts started to develop quickly all over the United States and, before the end of the 1930s, the first remarkable fan convention, which would be later known as *Worldcon*, was held in New York in 1939 (as told by Drewniak, 2016 and Jenkins, 2006). Shortly after that, the World Science Fiction Society was formally established as an institution in order to voice the enthusiasm and yearnings of the ever-growing community of science-fiction lovers.

This newfound movement kept evolving swiftly, and soon it crept over the American borders to reach many other nationalities and cultural backgrounds. And here is when translators come into play: as *fandoms* remain mainly Anglo-centric (although the rise of Japanese anime and manga since the 1980s is also noteworthy), many non-English speaking fans long to read their favorite books and play their beloved games in their native languages, which requires a gigantic translational effort (Drewniak, 2016):

The fandom went all the way from ghettoization to globalization. Initially a niche subculture, it grew over the years, and eventually took over global popular culture. Today the community is vast, so much so that the affinity between its subsets is not always obvious. Nevertheless, there is still a huge overlap between certain groups (for example, table-top and computer gamers, fantasy and sci-fi readers, and so on), and their members migrate freely between various related forms of entertainment. In short, it is still one extended geek family. (p. 4)

However, professional translators seem to greatly dissent as to how to approach science-fiction or *speculative fiction* stories with a large fanbase, as pointed by Drewniak (2016), who shares the opinion that translation does have to play a crucial role in the spread of science-fiction literature (she refers to it as *speculative fiction*, a common alternative denomination), given how it has grown to become a massive phenomenon straddling many countries, languages and media platforms. However, she doubts when faced with the question of how to face such challenge: Drewniak complains that, albeit there are sufficient records on science-fiction literature within the scholarly field of translation studies, most of them are overly focused on the study of particular elements in fantasy worlds, rather than offering a wider framework furnishing the translator with the necessary tools to work with a whole fictional cosmogony.

It seems that, while some professional truly care about the pieces of literature they work on, many others have grown to view fan-loved branches as mere means of making a financial profit (Sohár, 1999):

It seems to me that the new publishers could be divided into two types: the majority who do not care about the genre, consider it merely a means to achieve profit, and a small minority who are devoted to science fiction and make attempts to combine business enterprise with their personal literary interest ... This is where we find the interlinked role of publisher, manager, editor, writer, translator, and pseudo translator. (p. 250-251)

The creational model that is commonly found in *fandoms* (the fans or admirers who worship the original creator of their favorite franchise, and value their word above anything else) also exerts a significant influence on the translational process. Once again, Drewniak (2016) warns against the idealization of what she calls the *modern Renaissance man* who purposefully leaves

an imprint in their translation of the original work, therefore skewing it and being unfaithful to the source text. Drewniak goes on and quotes the work of Gutfeld (2012) as evidence for this assertion. This author also wagers several insightful assertions regarding the dynamic nature of fandom communities and how they shape modern literary systems throughout the world. For instance, she claims that science-fiction works translated from English often enjoy a much higher reputation than the stories written in the native languages of their respective literary systems, and non-(native) English speaking fans typically seek them out to a far higher degree than fantasy novels penned by their fellow countrymen. She also asserts that science-fiction fans would rather be challenged by the presence of foreignizing items in the stories they read than be *carefully taken care of* from a more domesticating standpoint, according to a number of surveys that she carried out in which participants had to rate a series of potential translational interventions (Gutfeld, 2012).

This insight into the rise of the *fandom* as a socio-literary phenomenon throughout the 20th century (and still going strong in the present) proves useful to portray how the modern science-fiction and fantasy genres developed in a different way than previous literary movements, straddling different means of artistic expression arising from technological breakthroughs (such as cinema, graphic novels or videogames) and involving worldwide readers in the creative process that nurtures and feeds the genre itself. Hopefully, this will provide a more detailed backdrop that will help us to fully understand how the translation of modern science-fiction stories can be tackled whilst taking into account the specific societal context in which they exist.

Still within the realm of the fandom, it would also be fruitful to look into the particular terminology associated with fandoms, as it has elicited many terms and expressions which are exclusive to said field and can be quite telling about the nature of such communities and the members taking part in them. Quoting Drewniak's words once again:

Interestingly, the words denoting the subculture are evaluative; the vector changes depending on perspective. This is especially visible in the words 'fan', 'fandom', 'nerd' and 'geek'. The first two started as neutral and descriptive, but over time evolved into specific, tribal identifiers. (Drewniak, 2015, p.9)

The author lists four terms, probably the most common ones in the world of fandom: *fan*, *fandom* itself, *nerd* and *geek*. The first one could be presented as the standard denomination for

anyone pertaining to a fandom community. As for the second one, its definition has already been laid out previously. Lastly, both *nerd* and *geek* are defined as *tribal identifiers*, that is, terms which are used within the fandom to address fellow members in a spirit of comradeship. Drewniak also asserts that many terms within this field are coined as neutral and descriptive denominators, but eventually evolve to acquire a more evaluative flair.

Therefore, this proves that the field of fandom terminology offers an attractive niche for further research in a largely unexplored section of linguistics and translation studies. This is also tightly woven with the last point that will be discussed in this section: how the sheer phenomenon of fandom influences and shapes the task of translation throughout the world. Still quoting Drewniak's assertions, she claims the following:

The existence of the fan culture – both the organized fandom and the surrounding media phenomena popularly dubbed ‘convergence culture’ – undoubtedly influences translation. Through its social networks and shared practices, it has carried American/Anglophone works of fiction, expressing very Anglo-Saxon values, into the far corners of the world. (Drewniak, 2015, p.18)

This poses a fresh take on the leverage that fandoms exert on both professional translators and pop culture as a whole: they carry inherently Anglo-Saxon values and canons into other societies, since the whole phenomenon of the fandom was born in the English-speaking world, specifically in the United States. It would be of great interest to further analyze how these so-called Anglo-Saxon values differ from those in other parts of the world, perhaps to the point that they may be incompatible, or might require a certain degree of modification.

In other words, when it comes to modern fantasy and science-fiction literature, readers and followers play a crucial role that can sometimes be as decisive as that of the author him/herself and, as such, we should also bargain for such a powerful influence upon analyzing the translations of this genre of texts.

We can thus conclude that science-fiction is an eclectic literary genre that draws ideas and influences from a wide number of works, authors, scholars and philosophies. Even though it was not recognized as a well-established genre until recently, its roots stretch much further back

in time than most readers realize. It also has the unique feature of relying on an extensive base of admirers or *fans* that contribute actively to the creation of new stories and fantasy worlds. This leads us directly to the next section in this theoretical framework: what does it take to build a cosmogony? What defines exactly a fantasy story?

2.5. Irrealia and its implications

The concept of *irrealia* (singular *irrealis*) was recently coined to refer to made-up concepts that play a significant role in fictional histories. *Irrealia* can range from faerie creatures to magic potions or flying saucers, but they all share an underlying, defining trademark: they do not have an equivalent in the real world. It is important to note, before delving into the study of *irrealia* and the role they play in literature, that the adjective *fictional* must not be understood in this case as a synonym for *fake* or *feigned*, but rather as a broad category encompassing the lore and knowledge pertaining to the imaginary world, devoid of any potentially negative connotations, as dully underscored by Moreno Paz and Rodríguez Tapia (2018).

This, of course, poses a major challenge to translators that approach fantasy or science-fiction novels: how are we supposed to translate concepts that are completely detached from our reality? Ultimately, *irrealia* only really exist in the minds of the authors that created them, and it is the translator's duty to convey the nuances and meaningfulness that they bestowed on them.

Several key figures must surely be mentioned in this chapter, including experts who have extensively studied the nature and definition of *irrealia* in recent years throughout a series of scholarly studies, such as Mika Lojonen, among others. Lojonen, already quoted in this dissertation as a benchmark scholar in the field of fantasy literature, mainly conducts his work in the department of Modern Languages in the University of Helsinki. It is him (2006) who used the term *irrealis* for the first time as the opposite of *realis*: that is, just like the real, factual world has its own lexical units to address and designate its different elements and nuances, so the fictional world owns a wide range of items that set and lay out its (imaginary) reality. As Moreno Paz and Rodríguez Tapia (2018) pinpoint, both *realia* and *irrealia* share pragmatic and linguistic features, thus diverging when it comes to the kind of knowledge that they convey and how they refer to reality.

But first and foremost, what are *irrealia*? How can they be properly defined? To begin with, it should be noted that the concept of *irrealis* (*irrealia* being its plural) exists by contraposition to that of *realis* (plural *realia*); as Moreno Paz (2019) states, *realia* are the culture-bound concepts that have a representation in the real world. Therefore, *irrealia*, being the mirrored reflection of *realia*, can be described as cultural items that are linked to a fictional, fantasy world. Moreno Paz (2019) reflects on how these terms can be defined and outlined:

The question of what *irrealia* are or what can be considered a fictional item entails to bring up the issue of what fiction is and how to tell a fictional lexical unit apart from other kinds of lexical units. We consider that it is possible to identify them by their discursive features (as opposed to non-fictional discourses), as well as pragmatic and semantic features, although one should bear in mind their ontological and epistemological traits, as we also deem that the philosophy of language can also answer these questions [own translation]. (p. 16)

The key point here is that *irrealia* are intimately related to the concept of fictionality, and thus, they cannot be defined without outlining the very concept of fiction first. Therefore, what is fiction? Now again, this poses a series of hurdles and challenges that are not easy to overcome. As Moreno Paz (2019, p.57) points out once more, defining what fiction is poses many challenges both from a literary perspective, and also philosophically, since the essence of *fictionality* (that is, what is understood to be fictional) is sometimes said to reside in formal values (such as a particular discursive speech or the use of certain figures of speech), as well as semantic or pragmatic markers (including a series of communicative values, namely referentiality).

That is, according to these thoughts, fictionality is established by means of formal, semantic and pragmatic items which bear no equivalence to the real world. A fictional work would then be built with words, expressions and ideas belonging to the realm of fantasy. And these fantasy words, expressions and ideas would be our much-sought *irrealia*, whose role is to anchor a given story to the realm of fiction and rip it from reality. As Lojonen (2009, p.167) claims, *irrealia* are “the signs through which a fictional world establishes its fictionality, signs through which it breaks off from the real world and announces its independence as a fiction – or its belonging, dependency or intertextual relations to another fictional world”. Thus, *irrealia* are

what defines a fictional world as, indeed, fictional, rather than a depiction or iteration of the real world (or a part of it). Loponen (2019) goes on to assert that *irrealia* exert a heavy influence on the texts they appear in, to the point of stating that “if a text contains one or more irrealis items, in most cases it belongs to the arts of the fantastic, and if it does not, it belongs to non-fantastic genres” (p.16-17). This underlines the idea that *irrealia* function as a tangible boundary between fictional and non-fictional literature, assuming that these items will be completely absent from the latter.

Sometimes, it is possible to contact the author of the text that the translator is tackling in order to inquire about the true nature of a particularly tricky *irrealis*. For instance, when the *Lord of the Rings* saga gained worldwide recognition and its tomes started to be translated into a growing number of international languages, many translators wrote desperate letters to J.R.R. Tolkien as to how were they supposed to treat the conundrum of Elvish names, fantasy races and mythical cities featured in his works. Tolkien proved to be very stern in this regard, as he ardently demanded that all of his precious *irrealia* be preserved as faithfully as possible in all translations, strictly avoiding any unnecessary domestication¹.

On the other hand, the troubled translator must know how to proceed if the author of the original text is out of reach (be it because they passed away, or they are simply too busy or far away to tend to our pleas). As Moreno Paz (2019) underlines in her PhD dissertation, different main traits must be taken into account when translating *irrealia*:

- 1) fiction and fictional particulars can be defined according to their pragmatic and semantic values; 2) the difficulty of translating *irrealia* is associated with the types of fictional worlds in which they appear; 3) *irrealia* constitute one of the main translation problems of fictional texts, since they are the lexical units that confer fictionality and semantically configure the text; 4) given that they are created with word-formation processes from real languages, it could be possible to establish a relationship between *irrealia* and neologisms, which makes it possible to distinguish different types of formation processes. (p.13)

¹ Domestication is commonly understood as an exchange of source-language target-language items. Many authors, such as Venuti, believe that domestication is inherent to the translation process, as all culture-bound items must be adapted in order to accommodate the sensibilities and perceptions of the target readership, whereas others, oppose it on the grounds that it can hinder the portrayal of the world created by the author.

The key point here is that *irrealia* are closely linked to the fictional worlds they belong to, and the neologisms that come along with them (given how a made-up world will inevitably call for equally made-up terminology); therefore, in order to fully understand *irrealia* and translate them properly into the target language, the translator must become acquainted with their cosmogony first, they must deeply comprehend the implications that every *irrealis* has on the text and the story it recounts. It should also be noted that every fictional world, however fantastic it may be, is always inevitably based on our reality, as no author can fathom a setting completely detached from our physical laws and understanding of the universe (this can be seen in the works of J.R.R. Tolkien, C.S. Lewis or Neil Gaiman, among many other world-known fantasy authors, all of whom modify, satirize or twist real-life elements to concoct their fictional cosmogonies). Thus, it can be argued that *irrealia* are translatable into human languages since they are the byproduct of a human mind (Loponen, 2009).

According to this, any given science-fiction author uses *irrealia* to highlight the exotic, unreal aspects of the world they create, whereas the commonalities shared with reality are taken for granted. In doing so, authors let us know that we are beholding a fantasy, something that does not belong in our realm.

Once the main defining traits and the purpose of *irrealia* have been briefly presented, the question arises as to how a translator can approach their translation. Is there any particular technique or procedure to observe? What should be taken into account? According to Umberto Eco (2004, p.5), the key lays in faithfulness, though this concept is nuanced: he asserts that it depends on the assumption that translation is a kind of interpretation, and translators must strive to convey not the intention of the author, but the purpose of the text, understood as, in his own words, “the outcome of an interpretative effort on the part of the reader, the critic or the translator”. If this holds true, a prior, extensive understanding of the source text is needed before anything is translated.

It is also remarkable that *irrealia* may be expressed differently depending on the nature of the work they belong to. That is, literature and visual arts will use different means to display fictional concepts: Loponen (2019) claims that fantasy literature employs language to depict its

irrealia, whereas audiovisual arts show them visually and, to a lesser extent, describe them by means of dialogues. Because of this, he states, audiovisual texts (both original and translated) typically feature fewer examples of physical description. He also underlines that, even in cases of oral, translatable physical description in audiovisual works, these visual depictions are grounded on their origins in literature and then depicted visually, hence limiting translational choices to, basically, either omission or what he denominates *denotative translation* (that is, the translation of the literal or factual meaning of a given word, rather than the subjective nuances or cultural implications that it may bode).

While it may seem obvious that literary and audiovisual works will inevitably resort to different means of expression to convey stories, it is important to note so when translating any piece of work, as its nature will deeply influence the strategies to follow when approaching its translation (Moreno Paz, 2019).

It should also be taken into account that different schools of thought (particularly regarding translation studies) often pose diverting definitions of both *realia* and *irrealia*. For instance, Loponen (2009, pp.4-5) asserts that Eastern European translation studies consider *realia* to stand for items or ideas existing as *culture-bound*, that is, either their denotative or connotative meaning is intrinsically tied to their culture of origin, and their value would considerably change in another language or context. Therefore, the use of *realia* anchors a given text to a particular cultural background, time or location, and poses a series of challenges concerning the potential effects that domestication or foreignization may exert throughout the translational process.

The idea that these concepts are *culture-bound* proves essential to the translational process, as translating any given *realia* or *irrealia* will be impossible unless the translator also acquires a sound grasp of the cultural background to which those linguistic items belong. The main issue, of course, comes when the translator has to become acquainted with a fictional culture that only exists in the literary works that they must work with. Loponen (2009) poses this problem as follows:

By viewing fictional worlds as semiotic world constructs, we are presented with translation problems similar to *realia* – with all new translation challenges presented by the factual non-existence of the referred cultures, time periods and/or geographic locations. From the translation point of view, studying fictional worlds as semiotic constructions creates the need for a specific set of

fictional realia – non-existing realia tied to a fictional setting, whose effect is to define and determine the fictional cultural, geographical and historical settings – thus irrealia. (p. 5)

As previously mentioned, the key lies in approaching fictional, literary world as semiotic units; that is, as units of thought that make sense by themselves and convey a particular message to the reader. In this context, the *irrealia* are the linchpin that allows the original author to showcase fictional, unprecedented cultural items to the reader in a way that appears intelligible: for instance, Loponen (2019) states that *irrealia* in fictional contexts are usually seen as *cultural anchors*, that is, they create references defining the fantasy cosmogony on different levels; they can tie the text to a specific genre or already existing cosmogony, or define said fantasy world in relation to the real world or other fictional constructs, as well as underlining the specific *breaking points* that set said fictional world apart from the real one or other, diverging fictionalities.

As it stands, *irrealia* are used as pivotal items to tell a fictional world apart from others, as well as setting the boundary between the construed, unreal fiction and the living world. As it can be seen in the following excerpt, *irrealia* are a mark of fictionality, as Loponen (2009) claims that they “can be called the signs through which a fictional world establishes its fictionality, signs through which it breaks off from the real world and announces its independence as a fiction – or its belonging, dependency or intertextual relations to another fictional world” (p. 5).

We may conclude that *irrealia* can be broadly defined not only as a figure of speech, but also as cultural items of fictional realities that play an active role in the construction of fantasy and science-fiction worlds. They are to be treated with utmost respect, as they bear the genius and nuances of the original author and greatly influence the shaping of the story we tackle as translators. Upon translating any given *irrealia*, the professional translator should therefore observe two main rules:

First of all, cohesion must be upheld throughout the entire text we are working with. For instance, Baker (1992) states that a translation should remain cohesive by means of three main

factors, namely the target audience, the purpose of the translation and the text type, and all three of them should be coherent and interlinked with each other. That is, once we agree on a translation for a particular *irrealis*, it has to be consistent when that said item appears later on the novel. This may prove challenging, especially when a translator (or a set of translators) is working on a whole saga, in which a certain term or expression is scattered over different books. It must also be taken into account that a single given saga may be translated by different professionals. To avoid potential incongruences and typos, it is highly advised to keep a glossary or systematized list featuring all relevant *irrealia* that may appear regularly on the text we approach (as ascertained by Baker and Saldanha [2009] in their definition of *expansion* as a translation technique).

Secondly, the spirit and message of every original *irrealis*, including underlying or implicit nuances, must be kept in the translation once it reaches its target readership, as tarnishing such textual items could result in an unwanted twist of the nature of the text. This calls for the use of several translation strategies depending on the context, and literal translation may not always be the answer. Let us take a look at the example proposed by Loponen, in which a hypothetical fairytale presents us with a lion (which is a *realis* since it represents an existing animal, but may be imbued with fantasy traits in order to become an *irrealis*, for example, a talking lion) as the main antagonists, depicted as a ruthless, deadly predator. If we translate this tale for a culture that fears lions as dangerous carnivores, we may resort to literal translation. But what should we do if this translation is intended for a different society that regards lions as noble, regal animals? An essential nuance of the story would be lost, as target readers would struggle to understand why such an elegant animal is portrayed as a cruel villain. In the light of this challenge, Loponen (2009) suggests we find a cultural equivalent instead of translating the original item literally. For instance, in a European culture, a wolf would be much better suited than a lion to embody a dark, menacing predator. However, we should also strive to seek out a balance, a middle ground between complete literality and complete adaptation, as wiping out for good a foreignizing element may also deprive the translated text of a much-needed hue.

It should also be noted that *irrealia*, just like other lexical units, can be subdivided into different categories according to their semantic value or literary genre. In this vein, Martinkovič (2022) draws a distinction between supernatural horror (defined by their intention to instil fear or terror in the reader), fantasy (defined by their impossibility and disregard for the laws that govern the factual world), science-fiction (defined by the exact opposite as before, that is, their feasibility,

the fact they might come into existence in the near or far future) and general *irrealia* (defined as items that could exist in the present, but don't, and which cannot be classified under any of the previously mentioned categories). Martinkovič also brings up the concept that *irrealia* can age, just like any real language does, i.e., a science-fiction technology featured in a piece of literature from the 50s may seem plausible and even outdated by 21st century standards. The author thus devises a timeline indicating that a science-fiction *irrealis* starts out being futuristic, then becomes common and later, finally, ends up being archaic.

Last, but not least, it must be noted that *realia* and *irrealia* are not always mutually exclusive categories, since the former can sometimes be transferred into the latter under certain circumstances. Such an occurrence may happen when a fictional work gains widespread popularity, to the point that it becomes a piece of mainstream culture in the social framework where it was produced and divulged (such is the case of some well-known fantasy sagas, such as *The Lord of The Rings*), and this process entails that speakers living within such community will make reference to this piece of literature and its concepts as a commonplace that takes place on a daily basis (Moreno Paz and Rodríguez Tapia, 2018). There is also the particular case of mythologies, which can sometimes be regarded as an actual, living part of a culture's heritage, even though it is obvious that the events depicted therein are entirely fictional. All of this goes to show that reality and fiction do not exist separately in a still void, but rather are intertwined and ever-evolving entities, since the former elicits the latter (Clute and Grant, 1997).

Running tangentially to this issue, but bearing a remarkable importance upon it, Kažimír and Martinkovič (2021) propound the concept of *pseudorealia* as a third way of addressing lexical terms that do have a counterpart of sorts in the real world, but are twisted or shaped by a given author so that they fit their made-up cosmogony. They claim that the thin boundary setting *pseudorealia* apart from both *realia* and *irrealia* relies highly on *contextual dependence and variability*, meaning that such terms may be ascribed to one or another category depending on the kind of referential relationship that they may establish with their surrounding narrative and lexical environment. Consequentially, the addition of *pseudorealia* to the *realia-irrealia* binome will in turn affect how all of them are understood and tackled from a translational viewpoint, as asserted by Kažimír and Martinkovič themselves (2021), claiming that

“the translation of *irrealia* is bound purely by their own (not only semantic) meaning and intertextual links. *Pseudorealia*, on the other hand, may share the same limitations in translation, but also more closely resemble traditional *realia*”.

That is, whereas *irrealia* may be translated freely owing to the fact that they are not bound to the factual world in any way whatsoever, *pseudorealia* do have to observe a certain degree of truthfulness, since they are tangible and existing in one way or another, and this has to be borne in mind when conveying such terms from one language into another. For instance, real-life toponyms, events, companies or people still have to be portrayed faithfully and accurately even if they are mentioned in the wider context of a fictional world.

Some other scholars have also referred to *irrealia* by different names, such as Suvin (1979), who used the term *novum* (Latin for *new*) as a pivotal, defining trait to identify science-fiction texts, setting them apart from the real world, which should be translated by means of dynamic techniques in order to preserve their original nuances.

In any case, *irrealia* have proven essential to the creation of modern fantasy stories and, as such, they should always be treated with great care. Thus, in conclusion, it can be stated that the existence of fiction and fantasy themselves entail the creation of *irrealia*, as these are the lexical and grammar items that anchor any given text into the realm of fantasy. Professional translators can adopt several techniques when approaching the translation of these very important items, ranging from domestication to morphological or culture-bound adaptation. However, it is always overdue to preserve the cosmogony created by the original author faithfully, as our suggested translation of *The Day of the Triffids*, *The Crucible of Time* and *Seeders* will show.

2.6. Theoretical guidelines and description of translation techniques

Having set the prior introduction to this dissertation, the main theoretical framework is now presented. The main goal of this chapter, which encompasses the theoretical and analytical side of this PhD dissertation, is to provide a comprehensive insight into the study and translation of highly specific terminology from a comparative viewpoint, conducting a prior study and setting a guideline that may be useful to overcome future challenges regarding the issue of terminology translation.

Therefore, delving further into the theoretical framework for this dissertation, it must be asserted that many authors have proposed different ways of classifying and defining translation techniques depending on how such strategies approach the procedure of translation itself. Vinay and Darbelnet, for example, seek out the concept of equivalence between the source and the target text, understood as “a procedure in which the same situation is replicated as in the original but different wording is used” (Vinay and Darbelnet, 1995, p.32).

Other scholars, on the other hand, tackled the classification of terminology, rather than its translation: for instance, Eugen Wüster an Austrian terminologist who came up with the classical approach known as General Theory of Terminology (GTT), whose main goal is to enable communication between different specialized fields and avoid scientific and technical ambiguity by using precise lexical units encompassing distinct concepts. This theory revolves around the approach of onomasiology (defined as “beginning with the concept and working towards the term” [Baker and Saldanha, 2009, p.287]), the nature of concepts (implying the fact that they have precise limits and a *fixed place* within a system of concepts), univocity (which entails a *one-to-one* relationship between the term and the concept), and also synchrony (which is defined as “focusing on current use of concepts and terms rather than on their evolution” [Baker and Saldanha, 2009, p.287]).

For all intents and purposes in this chapter, a combination of approaches will be used to categorize and analyze the items herein in order to cover a wider spectrum of perspectives. Therefore, the translation techniques to be used in the practical chapter of this dissertation are as follows:

- **Calque:** as defined and devised by scholars such as Newmark (1981), J.P Vinay and J. Darlbenet (1995), the calque is considered as a direct translation technique in which a given source item is conveyed unaltered into the target language; because of this, calques are commonly considered as a category of loanwords and approached as such. Delisle et al. (1999) define this technique as the transfer into the target text a word or expression from the source text by translating its elements in a literal way, while Hurtado Albir (2011) claims that it takes place when a foreign word or syntagm is translated literally, and she also makes a distinction between lexical and structural changes (as it can be seen later on in this very chapter). Hence, the key here seems to be the direct or literal transfer of a foreign element into the translated text.

As mentioned before, several kinds of calque may be found depending on how the original term or expression is transferred:

- **Lexical calques:** the source item is represented in the translated text exactly as it appeared in the original work, applying no translation whatsoever (an example of this kind of crude calque could be the expressions *reality show* or *playback*, commonly used in Spanish by their original English form). Alternatively, the item may be adapted to the grammar and phonetical rules of the target language, but it will still be recognizable as a foreignizing term (for instance, the Spanish word *líder* would be an adapted lexical calque of the English *leader*, but its pronunciation, meaning and core form remain the same) [Vinay and Darbelnet, 1958].
- **Semantic calque:** this happens when a natural, already existing item in the target language acquires a new meaning due to the influx of a foreign language in which said item has different connotations. For instance, lexicographer and semiologist Josette Rey-Debove (1978) poses the example of the hawk and the dove as embodiments of war and peace, respectively: neither of those words used to have these connotations in French (her native language), but it eventually

came to be that way because of the fact that the English denominations of these two species already bore those implications beforehand.

- **Structural or syntactic calque:** this third subtype of calque takes place when a compound or expression in the source language is translated word-by-word into the target one, thus generating a new item in the target language that did not exist previously. A common example of this kind of calque in Spanish could be the denomination *perrito caliente*, which serves as a translation of the English item *hot dog*: even though the two words comprising the target expression, separately, do not convey the original meaning (i.e., a snack consisting of a sausage wrapped in a bread bun and served with a variety of dressings), they do when shown altogether, since they form a new lexical item mimicking its English counterpart. Other recurring examples pertaining to this category may be found, commonly referring to concepts that were once novel in the target language and thus, since there were no coined words and expressions to express those new realities, it resorted to adopting the nomenclatures already used in other cultural and linguistic spheres: *agujero negro* for *black hole*, *paso de cebra* for *zebra crossing* or *sitio web* for *website*.

Thus, it may be concluded shortly that this technique will be used to convey a concept or reality that does not exist in the target language by resorting to a foreignizing item, thus coining an *irrealis* bearing all the nuances and full meaning intended by the original author in the wider framework of a science-fiction story.

Literal translation: moving on to further analyze other techniques and approaches, it can be found that literal translation is meant as the process in which a given source item is translated by means of its exact, coined counterpart in the target language. The main difference that sets literal translation apart from the previously commented calque is that it uses natural, already existing words and expression in the target language. It is, however, commonly classified as another *direct* translation technique, to the point that

the terms *literal* and *direct* are sometimes likened and used as synonyms. Once again, the definition of what a *literal* translation may differ somewhat depending on the consulted scholar; for instance, the aforementioned Delisle et al. (1999) define it as the process in which the grammar constructions of the original language are replaced by their closest equivalents in the target language, but the lexical units are translated out of context. They also claim that literal translation, rather than a fully-fledged technique, is just some sort of *pre-translation* to be carried out to highlight the main difficulties in each text before such issues are properly handled by means of more resourceful approaches. Lefevere (1975) also wagers that, although the use of literal translation is not necessarily harmful, it should be complemented with other strategies since, in his view, it only focuses on one aspect of the source text, while neglecting all others.

This latter remark, however, is not shared by other linguists and scholars, such as Newmark (1981), who claims that literal translation is necessary because there are many occasions in which the concepts and meanings of the original text match those intended to be expressed in the target language, and thus it is not necessary to apply any kind of adaptation or modification. He goes so far as to claim that it is the best approach in both semantic and also communicative translation, although he also pinpoints that, when there is conflict between these two sides, the communicative option should be favored in order to avoid an unnatural or odd-sounding result.

Another defining trait of literal translation is the fact that it focuses on the denotative level of the word, rather than its deeper connotations, which makes it more suitable for technical or scientific works, whereas literary texts will typically require the use of other approaches. In this case, concerning the nature of this dissertation, it should be noted that most botanical nomenclatures can be translated literally, as they have coined equivalents in Spanish and the more specific Latin denominations are used in both languages; other techniques which are used in this field, albeit less frequently, include cultural or semantic adaptation, both of which are also defined in this section.

Morphological adaptation: this translation technique entails modifying the source text in a way that affects its order, grammar structure or form, but without bringing about any changes to its core meaning, that is, the information that was meant to be expressed

in the original work. Some scholars who looked into the nature of morphological adaptation and its application include Vauquois and Boitet (1985), who provide a valuable insight on how this technique plays a particular role in the realm of automated translation, indicating that morphological analysis is key to attaining an accurate and adequate target text, as it allows us to notice any structural or underlying peculiarities that may arise from conveying the source work into the target language.

Semantic adaptation: similarly to the previous case, this approach also implies a modification of the source text, although in this case the changes are more thorough, affecting the meaning conveyed in the original work partially or totally.

Hervey and Higgins (1992) claim that adaptation (be it semantic, morphological or of any other kind, as they do not draw a distinction between these different subtypes of the aforementioned strategy) is the *freest* form of translation, used mainly for dramatical texts. They point out that, when applying this approach, the original culture turns into the target culture and the text is rewritten.

It should also be noted that the adaptation of a given work may also be *transmedial* (as claimed by a number of authors, such as Chaume [2018], O'Hagan [2012] or Canales [2020]): that is, a novel may be adapted into a comic, a movie, or a videogame, shifting the conveyed information from one mean of expression into another. This phenomenon, commonly coined as *transmediality*, has become increasingly popular in recent decades, and it poses the challenge of shaping the content of the given story to the particular language of a different medium of expression: for example, when conveying a written text into a film, its plot and development will inevitably have to be adapted into an audiovisual format, thus representing in pictures and sound what was previously text, and adjusting the pace and rhythm of the story to this new narrative language. The concept of *transmediality* bears a paramount importance in the particular field of science-fiction works and their potential translation, since it is a genre that inherently straddles different means of artistic expression using diverging languages; for instance, a piece of literature can be conveyed and adapted visually as a movie, or an interactive videogame. Other forms of expression, such as graphic novels, combine visual elements and written words, all of which are deeply interwoven. Therefore, the idea of

transmediality helps us understand how fictional stories can be translated not only from one language into another, but also from one means of expression into a different one.

The use of adaptation in professional translation also brings up the issue of bridging the lapses or content differences between the original and the translated text, thus ensuring that the adapted item still conveys the core information and implications devised by its original author.

Adaptation is sometimes defined as a way of *textual recycling*, likening it to the concepts of remake, imitation or commentary, and underlining its transformative nature. It has also been classified as a way of *oblique* translation (Vinay and Darbelnet, 1995), which means that it does not convey the original information directly or literally.

Diving deeper into the concept of adaptation, Baker and Saldanha (2009) underline the following comment:

Adaptation may be understood as a set of translative interventions which result in a text that is not generally accepted as a translation but is nevertheless recognized as representing a source text. As such, the term may embrace numerous vague notions such as appropriation, domestication, imitation, rewriting, and so on. Strictly speaking, the concept of adaptation requires recognition of translation as non-adaptation, a somehow more constrained mode of transfer. For this reason, the history of adaptation is parasitic on historical concepts of translation. (p. 3)

That is, under this definition, adaptation would not be a single, well-defined translation strategy, but a loose set of notions of concepts to be applied when tackling a text. It is also implied that, although adaptation is closely related to translation, they are not the same, and they may take place independently.

Baker and Saldanha (2009) also reflect on the origins of adaptation in the following excerpt:

Adaptation has always existed, since it is a ‘normal’ part of any intellectual operation; but the golden age of adaptation was in the seventeenth and eighteenth

centuries, the epoch of the *belles infidèles*, which started in France and then spread to the rest of the world. (p. 3)

This French concept of *belles infidèles* (which literally translates as *unfaithful beauties*) refers to the common practice, back in the Enlightenment (as already mentioned in the preceding paragraph), of aesthetically modifying the original text upon its translation so that it conformed with French canons of what is beautiful and acceptable, even if that meant a substantial alteration of the rendered information. Hence, this shows that adaptation may sometimes be used in order to twist the original work for personal, political, or simply aesthetical purposes that do not concern the field of translation and linguistics.

This leads to the dilemma of discerning when adaptation is justified, and when it is unjustified or to be avoided. According to Newmark (1981), adaptation “has to be based on the translator’s judgment about his or her reader’s knowledge” (as cited by Baker and Saldanha, 2009, p.4), and its use would be mostly justified when the original text is metalinguistic in nature, its main subject being language itself. The advocates of adaptation commonly claim that it is sometimes necessary to preserve the message of the original work, whereas its detractors see it as a betrayal of the source text.

The same authors also highlight that translation may be either local or global, with the former “being caused by problems arising in the text itself and limited to certain parts of it, whereas the latter is determined by factors outside the original text and which involves a more wide-ranging revision” (Baker and Saldanha, 2009, p.5).

Addition or expansion: this technique entails adding information that was not present originally in the source text, thus expanding the information conveyed by the original author. It is the opposite strategy of omission (sometimes also referred to as *deletion*), which will be seen afterwards. Baker and Saldanha (2009, p.4) define it as “the explicitation of source information, either in the main body of a text or in a foreword, footnotes or a glossary”.

Omission: being the opposite pole of the previous technique, omission happens when some information or a particular item from the source text is erased from its translation, and therefore it is not represented in any way in the target language. Scholars such as Leppihalme (2001) or Chesterman (1997) label it as a strategy pertaining to the field of *direct* translation. While it is commonly looked down on as mistake or loss in the translated text, a number of professionals concede that it is sometimes necessary in order to convey or clarify the concepts of the original text into the target language, including Tytler or Hermans (1985). Baker and Saldanha (2009, p.4) classify it as an adaptation procedure and define it as “the elimination or implicitation of part of the text”.

Explanation: this technique consists in providing a shorter or longer definition of a given term instead of its translation, and it is commonly used in cases when the original item may not be understood by the target readership (due to being obscure or too alien for them), or it simply does not have a clear equivalent in the target language. Baker (1998) features it as one of the seven existing procedures that may be applied when translating a culture-bound element in a text. The term *explanation* is sometimes used as a synonym for *description*, albeit some authors point out that both terms should not be equated, as the latter usually refers to a lengthier, more detailed utterance, whereas the former is envisaged as a briefer translation resource; this includes Popović (1975), among others.

Creation: this procedure, which is usually put in practice when translating fantasy and science-fiction texts, consists in devising a brand-new term that did not previously exist in the target language in order to represent a reality that had not been expressed before in said cultural space. It is also intertwined with the closely related concepts of sub-creation (this implies the thought that an already created concept can spawn a secondary by-product descending from it) and recreation (that is, to redo or reproduce a different iteration of an already existing reality).

Once again, Baker and Saldanha (2009, p.5) provide an insightful definition for its translation technique, claiming that it is “a more global replacement of the original text

with a text that preserves only the essential message/ideas/functions of the original”. Therefore, it is considered to be an adaptative (or *free*) strategy that modifies the source text in a significant way, rather than a *direct* technique sticking to the original work (such as the previously commented calques or literal translation).

Hence, it can be concluded that the aforementioned techniques encompass a wide array of approaches that can be applied in different contexts: for instance, literal translation can be used to convey an idea faithfully into the target text when there are no semantic or cultural hurdles, whereas semantic or morphological adaptation may help us shape the content of the original work so that its underlying meaning and nuances stay the same in the target language. Other translational techniques involve expanding the source text to make it clearer (such as expansion or explanation) or, on the contrary, cutting it short to concoct a more concise text (as is the case with omission).

Such a variety of perspectives and techniques will be applied to translate a series of selected excerpts from the three novels that comprise this dissertation’s corpus throughout its practical chapter, considering the broad spectrum of contexts and styles featured in all of them. Qui

The professional translator must be particularly careful when approaching the translation of eponyms: these highly specialized items are defined as units of meaning based on proper nouns bearing noteworthy relevance, such as renowned inventors, names of branches or cities and towns. These problematic items are often recommended to be left untouched (as suggested by Hurtado Albir, 2011), as they may be commonly regarded as proper nouns themselves; however, they might require some degree of adaptation if such terms are deemed as *irrealia* in the wider context of a fictional cosmogony, given how they may convey vital semantic concepts concerning the specific world-building of the story, and such crucial information could be lost if the target reader fails to grasp the different nuances and elements present in the eponym.

2.6.1. Translation of botanical terminology

It is now convenient to delve deeper into the theoretical guidelines behind the translation of botanical terms in the novels comprising the corpus of this dissertation, given how it plays a pivotal role in all three works, and it also constitutes the primary leitmotiv of this essay. It can be wagered that the nature of the translation process will depend heavily on the botanical taxonomy used in the original text: that is, if the source author uses the traditional Latin nomenclature for a number of plant species, the approach will greatly differ as opposed to translating more modern and common terminology used to bring botany closer to the layman reader.

Some expert works focus on the evolution of botanical terminology throughout history and how this may affect the development of new taxonomies, as well as how they may be understood by differing readership: for instance, the two-volume essay entitled *Eléments [sic] de physiologie végétal et de botanique* (ENG *Elements of botanical and vegetal physiology*) (by Charles-François Brisseau-Mirbel, 1815) analyses how French and Latin vocabulary permeate botanical texts, and the implications that each language entails for the French reader approaching such texts.

Similarly, several botanical translators have endeavored to offer a deciphered version of the science of botany with the aim of making it accessible for unspecialized or marginalized readers. In *The voice of nature: British women translating botany in the early nineteenth century*, Von Flotow (2011) makes the following remarks as regards the translating endeavors of 18th-century scholar Priscilla Wakefield, who is notable for being one the first female botanists in modern times to defy highly sexist societal conventions in a bid to make botanical science more accessible to the general public, particularly for female readers:

Her translator's preface was veritable aglow with enthusiasm for botany as a "highly interesting branch of natural science" evolving at a time when "it is universally felt and expressed that knowledge is power" (v). Botany, like the flowers it so eagerly described, was "bursting forth in all the fullness of its splendor, divesting itself of the artificial garb by which it has been too long disguised" (ibid.). This "artificial garb" to which the translator refers could be an oblique reference to the fact that botanical texts even into the late eighteenth

century were formulated in Latin, which, as another female botanist Priscilla Wakefield had lamented, “deterred many, particularly the female sex, from attempting to obtain the knowledge of a science, thus defended, as it were, from their approach (Wakefield 1798: vi). The translator’s preface also contained those self-deprecating, apologetic statements that commonly framed women’s writing in the public sphere. (Von Flotow, 2011, p.25-26)

This excerpt appears to be particularly relevant to the purpose of this epigraph, as it pinpoints how the traditional use of Latin in botanical texts (referred to in the aforementioned preface as *artificial garb*) was a deterrent that prevented many modern-era readers from becoming acquainted with the workings of botany, and thus this classical language was gradually replaced with those other languages used in each present-day country. As previously mentioned, this also enabled long-marginalized readers (including women or the working class) to access a wider variety of scientific contents that had been too obscure and cryptic prior to this point in history.

Hence, it must be reckoned that the translational drive triggered in the botanical world during the Modern Era was motivated by the will to expand and divulge knowledge in the wider frame of the Enlightenment. This current of thought evolved to the point that sticking to the old-fashioned use of Latin started to be frowned upon, as von Flotow (2011) showcases, stating that “this criticism was therefore levelled more against the translation’s failure to appeal to the absolute layperson in the study of botany than that it criticized the translation or translator *per se*.”

Here, it can be seen that acquiring botanical knowledge is no longer enough to translate such a text: the translator should also have the ability to convey their knowledge in a way that is understandable and intelligible to the average target reader. The author also tackles how female translators were looked down on by male scholars, pointing to the long-standing issue of sexism in the realm of science and knowledge.

Moving on to present-day translation studies, many scholars have shifted the debate towards the concepts of the translator's *voice* and whether it should be noticeable or not in any translated botanical text. Concerning this dilemma, E. Martin (2011) assesses the following point, still in relation to Priscilla Wakefield's work:

Recent research in translation studies into the notion of 'voice' in translation has explored how the activity of translation can be considered a complex form of quotation, a re-enunciation of the source text and reanimation of it in ways that can be neutral but can also be interpretative, critical or dissociative (Hermans). I begin here by considering the translation as a virtual meeting point of two very different minds, Wakefield and Ségur being, as we shall see, from cultural and social backgrounds diametrically opposed – in itself a reflection of the range of people generating botanical writing in this period. (p. 30)

This shows that the boundaries between the activity of translation and other means of reformulation or enunciation is sometimes blurry, and it must always be considered that the particular circumstances and contexts of each translator are likely to affect how the translational process unfolds.

The preceding points present the professional translator with the following challenge: how to act when facing an old botanical text with all the hallmarks of that bygone style (i.e., Latin nomenclature, obscure writing, etc.). Should it be adapted into a more updated form so that the target readership can access its content more easily or, on the other hand, should the original taxonomy be kept out of respect for the source text? The answer, once again, will depend on whether the translator wishes to present the source text as a foreignizing element to its potential readers or, on the contrary, their aim is to enable the exchange of the highest possible degree of information and communication. As mentioned earlier in this dissertation, the *scope* or goal set prior to the translational process will determine what techniques, strategies and approaches are to be applied.

The Latin terms for all of these can be found in footnotes at the bottom of the page, should the reader have been interested. So in Wakefield's text Latin is, quite literally, pushed to the margins. In Ségur's translation, by contrast, the terms are all absorbed into the main text itself. [...] This passage therefore hinders reading because the reader is continually obliged to jump between French and Latin terminology – unlike the same passage in Wakefield's text, which reads much more smoothly since it is not packed so full with botanical names in two languages (Martin, 2011, p.37)

Still following the work of Priscilla Wakefield, it can be seen how her use of Latin and French terminology compares to another 18th century botanical translator, Ségur. On a similar note, E. Martin praises how Wakefield limits the older Latin nomenclature to small footnotes that can be easily overlooked if the reader does not wish to bear them in mind, and neither are they essential to understand the gist of the text. In this way, a specialized scholar may read both the main text and the Latin annotations, whereas laymen may ignore the latter and still fully understand its nature. Ségur, on the other hand, is criticized for merging both terminologies in a way that appears to be confusing and convoluted. This goes to show how the layout of the translated text may also affect how it is perceived and understood by its potential readers.

Thus, in conclusion, this section has laid out the main translation techniques that will be used to analyze and classify the excerpts comprising the translational corpus in the practical chapter of this dissertation, including literal translation, several kinds of adaptation (semantic, morphological or cultural), omission or addition, among others. An insight has also been provided as to how such techniques can be applied in the particular field of botanical translation and other closely related niches. In that vein, the next section will revolve around Linnaean taxonomy, which revolutionized the study of modern botany and was propounded by Carl Linnaeus (to whom it owes its name) in the 18th century.

2.7. Carl Linnaeus and his taxonomy: the foundation of modern botany

This section is devoted to a central figure in the world of contemporary botany, since he devised a ground-breaking taxonomy which revolutionized how botanical science and the overall study of plant species was understood prior to the Enlightenment that swept through Europe during the 18th century: this illustrious scholar was Carl Linnaeus (1707-1778), Swedish scientist, naturalist, and zoologist. His most remarkable breakthroughs will, therefore, bear an important leverage on the theoretical and practical development of this dissertation, which revolves around how botanical knowledge may be transferred and tackled in different languages and cultural spheres, since botanical nomenclatures will have to be understood, transferred and translated whenever it is due during the empirical section in this PhD dissertation. Moreover, and most importantly, his invaluable contributions to the field of botanical sciences (as well as many other scientific works relating to it) were a tipping point in the wider framework of modern studies, and set the foundations for present-day botany as a well-established discipline. Hence, Linnaean taxonomy is still paramount in modern botanical sciences, and therefore in the nature and spirit of this academical essay. It is important, then, to analyse how it developed and came into existence on the grounds of prior botanical knowledge.

Let us begin by introducing a brief background on the author's early life and the circumstances surrounding his personal and professional development: thus, Carl Linnaeus is born in the minute Swedish village of Råshult in 1707. Therefore, he struggled to cultivate his undying love for botany during his childhood and teenage years, living in a family where he was destined to become the local priest, in time. However, he finally managed to study in Lund and Uppsala after impressing his village's physician with his extensive knowledge about plants (Müller-Wille, 2022). His first scholarly feat is the publication of his botanical treaty entitled *Flora Lapponica* in 1737. Following a scouting expedition to Swedish Lapland, Linnaeus wrote this thorough account of the flowers, trees and other plant species commonly found in this subarctic region.

Following the aforementioned publication of this treaty, Carl Linnaeus moved to mainland Europe in order to expand his command of the botanical sciences and open up new lines of

research regarding the nature and physiological processes affecting plants. First of all, he based his more recent studies in The Netherlands, where he shared his accomplished works and impression with Dutch botanist Jan Frederik Gronovius, who would eventually become one of his most noteworthy mentors.

During his stay, he came up with the first draft of his renowned taxonomy in the form of a text entitled *Systema Naturae* (ENG *The system of nature*). This new work was aimed at streamlining and clarifying the overly convoluted denominations commonly used for botanical species with a novel binomial taxonomy in which each plant is given two Latin names, the first one referring to its broader *genus*, while the second one would narrow the description down to the specific species being referred.

This will be explained in further detail later on but, as a telling example, let us look at how the scientific denomination of the *cutleaf groundcherry* (a species of nightshade native to the Americas, but commonly found in other tropical or subtropical regions) shifted with the arrival of Linnaeus' taxonomy: the previous denomination was *physalis amno ramosissime ramis angulosis glabris foliis dentoserratis* (a fully-fledged description that seems completely obscure to any reader without a sound grasp of Latin), but after Linnaeus it became *Physalis angulata*, which strikes the reader as a much briefer and clearer name. Hence, in this case, *Physalis* would mark the wider botanical *genus* encompassing different species of nightshades, whereas the second term *angulata* would point to the particular species commonly known as *cutleaf groundcherry*. (Müller-Wille, 2022)

Even though this dissertation lays the focus on how Linnaean taxonomy classifies and understands plants, it is important to keep in mind that it actually spans much further, also applying to animal species: for instance, the Latin name for modern human beings, *Homo sapiens* (ENG *wise man*) is also owed to him. Once again, the term *Homo* would mark the broader *genus* including other hominid species who inhabited the Earth during Prehistoric times (e.g. *Homo neanderthalensis*, commonly known as Neanderthals), while the second item, the adjective *sapiens* (literally Latin for *wise*) would narrow down the denomination to present-day human beings.

Linnaeus kept working on his nomenclature, and even extended his taxonomy to mineral *species*, considering them on an equal footing with plants and animals. Then again, it must

be borne in mind that the theory of evolution was still far from being devised, and Linnaeus considered plant, animal and mineral *species* as permanent, non-changing categories.

During his later years, Linnaeus diverted most of his efforts towards the betterment of other branches of knowledge; for instance, he pioneered a very specific realm of philosophy known today as physico-theology, resulting from the unlikely hybridization of the study of the natural world and religious studies. In this vein, he chiefly wrote two treatises headlined *Oeconomia Naturae* (ENG *The Economy of Nature*, 1749), and *Politiae Naturae* (ENG *The Politics of Nature*, 1760), respectively, both of which would resound so deeply in Linnaeus's kindred scholarly circles that they would even influence Charles Darwin's essay in the century to come (Müller-Wille, 2022; Mancuso and Viola, 2015).

Carl Linnaeus also gained a foothold in other disciplines, namely pathology (he devised an intricate classification of illnesses in his corpus entitled *Genera Morborum* [ENG *Genera of Diseases*], 1763), pharmacology (*Materia Medica* [ENG *The Materials of Healing*], 1749), or physiology. (Müller-Wille, 2022)

Let us now move on to the particular analysis of Linnaean taxonomy and its implications for this dissertation: Linnaean taxonomy was the main referent for botanists for a long time, as it established the foundations of modern botany by dividing the entirety of nature into three easily distinguishable realms (*Regnum Animale* [animals], *Regnum Vegetabile* [plants] and *Regnum Lapideum* [minerals]), applying homologated Latin nomenclature codes to each particular species and classifying them into a carefully devised hierarchy that consists of *classes* encompassing a wider number of *orders* and *genera* which, in turn, also comprise an even greater number of *species*.

Regarding the classification of plants in particular, Linnaeus sorts them into twenty-four different *classis* in accordance with their sexual systems, which also constituted a revolutionary improvement compared to previous botanical tomes, although it was also criticized by some contemporary scholars, as Martin (2011, p. 12) claims that “Linnaean classification of plants according to the sexual system making female botanizing seem to some male critics of the time a prurient, licentious undertaking”.

All of this made Linnaean taxonomy a veritable benchmark for botanists across the world during decades, until his Latin nomenclature fell out of use and was gradually replaced by the respective languages used in each country. It is also remarkable how Linnaeus looked into other, lesser-known aspects of botany, including the dynamics of sleep in the vegetal kingdom:

[...] It was relatively easy for Linnaeus to assert that plants sleep. But it would be several centuries before sleep was recognized as a fundamental biological function related to the brain's most evolved activities, and so his idea was not even contested. Today, the same theory has plenty of opponents, and even Linnaeus, if he had known the many functions of sleep, would probably interpret his own observations differently and would deny the existence of an activity in plants that could be compared to an activity of animals. (Mancuso and Viola, 2015, p.15)

It can be seen here how Linnaeus was ahead of his time in posing questions and raising points about the natural kingdom that had been broadly neglected prior to that point in history, even if many of his perusals were later proven wrong and were corrected by more modern scholars. In this particular case, he misguidedly conferred plants the ability of 'sleeping', completely unaware of the fact that this bodily function, understood as it happens in the animal kingdom, is necessarily connected to the presence of a complex nervous system run by a brain, which vegetal species do not have. However, based on the botanical knowledge available at that moment, Linnaeus made assertions about the realm of botany that his contemporary peers did not dare to claim.

Concerning the previous classification of plant specimens into encompassing categories labeled as *species* and *genera*, it must be noted that this nomenclature was not coined from scratch, but rather based on previously existing principles that Linnaeus adapted in order to accommodate his novel take on the botanical science: Martyn (1815) explains how Linnaeus underwent this reinvention by laying out its main principles in his works entitled *Critica Botanica*, *Genera Plantarum* and *Species Plantarum*, in which he devised the new structure to classify plant species and wider genera by keeping their old, already established names, while coining new ones for those which were newly discovered and had not been yet compiled in existing botanical

treaties. He also overhauled the existing nomenclature to make it clearer and simpler to the average reader.

It can be seen in the preceding excerpt that these aforementioned *genera* had already existed for centuries when Linnaeus came across them, and his endeavors were actually aimed at reforming such categories according to the studies that he had conducted.

Once these *genera* and the corresponding *species* pertaining to them had been settled, Linnaeus was faced with an even greater challenge: how to name the plethora of botanical specimens that he had discovered and thoroughly studied. In order to overcome this hurdle, the botanist proceeded as follows: Martyn (1815) goes on to assert that Linnaeus struggled at first to name the plethora of plant *species* and *genera* that he had so thoroughly defined and described; he thus came up with a series of what the Martyn calls *trivial names*, which Linnaeus joined to the generic ones in order to elicit a new, clearly distinguishable nomenclature. Therefore, under this new system, every species was given a two-word name, which would make plant identification a much simpler task than ever before (for instance, Martyn names Pier Antonio Micheli [1679-1737] and Leonard Plukenet [1642-1706] as examples of earlier botanists who would use long-worded and convoluted phrases to classify plants).

This underscores the difference between description and naming of a given concept: while a thorough portrayal of an item is indeed highly useful in providing a detailed picture of what it represents and entails, it is also paramount to designate such reality in an accurate, concise way in order to enable speakers of the target community to refer to these concepts briefly and practically (Rousseau, 1785).

When it comes to Linnaeus, he came up with a two-word nomenclature that allows for a high degree of accuracy in describing each plant species without resorting to long-worded definitions: therefore, each specimen is assigned two Latin words; the first one designates its broader *genus* (i.e., the wider class or category within the vegetal kingdom to which it pertains), whereas the second one marks the specific species of said plant.

This classification thus allowed Linnaeus to easily and accurately define an extensive gamut of vegetal species without the confusion and hassle of verbose nomenclature, as used prior to that moment in history (i.e., the 18th century, specifically when considered in the wider frame of the Enlightenment and its spread throughout during said century) by other fellow botanists.

The comprehensive work of Linnaeus is not, however, without flaws; his essays and revolutionary taxonomy was also criticized by contemporary scholars and readers alike, as it can be seen in the following statement:

Even the labour of Linnaeus, though immense, remains still imperfect, inasmuch as it does not comprehend all known plants, and is not adopted by all Botanists without exception; for the writings of such as not submit to it; require from their readers the same labour to settle the synonyms, as they were forced take for those which preceded it. (Martyn, 1815, p.15-16)

That is, even though Linnaean taxonomy proved a massive improvement over previous botanical treaties and works, it was still lacking in the fact that it did not encompass all existing plant species (given how many of them were not even known at that time, or they were not easily accessible for Western researches due to their location in faraway regions that were regarded as remote from a European perspective), and the nomenclature that he devised was easily mistakable and confusing for untrained or layman readers, owing to the massive amount of denominators and synonyms used to describe the far-reaching number of compiled species. This adds to the fact that many readers approaching the works of Linnaeus were not acquainted with Latin language and its associated terminology.

Discussing the use of synonyms in Linnaean taxonomy, it should be noted that the Swedish botanist based many of the terms that he recurrently used on the earlier works of other experts in said field:

Linnaeus indeed has not given a complete synonymy. For plants known long since, he has contented himself with quoting the Bauhins and Clusius, with a figure of each plant. For exotic plants lately discovered, he has cited one or two modern authors and the figures of Rheede, Rumphius, and some others, and has gone no further. His undertaking did not require of him a more extended compilation, and it is sufficient that he has given one certain information with regard to every plant which he names. (Martyn, 1815, p.17)

The aforementioned excerpt thus mentions a number of preceding scholars that inspired Linnaean nomenclature: the author lists Swiss botanist and physician Johann Bauhin (1541-

1613), along with his brother, Caspar Bauhin (1560-1624), who followed his father's steps; other referenced experts include Flemish mycologist and botanist Charles de L'Écluse (1526-1609, also known by the Latin name of Carolus Clusius) plant biologist Hendrik van Rhee (1636-1691) and Dutch naturalist Georg Eberhard Rumphius (1627-1702), among others.

Regarding the first two scholars referenced on the preceding paragraph, the Bauhin brothers, they had been extensively praised and revered due to their invaluable contributions to the betterment of the botanical science:

At length the two illustrious brothers appeared; who alone have done more for the advancement of Botany than all the rest together who preceded, and even followed them, till Tournefort. [...] For till this part of natural history falls into oblivion, the names of John and Caspar Bauhin will live along with it in the memory of mankind. (Martyn, 1815, p.6)

In this passage, Johann and Caspar Bauhin are likened to French botanist and explorer Joseph Pitton de Tournefort (1656-1708), revered as the pioneer who first coined the concept of *genus* and *genera* in order to classify wider categories of plant species, something that would later be implemented and refurbished in Linnaean treaties. Tournefort's fame and reputation in the botanical world is attested by many contemporary and posterior authors. As Wakefield (1798, p. 42) wagers, "Tournefort is a name that was highly distinguished on this list, before the time of Linnæus, whose superior genius has raised him above all his predecessors: his system is now universally adopted."

It is important to underline, once again, the Bauhin brothers and how their research left an indelible mark on Linnaeus's later works. One of the most controversial aspects tackled by the Bauhins that was later reshaped and adapted by Linnaeus is that of nomenclature, i.e., how to name a plant species that has already been defined and classified. In this case, it can be reckoned that the taxonomy concocted by Johann and Caspar Bauhin was significantly more convoluted than the one later envisaged by their Swedish counterpart:

The nomenclature of the Bauhins being formed only from the titles of their chapters, and these titles usually comprising several words, hence came the custom of giving, as the names of plants, long ambiguous phrases; which made this nomenclature not only tedious and embarrassing, but pedantic and ridiculous. I own there might have been some advantage in this, provided their phrases had been better constructed; but being composed indifferently of the names of places whence the plants came, of persons who sent them, and even of other plants to which they fancied them to bear some similitude, these phrases were sources of new embarrassment and fresh doubts, because the knowledge of one plant required that of several others to which the phrase referred, and whose names were not better determined than its own. (Martyn, 1815, p.8-9)

Thus, the Bauhin brothers also came under a barrage of criticism due to their ambiguous, confusing and exceedingly long-worded taxonomy, using ever-extending phrases to refer to a single species instead of opting for briefer, more concise denominations. This made the botanical texts written by Johann and Caspar unintuitive and difficult to navigate for anyone but highly specialized experts, even though they indeed contained extensive knowledge about the vegetal kingdom.

Thus, to bring matters to an end, it may be concluded that Linnaean taxonomy has greatly influenced the study of botanical sciences ever since 18th century, when it came into existence thanks to the thorough work and research of its creator, Swedish scientist Carl Linnaeus (1707-1778). Even though large swathes of his essays and taxonomy were later corrected, and many researchers thereafter have shed light on a number of questions regarding the vegetal realm that were obscure (or were not even in place) in Linnaeus' time, it can be unquestionably wagered that his figure exerts an undeniable leverage on the study of botany to this day, and his principles will be taken into account when handling the translation of botanical terminology in the science-fiction stories included in the corpus of this dissertation.

2.8. The translation of syntactic units and translation universals

The translation of syntactic items also deserves a section of its own, since these particles bind units of meaning and thought together in order to compose coherent sentences. As Brian Mossop (1996) conveniently argues:

Written sentences are only superficially strings of words. In reality, they have to be seen as wordings: words contained in a complex hierarchical arrangement of constructions. It is this arrangement – the syntactic structure – which tells us how the meanings of the individual words are related to each other. [...] Syntactic structure is central to the creation of meaning. (p. 19)

Thus, it can be understood that there is no text or communication without the proper use of syntactic units. The professional translator can count on the presence of the so-called translation universals to aid them when conveying a text into a different language: since all humans follow the same mental procedures to construct language, think of the same concepts and express them in the same way, it is to be expected that many syntactic structures will have direct equivalents in all (or at least most) human languages, which may make translation easier in many cases. The extent of these universals is, however, contested; whereas some scholars claim that any message is translatable into any language, others see more complex challenges. Concerning this dichotomy, Bassnett claims that (1980):

Translation may always start with the clearest situations, the most concrete messages, the most elementary universals. But as it involves the consideration of a language in its entirety, together with its most subjective messages, through an examination of common situations and a multiplication of contacts that need clarifying, then there is no doubt that communication through translation can never be completely finished, which also demonstrates that it is never wholly impossible either. (p. 44)

Baker (1993) defines them as, in her own words, universal features of translation, that is, features which typically occur in translated text rather than original utterances and which

are not the result of interference from specific linguistic systems. Baker and Saldanha (2009), also assert that there are four cases in which a translator has to resort to the use of adaptation in order to tackle their work text:

- cross-code breakdown: where there are simply no lexical equivalents in the target language (especially common in the case of translating metalanguage).
- situational or cultural inadequacy: where the context or views referred to in the original text do not exist or do not apply in the target culture.
- genre switching: a change from one discourse type to another (e.g., from adult to children's literature) often entails a global re-creation of the original text.
- disruption of the communication process: the emergence of a new epoch or approach or the need to address a different type of readership often requires modifications in style, content and/or presentation. (Baker and Saldanha, 2009, p.5)

That is, its use may be motivated by lexical, cultural or communicational issues, depending on the context. Such cases can be seen in the three novels that comprise the corpus for this dissertation, as they cover a wide range of cultural and diachronic backgrounds (from present-day Canada to 50s Great Britain), as well as different perspectives on the use of botanical terminology, and a broad gamut of speech figures and styles.

Let us also remember how Chesterman (2004) distinguishes between two different kinds of universals: *S-universals*, 'universal differences between translations and their source texts', and *T-universals*, 'universal differences between translations and comparable non-translated texts'. Chesterman (2000) also looks into the reason for the existence of translation universals, wagering that its origin can be found, as he says, in the nature of translation as a communicative act, the translator's awareness of his or her sociocultural

role, and in neighboring fields of scientific enquiry, such as human cognition.

Tymoczko (1998) has also pursued the study of translation universals, reaching the conclusion that, according to her, the search for universal laws of translation follows the tradition of empirical research, whose claims about scientific objectivity have been seriously challenged by twentieth-century explorations of subjectivity in the social sciences. Jettmarová (2005), as well, asserts that such universals tend to be overtranslated so that they fully comply with the rules and conventions of the target language, often tarnishing their meaning.

It may be concluded that these *universals* indeed exist and can be found throughout all human languages, but their extent and nature is still a subject of study and controversy. These items can also be found throughout the novels comprising the literary corpus for this dissertation, and they will be analyzed in accordance with their surrounding context (be it linguistic, cultural or diachronic); the study and translation of these universals will be tackled later in this dissertation, in the section devoted to empirical studies, providing a variety of approaches that may be used to convey such items appropriately depending on their particular context and nuances.

Let us now tackle the concept of transparency, which also proves essential to the development of translational activities:

[...] It seems inevitable that transparency would become the authoritative discourse for translating, whether the foreign text was literary or scientific/technical. British translator J. M. Cohen noticed this development as early as 1962, when he remarked that “twentieth-century translators, influenced by science teaching and the growing importance attached to accuracy [...] have generally concentrated on prose-meaning and interpretation, and neglected the imitation of form and manner (Cohen, 1962, p.35).

This points to the long-standing dichotomy of whether the professional translator should focus on conveying transparently the core content of the original text (here referred to as *prose-meaning*, that is, the information conveyed in the text regardless of any figure of speech) or, on the contrary, they should favor the adaptation of such figures into the canons and manners of the target readership (i.e., *the imitation of form and manner*). Cohen

underscores how the latter has been broadly neglected throughout most of the 20th century, as the adaptation of form and rhetoric figures was commonly dismissed as a secondary goal compared to conveying the vital information intended by the source author. In recent years, however, this trend seems to have been steered, as the role of figures of speech and the form and layout of the text are seen in a more positive light, and new-generation translators are instructed in more comprehensive techniques and approaches.

Having set this as a prerequisite for comprehensive, all-encompassing translation, many questions arise as to how professional translators could define a strategy or approach that tackles all of these elements at once. Regarding this hurdle, it could be considered that “a fluent strategy can be associated with fidelity because the effect of transparency conceals the translator’s interpretation of the foreign text, the semantic context he has constructed in the translation according to target-language cultural values.” (Venuti, 1995, p.78)

It can thus be wagered that the concepts of *transparency* and *fidelity* are deeply intertwined, given how one necessarily leads to the other upon the translation of any given text. Therefore (once again, in accordance with the principles of the *skopos* school of thought), professional translators are to approach the source text with the primary goal of staying faithful to both the information and the communicative intention envisaged by the author.

Diving deeper into the concept of *transparency* and its implications, it can be seen that its intricacies may vary depending on the culture or language in which it is dealt. As it is shown in the following statements, the way in which transparency works in English texts may differ from the way it is understood by Spanish-speaking readers and scholars: for instance, Venuti (1995) claims that transparency infuses texts with English values and conjures up the illusion that the translated text is the original one instead, as it reflects the gist and essence of the original author; this would run contrary to what he calls *modernist translation*, which, in his own words, “inscribes the foreign text with marginal English values” (Venuti, 1995, p.21) and shows a foreignizing trend that galvanizes linguistic and cultural differences between the source and target text.

In this case, the author wagers that the concept of transparency implies not only linguistic, but also cultural translation: that is, for a conveyed text to be transparent, it must read as if

it has been written in the cultural sphere pertaining to the target language, instead of a foreign one (this process is conveniently called *domestication*, as explained in footnote 1, p.31). The author also compares this ‘transparency-abiding’, traditional concept of conveyance to what he refers to as *modernist translation*, in which the professional linguist or scholar keeps foreignizing elements present in the original text (be it linguistic or cultural) to mark that the resulting text is, indeed, a translation, and not the source work. He also points, however, that even in this case, the expert must adapt or *domesticate* a number of lexical and cultural elements in order to make the target text intelligible for its readership since, otherwise, such resulting work would be too obscure and cryptic.

This discussion also raises a further point concerning the implications of transparency: given that the cultural values associated to a particular community change and shift through time (i.e., present-day Spain or England are not ruled by the same societal conventions, moral values or rules that were in place and broadly accepted in the 15th century), this also entails that the way in which translations should be conducted should evolve alongside cultural and moral values. Thus, bearing this in mind, the following question arises: if a modern translator approaches an ancient text, should they translate it accordingly with their present-day cultural context or, on the other hand, should they accommodate it to the conventions that were enforced when such text was written? Once again, as indicated in the aforementioned *skopos* theory, the professional translator should make such a choice considering the aim of the text they are tackling: if the purpose intended in the original text was chiefly practical or informative, it might be wiser to adapt such information to the forms and manner of the modern readership. If, on the contrary, the source work is imbued with more artistic or literary pretenses, the translator should at least consider the possibility of preserving its foreignizing or outdated elements. This can also be seen on this dissertation’s corpus, given the abundance of personal and culturally-charged figures of speech that can be found throughout all three novels, and how fantasy and literature intertwine with science in their plots.

This excerpt shows how transparency also plays a crucial role in ensuring narrative fluency in literary works, using the works of Argentinian writer and translator Julio Cortázar (1914-1984) as a representative example of such a statement:

Translating fluently, insuring the illusion of transparency and the evocation of a coherent voice, positioning the reader in a narrative point of view, ultimately heightens Cortázar's modernist effects, the discontinuities that dislodge the reader from the narrative positioning and encourage a self-consciousness skeptical of the realist illusion. (Venuti, 1995, p.267)

In this case, the works of Julio Cortázar serve as an example of how mimicking a realistic style (represented in the preceding passage as *insuring* (sic) *the illusion of transparency*) can be used as a thought-provoking tool to make the reader intellectually and emotionally invested in the work that they are reading. Hence, the *transparency* approach is not only useful when translating strictly informative or communicative texts, but also in more literary or artistic contexts in which more subtle nuances come into play.

Transparency occurs only when the translation reads fluently, when there are no awkward phrasings, unidiomatic constructions or confused meanings, when clear syntactical connections and consistent pronouns create intelligibility for the reader. When the translation is a poem in free verse, varied rhythms that avoid jogtrot meters are needed to give the language a conversational quality, to make it sound natural. Line-breaks should not distort the syntax so much as to hinder the reader's search for comprehension; they should rather support the syntactical continuity that gets him or her to read for meaning over the lines, pursuing the development of a coherent speaking voice, tracing its psychological contours. These formal techniques reveal that transparency is an illusionistic effect: it depends on the translator's work with language, but it hides this work, even the very presence of language, by suggesting that the author can be seen in the translation, that in it the author speaks in his or her own voice. If the illusion of transparency is strong enough, it may well produce a truth-effect, wherein the authorial voice becomes authoritative, heard as speaking what is true, right, obvious. (Venuti, 1995)

Finally, it can be seen how technological and scientific breakthroughs throughout recent decades have also influenced how translation is regarded, and how professional translators tackle different kinds of texts: Baker and Saldanha (2009) underscore how the soaring number of technical, scientific, and commercial documents throughout the 20th century has shaped translational behaviors, ushering a renewed preference for transparency and

efficiency in communication, as well as underpinning the importance of equivalence between the source and target texts, which usually entails some sort of adaptation or rewriting of the original work so that it accommodates the canons and values of the target readership.

Thus, it can be reckoned that the technological race spanning through recent years has also resulted in a renewed appetite for immediate and cost-efficient communication, therefore favoring and encouraging transparent translations in which the contents and figures of speech are crystal-clear for the target readership. The author also raises the point of rewriting and its role in the translational process, as well as asserting how both procedures (rewriting and translation) compare, marking their differences and similarities: it can be assessed that rewriting implies a higher degree of adaptation and alteration of the original content, while translation always entails, as mentioned in the aforementioned excerpt, “some form of equivalence between source and target texts” (Baker and Saldanha, 2009, p.3). That is, translation necessarily implies a greater degree of faithfulness towards the original work.

Catford (1965) identifies two different kinds of untranslatability, coined as linguistic and cultural. On a linguistic level, untranslatability happens when there is no lexical or syntactical counterpart in the TL (target language) for an SL (source language) item.

[...] Contradictory usages can be the syntactical equivalents of lexical ‘false friends’; just as we generally translate a lexical ‘false friend’ with a lexical equivalent rather than its cognate, we might expect contradictory syntactic usages to be translated with the equivalent syntactic pattern rather than word by word. Thus, contradictory usages make it clear that there are different levels of translation, ranging from the word at one extreme to the entire work as the unit of translation at the other (Nida 1964, p.25).

In this excerpt, Nida discusses the recurring issue of the so-called *false friends* and how their existence poses a hurdle to be overcome when translating any given text. Nida warns against conveying false friends into the target text by means of misleading lexical equivalents, rather than the actual counterpart that accurately represents the meaning and hues of such terms in the target language. He also makes a point that there are different layers of levels to the translational process, ranging from the smallest unit of translation (the

word, or even the morpheme) to the entirety of the text to be translated. Hence, the professional translator must consider these different levels and scopes when applying a particular strategy, since a particular word in the original text may prove problematic and call for the use of a specific technique, whereas a whole sentence may require a radically different approach. Besides, as it can be seen in the following assertion, lexical items are not to be tackled in the same way as syntactic structures, as each of them articulate the stream of speech differently:

Obligatory explication is dictated by differences in the syntactic and semantic structure of languages (Barkhudarov 1975; Vaseva 1980; Klaudy 1993, 2003; Englund Dimitrova 1993). Syntactic and semantic explication is obligatory because without it target-language sentences would be ungrammatical. (Baker and Saldanha, 2009, p.106)

It may thus be observed that syntactic and semantic structures interweave in the text in order to create coherent speech, and this must be borne in mind and showcased in the target text by translators. This can also be applied to the proposals for the novels in this corpus, especially when it comes to the translation of botanical terminology, as the meaning of a given term or item (that is, its semantic side) can often be inferred from its wider syntactic structure within a sentence or paragraph. Such claim is also applicable to the broader field of literary translation, in general (as well as science-fiction in particular), owing to the fact that such texts lend a paramount importance to formal, rhetorical aspects of language.

Having dived into the field of botanical taxonomy, seeing how it has evolved through time and how its highly classified terminology can be translated with the help of a variety of linguistic and translational approaches, it is now time to tackle one last epigraph before kickstarting our practical research: that is, the description of the corpus itself, comprising its novels and the authors who created them, all of which will be dealt with in the upcoming chapter.

3. Corpus description

Following the layout of this dissertation's theoretical framework, the works comprising its corpus will now be presented in thorough detail, its implications defined and explored in order to set the foundations for the forthcoming empirical chapter.

3.1. Overview of the authors and works

This section revolves around the authors of the three novels that comprise the corpus of the present dissertation, as well as their respective works. In each case, relevant information will be provided regarding the life and career of each author, alongside a description of the plot and rationale of the novels.

These authors have been selected on the basis of their different, but complementary approaches towards the field of science-fiction and, more concisely, the role of botanical terminology therein. The three selected novels also depict a chronological progression that showcases the evolution of the fantasy genre throughout the latter half of the twentieth century and the first decades of the current twenty-first. For instance, the depiction of the plant-like antagonists evolves from the rudimentary, mindless triffids created by John Wyndham, to the cunning plant-fungus symbionts found in *Seeders*, manipulating and shaping human minds through their fears and whims. This chronological evolution throughout the three selected works also provides a glimpse into the societal issues and mindset of each era. This can be clearly seen, for example, in the representation of female characters: while Wyndham's *Day of the Triffids* shows a blatantly patronizing, condescending approach to the women in the story (depicting virtually all of them as weak, dimwitted characters depending on men for everything), Colucci's *Seeders* revolves around a strong female lead that experiences a remarkable personal growth as time goes by and stands up to abusive men. *Seeders* also includes a plea for environmentalism that is unheard of in previous works.

It is also important to lay focus on geographical and dialectal issues, as the three selected authors include an American (A. J. Colucci) and two Brits (John Wyndham and John Brunner). This

also provides an interesting mix of lexical and societal perspectives that can also prove very useful to the empirical research to be carried out further on in this dissertation.

Thus, in short, the choice of these authors and their respective works is motivated by their time (there is a clear progression upon comparing the 1950s to the 1980s and present day), their geographical location and their different approaches to the science-fiction genre with a special focus on botany.

Finally, the aim of this section is to set up a preliminary framework as an initial step before conducting a comprehensive, empirical research.

3.1.1. Seeders

Seeders is a 21st century horror novel published in 2014, featuring heavy science-fiction and medical elements. This novel served as inspiration to choose the topic of my dissertation, as its publication is rather recent, it is fairly unknown in the Spanish-speaking world and has not been translated into Spanish so far, yet it poses an interesting insight into the world of botany applied to horror and fantasy, while displaying a rich but light writing style that appeals to younger readers. The story of *Seeders* revolves around the mysterious death of a brilliant but unhinged botanist who carried out groundbreaking scientific research on his remote island off the Canadian coast. When his daughter, his former pupil, and several other characters flock to the island to pay their last respects to the late scientist and hear his last will, they will discover a novel, lab-engineered fungus that allows local plants to communicate with them through visions and whispers, eventually wreaking havoc and setting them against each other. Besides the evident botanical leitmotiv, the author also tackles a variety of topics such as the looming threat of climate change, sexual abuse, mental health, maritime terminology, and several sorts of jargons, all of which prove to be highly interesting from a translator's viewpoint.

The issue of climate change, in particular, plays a pivotal role throughout the whole story, and becomes increasingly apparent and urgent as it develops. Towards the end, the plot indeed veers into the theme of revenge, with the vegetal kingdom taking matters into its own hands and subjugating humankind by means of the lab-crafted neuro-fungus before humans destroy them (as well as themselves along the way). The author also criticizes heavily human hubris,

portraying through several characters how society implicitly indoctrinates us to believe that the whole planet and its rich habitats are entirely at our disposal, and that other species (particularly plants) are devoid of feelings and merely function as tools to satisfy our vanity. This arrogance has led humanity to a critical point in which its boundless greed may entail its destruction, as well as the disruption and tarnishing of countless natural ecosystems.

Colucci conducted an extensive prior research with the aid of several experts (such as plant biologist Dr. Eric Brenner of New York University, mycologist Dr. Roy Halling of the New York Botanical Gardens or survival expert Skip Thomsen, as indicated by the author herself in the final acknowledgements as a part of her novel) in order to construct a highly realistic environment that goes into great detail to depict a wide range of plant species and their complex communication processes, as well as the way they interact with their surrounding environment, including plant-fungi symbiosis (known as *mycorrhiza*) or the diverse signals that trees or flowers give off to mark that their physical integrity is compromised, or that they are suffering intense pain or stress. The local cosmogony is so masterfully put together that it is sometimes difficult to tell where real science ends and fantasy begins, as the boundary between both realms grows blurrier as the plot unfolds.

A.J. Colucci devises a brilliant way to make her readership feel the strain that has befallen the natural world with the advent of modern human society: in *Seeders*, plants use a man-made fungus to establish contact with humans and make them feel their pain and anguish. Eventually, these plants can manipulate the hosts of the fungus, plaguing their minds with their own thoughts and forcing them to turn against each other and spread the parasitical fungus all over the world. However, before doing so, they need to *learn* from a living human mind in order to acquire the necessary knowledge about neural connections to instill other minds with their desired thoughts. And this is where the infamous *seeders* that give this novel its title come into play: in the fictional world of A.J. Colucci, a *seeder* is a human being that serves as a host or breeder of sorts for the fungus to grow, spread and, more importantly, acquire the necessary knowledge about the human mind and its anatomy in order to successfully subjugate and control humankind.

It should also be highlighted that the novel scientific field of plant neurobiology plays a pivotal role in the novel. This novel field of expertise tackles plant behavior from the (scientifically backed) assumption that they can perceive their surroundings and react in accordance with

external stimuli as if they were endowed with a nervous system, even if they do not. Plant neurobiology will be explored in further detail later in this dissertation; for now, it suffices to say that the author uses it in order to provide a solid, credible foundation for her somber fictional setting, weaving fantasy and real science in order to present her readers with a sentient fungal species.

Additionally, although it runs more tangentially to the purpose of this dissertation, the topic of mental health and abuse is also crucial to the unfolding of the story, both from a psychological perspective and also from a more scientific, medical viewpoint. As for the former, it delves into the nature of abuse, particularly concerning the female lead and her character development as the story goes; she is depicted as victim who has been emotionally subjugated in different toxic relationships throughout her life (first to her mother, who pretended to be sick and demanded her unfaltering assistance; then to her abusive husband, and she is finally intimidated and chased by the unhinged doctor in the island), but then she eventually rebels against the people threatening and constraining her, and emerges as a determined and empowered protagonist. Regarding the latter, the author goes into great detail to describe the neurological processes triggering emotional and bodily responses, both in humans and also in plants, tackling mental and physical disorders from a scientific perspective.

3.1.2. A.J. Colucci

Bronx-born A.J. Colucci is a fantasy and horror writer based in New Jersey. She already received praise and rave reviews after her first novel, *The Colony*, was released in 2012. She defines herself as an *author, feminist, nature lover and animal enthusiast* (as stated in her own Twitter profile). She is also a member of both the International Thriller Writers association and Mystery Writers of America. She worked as a newspaper reporter, magazine editor and writer for corporate America before becoming a full-time author with two successful novels published, both of which revolve around the dark side of nature and how humankind attempts to detach itself from the rest of the natural world, believing in its hubris that humans are superior to any other living being.

Her first novel, *The Colony*, revolves around a super-colony of ants brewing beneath the streets of New York, whose poisonous stings liquify flesh. When the ants start attacking city locals, two entomologists will set out on a quest to find the queen of the colony before the American government decides to level the city to the ground.

As it can be seen, both novels share a deep fascination with nature and the consequences it can have on human societies, taken to the extreme. This can also be linked with the spirit and nature of the remaining two novels in this corpus, both of which also display, in different ways and perspectives, how nature can rebel against the manmade world when its survival is at stake, and how such challenges can be overcome (or not) through cunning and adaptation by the portrayed characters.

3.1.3. The Day of the Triffids

The Day of the Triffids, by John Wyndham, is a science-fiction classic revolving around the issue of survival in a post-apocalyptic world, taken over by a lab-engineered species of moving plants after an unprecedented celestial phenomenon left most of the human population blind. This novel is remarkable for being one of the first pieces of modern literature to present plants as a source of horror and danger, as well as conceiving a fictional vegetal species with complex anatomical features. The author also poses an intriguing view on how the survivors of an extinction event could thrive and build a brand-new society in a hostile world.

This science-fiction cult novel proves to be a pioneering work when it comes to devising a fictional antagonist species belonging to the vegetal realm: the author provides an original, highly detailed depiction of these creatures, which are presented as conic, vaguely tree-like structures that grow up to be slightly taller than a human adult, covered in leathery leaves and equipped with a deadly, poisonous whip-like appendix that they lash out against their enemies; its touch is fatal and causes an almost immediate death unless the triffid's poison bladder is empty or the target wears protective equipment. Their most characteristic feature is their ability to clumsily move on root-like pseudopods, grimly rocking back and forth as they go. They are also carnivore plants, although their digestive organs are unable to process fresh meat, so they

have to wait for the corpses of their victims to rot until they can digest their flesh. It is also stated that triffids reproduce through pollination in plentiful numbers, and they seem to thrive in tropical climates, though they are present in virtually any ecosystem, bar arctic or desertic landscapes. The author also describes these plants as remarkably sturdy, and several blows are needed to sever their stiff stalks and kill them. The whole action takes place in 1950s-Britain, roughly the same time when the novel was written.

Besides the botanical aspects of the novel, the survivalist element, as previously mentioned, also plays a pivotal role in the development of the plot: as the apocalypse looms large, the main character struggles to flee a ruined London that steadily becomes a sprawling death trap; stores are looted and blinded survivors engage in vandalism out of despair, hunting down the sighted and wreaking havoc. As many of them begin to die and nature starts to take over, an unknown disease spreads. Some isolated groups attempt to rebuild society, but ultimately become aware that it is not wise to remain in the crumbling carcass of a large city, and they make for the countryside. Once there, the remaining survivors truly acknowledge triffids as a real threat, having to fend them off as they gather in droves around precarious settlements. Finally, human communities migrate to small islands where they can thrive and ensure safety without the looming menaces of triffids or looters, in hope that they will be able to return to the mainland in the near future, once they are recovered enough to put up a fight against their plant antagonists.

This novel is, therefore, revolutionary in the fact that it pioneered pulp-like science-fiction stories with a strong survivalist component, similarly to what can be seen in the aforementioned *Seeders*. The author laid out a variety of concisely defined scenarios that the characters have to navigate in order to escape unscathed before the dreaded triffids or pillagers hunt them down, or they succumb to disease or starvation. Thus, we can find the deserted city or the secluded farm, among others, which somehow function like the different stages of a videogame to be beaten by the player, each one of them posing a series of particular hurdles to be overcome and a number of tools and resources to be used to accomplish the defined goals in each case (be it run away, hoard supplies or secure a shelter).

Hence, it comes as no surprise that *The Day of The Triffids* has had a far-reaching repercussion in pop culture all over the world for many decades, including several audiovisual adaptations in the form of movies and TV series, a sequel penned by British author Simon Clark in 2001,

entitled *The Night of The Triffids* (which further explores the implication of a triffid-driven apocalypse and how human society could adapt and thrive in such a hostile world) and even amateur videogames. This brings us back to the concept of transmediality and its implications, i.e., how an idea or story can transcend the means of artistic expression in which it was created, thus being adapted into a different medium in order to reach a larger audience, or to explore how such story can be tweaked or repurposed by using a different language. Moreover, Loponen(2019) underscores how the phenomenon of transmediality plays an essential role in the particular field of fantasy literature and the *irrealia* featured in such works, owing to the fact that visual means of expression can shape literary *irrealia* in a physical way, thus filling in some loopholes or gaps that may have burdened the original work.

3.1.4. John Wyndham

John Wyndham (1903-1969), whose full, real name was John Wyndham Parkes Lucas Beynon Harris, was a British writer born in Birmingham, Warwickshire (England) on July 10th, 1903. He grew up and studied in Derbyshire County and, by the 1920s, he already started writing short stories for American pulp magazines after having tried many different jobs, ranging from advertisement to farming. A few years later, in 1935, he published his first two novels under the pseudonym of John Beynon: *The Secret People* and *Planet Plane* (which was later renamed to *Stowaway to Mars*). He did not write by the name of John Wyndham until 1951, when he completed *The Day of the Triffids*, his most iconic work. Other novels by the author include *The Kraken Wakes* (1953), *The Chrysalids* (1955), *The Midwich Cuckoos* (1957; adapted for the big screen as *The Village of the Damned*, 1960), and *The Trouble with Lichen* (1960). His short stories are compiled in *Consider Her Ways* (1961) and *The Seeds of Time* (1969).

As it can clearly be seen on *The Day of the Triffids*, John Wyndham was bent on depicting the hardships of common everyday characters in the wake of an apocalyptic event that completely disrupts their routines in the comfortable English countryside, forcing them to become survivalists.

3.1.5. *The Crucible of Time*

The Crucible of Time is an epic-like story that describes in great detail the evolution of a plant-like sentient species throughout several centuries, from a Mediaeval-esque society to an advanced technological civilization, as they struggle to achieve a sufficient level of progress to leave their home planet before an impending cosmic cataclysm renders it uninhabitable.

The novel is divided into seven chapters, each of which features different characters (although implicitly linked to previous ones) as follows: the first one presents us with a mediaeval-esque world shaken up by the appearance of the *New Star* on the skies (an omen of the cosmic threat that this world will face in the future), and introduces us to Jing, a pivotal character who will eventually become a mythical figure later in the novel. As the plot gradually unfolds, the author describes how this alien planet suffers different calamities brought about by the ever-approaching celestial bodies which will inevitably collide in the distant future: this includes a harsh glaciation (as the aforementioned bodies block out sunlight) which is ironically followed by an abrupt thaw that causes sea levels to grow dramatically, thus destroying countless settlements.

The alien inhabitants of the battered planet are then forced to adapt to these hostile environmental changes, be it by migrating to warmer tropical areas, or taking to the sea as wandering nomads when their homes are lost to soaring waters. As their technology advances and improves, they eventually become aware of the impending danger that they are facing, and thus deduce that they must come up with a way to flee their dying planet in the far-off future, so that their descendants may survive. However, different characters in different eras will not only have to dodge an ever-increasing number of natural disasters, but also the insanity and violence of conspiracy deniers that refuse to acknowledge the looming danger and resort to superstition and fanaticism, attempting to sabotage any further technological breakthrough. Nevertheless, against all odds, the species finally reaches the necessary level of advancement to achieve space flight, and thus ultimately survives by venturing into outer space.

The anatomical descriptions of the creatures bear a great interest: they have virtually no rigid parts (besides their jaws and two pairs of claws that they use in the fashion of hands). They apparently have a humanoid form, but they are made of tubular structures that may stretch or fold at will depending on the occasion (for instance, it is specified that, whenever a creature

greet another of a higher rank, they dwindle down to a lower height in the manner of a bow as a sign of respect). Puncturing one of their main tubules proves to be lethal, although injuries inflicted against minor ones may heal. Furthermore, these creatures have a single eye on their heads, and their organs are covered by a *mantle* that may display different patterns, sustain injuries or infections, and it gets wrinkly and brittle with age.

This species also displays two utterly alien features: the first one would be the use of pheromones. These creatures give off a wide variety of pheromones to mark their reactions or feelings regarding any given event in their surroundings. Throughout the novel it is stated that there are combat pheromones, as well as rage, happiness, shame or sexual attraction, among others. However, it is also clear that these exudations are a holdover of their primitive ancestors: when they evolve enough to develop a complex language and social structure, pheromone exudations start to be considered as a sign of barbarism, and all characters try to avoid them or conceal them with perfumes.

The second trait is referred to by the author as *weather-sense*, some sort of sixth sense that allows these creatures to foresee most weather phenomena that may jeopardize their integrity. For instance, they may feel that a storm is going to break out before it happens, even if they cannot see the sky.

Another highly original feature is the layout of their minds, as well as their different layers of consciousness: they are always exposed to the so-called *dreamness*, a state of delirious insanity that they plunge into whenever they are affected by hunger or external hardships, which elicits fantastic hallucinations. When a wounded or starved creature gets back on its feet, it recovers its prior state of rational consciousness although, if the delusion is too intense or long-lasting, it may go insane forever. At the beginning of the novel, the author describes a number of religious cults whose priests fast or torment themselves voluntarily to dive into *dreamness* and experience visions that they read as prophecies.

Albeit the element that resembles the plant world the most is undoubtedly their mating process: when a male and a female mate (in an act fairly similar to human intercourse, although more brief and less emotional), the female produces a *bud* that eventually *blooms* into offspring. Newborns are unable to move or stand upright until they reach a more advanced stage of growth, and they must be fed in the spot they lie in, in a similar way to plants.

The mating process proves essential to the unfolding of the plot as, halfway in the novel, it is revealed that males and females do not actually belong to the same species but are different races who evolved together and eventually developed a symbiotic bond to ensure their survival. This way, males *parasite* females and use them to bear their spawn, but a biological mutation in females causes them to become sterile, and several characters must now find a way to alter their biology to avert extinction. Furthermore, the discovery that males have been parasitizing females for millennia triggers an unprecedented social change: all over the first half of the story their society is preeminently patriarchal, not unlike during human Middle Ages, whereas in the second half of the novel females take over and now wield virtually every single position of power, even display a certain disdain towards males.

As for feeding, we can also find several points of interest: it is explained that the protagonist species evolved from ancient flying creatures that hunted down a wide array of animals for food; but currently, in addition to losing their ability to fly, it is also a taboo to eat meat, as it is regarded as a barbaric, cruel act they would only resort to if their lives absolutely depended on it (that is, they regard it in a similar way as we would consider eating a pet). We can also notice a social evolution throughout the story in this regard: in the first chapter, many villages raise cattle for their consumption, although it does not seem to be a vital part of their diet. However, later on, they completely give up eating meat and, towards the end of the story, even small species of fishes are reserved for feeding large animals used as mounts.

On the other hand, the social and technological development of these creatures is as fascinating as their anatomy: contrary to humans, they have not based their technology on the manufacture of inorganic resources, such as stone or metal, but rather they grow and modify a vast assortment of living beings at their service to specialize in every task that needs to be done. For instance, rather than inventing the compass, they raise a tiny animal that always turns northwards and, even in their most advanced stage of civilization, they continue to use animals for transport purposes, albeit genetically modified to adapt to each environment they may travel to. Their houses are carved in immense trees and lit by some sort of fireflies and, by and large, the vast majority of their tools are living, organic beings. Stone carving, the use of fire or metal smelting are also known, but they play a much lesser role than in human cultures.

Lastly, even though social norms in this species are obviously based on those of humankind, there are some remarkable differences: love bonds between parents and children, for example,

appear to be much weaker than they are among humans (it is socially acceptable for a parent to sell their child in exchange of a useful tool, even though in later chapter society seems to shift towards a more human-like parenting). Furthermore, these creatures are generally polygamous: even though they can fall in love and engage in long-lasting romantic relationships, it is perfectly acceptable for each partner to mate with others. Although at the beginning of the novel it is implied that there is a number of empires or independent states that sometimes turn against each other and speak different languages, as time goes by the existing societies tend to unify and become more homogenic: old languages give way to a common worldwide speech, and nations disappear as such, even though it is stated that differences and even rivalries remain among different cities.

3.1.6. John Brunner

John Brunner (1934-1995) was a British science-fiction writer born in Wallington, Oxfordshire. He published his first novel at the young age of 17 and carried out most of his work during the 1960s and 1970s. Most of his stories fall within a particular science-fiction subgenre coined as *space opera*; that is, epic-like works of literature that span throughout a wide range of characters and different eras, as will be seen later on. All of these also applies fully to *The Crucible of Time*.

Some of his most notorious novels include *Stand on Zanzibar* (1968, which tackles the issue of overpopulation in the foreseeable future), *The Sheep Look Up* (1972, this time on the consequences of pollution) or *The Shockwave Rider* (1975, which dives into the implications that advanced computers may have on interpersonal communication and an eventual loss of privacy).

John Brunner was also a strenuous advocate against the use of nuclear weapons: he became a member of the National Council for the Abolition of Nuclear Tests in 1957, and also led the Campaign for Nuclear Disarmament.

In conclusion, the three selected authors and their respective novels share the fact that they use fictional settings with dark or ominous features to depict the fight for survival of their characters and, at the same time, convey a fair dose of social criticism. However, they are also different

enough to be distinct and provide us with particular insights into the science-fiction genre and how we may approach its translation: *Seeders* presents us with a fast-paced horror story heavily charged with ecological and environmental implications, *The Day of the Triffids* dives into the issue of survival in a hostile post-apocalyptic world and, lastly, *The Crucible of Time* is an epic-like saga that follows the growth and maturity of a sentient species throughout several centuries. In conclusion, this selection of works is intended to provide the research with a sufficient work field to fully comprehend the implications of science-fiction translation, always keeping a special focus on botany as an interesting niche field. The latter two novels in this corpus already have a few published translations in Spanish, and they are intended to be used as a means of comparing how challenging lexical items in both of them can be coped with.

Thus, having set out the novels comprising the corpus of the present dissertation and the potential challenges that each of them may pose from a linguistic and translational viewpoint, here follows a depiction of how said stories have been translated into Spanish by a number of translators and scholars within different diachronic and societal contexts.

3.2. Spanish translations

Having already underlined why the selected, original works are highly relevant to the study of science-fiction translation, with a special focus on the role of botanical and scientific terminology, and how their respective authors have greatly contributed to the development of fantasy literature throughout the last few decades, it is now paramount to also underscore how said novels have been translated into Spanish by a number of professionals, as well as reflecting on how such translations have made their way into the Spanish-speaking literary market, thus shaping how science-fiction readers and admirers in the Spanish-speaking world perceive this thriving niche in the wider framework of contemporary literature.

Let us begin by pinpointing, and stated previously in this dissertation, that the first and most recent novel amongst the three works that comprise the starting corpus in this paper, i.e., *Seeders* by A.J. Colucci, has not been translated into Spanish so far, hence providing us with a unique insight into how the research of an English piece of literature can be approached from a

Hispanic perspective when there is no official, published referent to use as a benchmark in the researcher's mother language.

The remaining two novels chosen to fulfill the purpose of this academical work, on the other hand, have indeed been translated into Spanish and commercialized to the general public in a wide array of countries including both Spain and Latin America. *The Day of the Triffids*, in particular, being a well-established and revered piece of literature among science-fiction circles, has been conveyed into Spanish more than a few times, albeit *The Crucible of Time* has also received its fair share of attention, both from fans and also from professional translators.

Regarding the former (i.e., *The Day of The Triffids*), the first Spanish translation that can be accounted for is, as a matter of fact, the one chosen for this paper, which was carried out by Argentinian translator José Valdivieso as early as 1956, a mere five years after the original English text was published. This is of utmost importance since, given that both the original work and its translation are so close in time, both pieces will undeniably share a very similar chronological and social context. That is, later translations may, even if just inadvertently, reinvent the source text in order to align it with shifting societal values or aesthetic tastes, but Valdivieso's rendition will provide us with a unique glimpse into how science-fiction literature was understood and regarded in the Spanish-speaking world at the very same time when its English counterpart was written and published.

Other works by José Valdivieso may include the translation into Spanish of some of the most remarkable stories by Theodore Sturgeon (1918-1985), one of the most remarkable horror and science-fiction authors in the United States during the first half of the twentieth century.

Delving deeper into the circumstances and details under which this translation came into existence, it is noteworthy that it was distributed by the defunct *Ediciones Minotauro*, a Buenos Aires-based publishing house specialized in science-fiction literature at a time when it still remained obscure and overlooked in Spanish-speaking countries. Founded in 1955 by Francisco Porrúa (which means that this translation for *The Day of The Triffids* was, indeed, one of the first works ever published by them), its headquarters moved to Barcelona by 1975, where it kept operating as an independent publishing house until 2008, when it was acquired by the wider Spanish publishing holding *Editorial Planeta*.

Other Spanish translations for *The Day of The Triffids* include the one conducted by translator Catalina Martínez Muñoz for the Spanish publishing house *Alianza Editorial*. In stark contrast with the previously commented rendition, this other version happens to be much more recent, having been published in 2021. As pointed before, diverging translations written in different times and contexts can help us muster a deeper understanding as to how values and canons can shift or be ditched.

As regards *The Crucible of Time*, being a much more recent piece of literature, it has chiefly been translated into Spanish by a reduced number of professionals: for all intents and purposes, the selected translation to be researched in this paper has been penned by Argentinian translator and novelist Margara Averbach for the Barcelona-based publishing house *Ediciones B* in 1995. Considering that the original novel was published in 1983, this makes for a twelve-year gap between the appearance of the source work and its respective Spanish translation thus providing, once again, a fairly short timespan which means that, once again, both the original work and its translation share a very similar social and chronological background.

Regarding this translation's publishing house, the aforementioned *Ediciones B*, it was established during the late 80s (specifically in 1987), much more recently than the previously mentioned *Ediciones Minotauro*, and actually four years after *The Crucible of Time* was originally published in English. It is, therefore, a fairly new company, even though it acts as the successor of the defunct (and wildly popular) Spanish publishing house *Editorial Bruguera*, highly conspicuous for distributing numberless iconic comic strips and pieces of pop literature throughout Spain during most of the twentieth century. *Ediciones B* was thus intended as a break-away branch of sorts, continuing the work of Bruguera on a smaller scale. However, and similarly to what also happened to *Ediciones Minotauro*, it was recently (the takeover took place in 2017) acquired by a much larger company, namely Penguin Random House in this case.

As for Margara Averbach and her career, both within and outside *Ediciones B*, it must be noted that she is a renowned author in Argentina besides her unvaluable endeavours as a translator: some of her most noteworthy stories include *El Año de la Vaca* (ENG *The Year of the Cow*) [1992], which tackles coming-of-age issues in the frame of an oppressive totalitarian regime, or *El Agua Quieta* (ENG *The Still Water*) [2015], which follows the adventures of a little child who discovers a magical pond while his family struggles against the backdrop of the devastating

financial crisis that ravaged Argentina during the early 2000s. It is therefore remarkable how the author intertwines childlike stories and characters with somber issues from the grown-up world, hence resulting in an overall bittersweet tone.

Moving on to her work as a professional translator, Margara Averbach is mostly known for translating the fantasy saga *A Court of Thorns of Roses* (SPA *Una Corte de Rosas y Espinas*), by American fantasy author Sarah J. Maas (1986-).

Therefore, it can be concluded that picking a given, representative translation to be researched in an academic paper calls for a thorough prior analysis, taking into account that a rendition of a source text may also serve us as a sneak peek into the wider background in which both texts were elicited. For the two latter novels included in this corpus, different options have been discussed before deeming which iterations are most appropriate to the purpose of this thesis in accordance with a series of factors, ranging from the very nature of the translation to the context under which they were created.

It is worth mentioning that, during the span of several decades, Valdivieso's translation for *The Day of The Triffids* was the only one used by Spanish-speaking publishing houses; only as recently as 2021, an updated translation was commissioned to Catalina Martínez Muñoz. However, given the paramount importance and influence that the original translation by José Valdivieso has exerted for a long time within the realm of Spanish science-fiction literature, the focus has been laid on his rendition. As for *The Crucible of Time*, no other published Spanish translations have been found, except for the chosen one for all intents and purposes in this dissertation, conducted by Márgara Averbach.

4. Methodology

This chapter will thus be devoted to explaining and showcasing the methodological approach to be adopted when conducting the practical, translational chapter in this dissertation. First and foremost, it is paramount to define the array of translation techniques to be employed in each given case, considering the vast variety of contexts and terminological fields encompassed in this paper. Some of these techniques were already presented and discussed in chapter 2.5, and now a further, more detailed picture of them will be offered in order to shed light on how they can be directly applied to, and linked with the forthcoming practical chapter of this PhD dissertation.

4.1. Description of different translation techniques

This PhD dissertation revolves around the translation from English into Spanish of three benchmark novels selected to encompass the main topics and areas featured in science-fiction literature, with a special focus on botany and other closely related terminology fields. Hence, once the showcased works have been chosen and presented, it is now time to reflect on how the translation of said terminology could be approached: in order to provide an insightful theoretical framework prior to the practical chapter of this essay, here follows a description of how different linguists and translation scholars have tackled this task throughout the second half of the 20th century until present day. Each one of them envisions translation in a different way and presents us with distinct translational techniques and strategies that will later serve to devise the due guidelines to be used when tackling the key excerpts from the three selected stories in the empirical section of this dissertation.

Many scholars (such as Eugene Nida [1964], Noam Chomsky [1981], Lubomír Doležel [1998] or Hans Vermeer [1987]) have approached the task of translating texts from their source language into a different target language from a number of perspectives. Most of them largely agree on the fact that different terms and expressions in unique contexts also call for the use of distinct translation techniques in order to properly convey their meaning and nuances in the translated texts. In this chapter, several translation theory scholars will be highlighted alongside

the translation models and techniques that they propose to tackle a wide array of problematic situations.

But first of all, what is a translation technique? According to the aforementioned scholars and linguists, it can be defined as a fixed procedure that is used consistently to cope with a translational issue in a series of contexts (Vinay and Darbelnet, 1995). As it can be seen later on, linguistics scholars throughout time have defined a large number of these techniques or procedures to assist translators when approaching different text typologies. This also leads us to a related concept, that of translation models: these are commonly understood as whole methods or philosophies, so to say, which can be used to cope with the general process of translating from a particular perspective (Holmes, 1972). Therefore, it could be said, that these models encompass a wider number of translation techniques. Having pointed this out, let us move on to outline the main translational strategies defined by experts in the past.

Many potential translation strategies have been propounded by different scholars throughout the last few decades. For instance, Loponen (2019, p.35) draws on the works of other experts, such as Chesterman (1997), Jääskeläinen (2009), Lörscher (1991) or Leppihalme (2001) to showcase several diverging ways to understand translation techniques and their classification and labelling:

Chesterman (1997, p.90) divides strategies into two kinds: global strategies that affect the translation on a wider textual or stylistic level, and local strategies that are used to translate specific structures or textual points. Jääskeläinen (2009, p.384) takes the division further by providing a four-square map of translation strategies by dividing translation strategies into process and product strategies in addition to global and local strategies. In Jääskeläinen's (2009, p.384) map, process-oriented global strategies describe "task-independent preferred modes of action," such as consistency or work-flow practices, while process-oriented local strategies match Lörscher's (1991) "individual problem-solving strategies." Product-oriented global strategies describe text-related "task-dependent general approaches," such as domesticating versus foreignizing or the overall register or style of the translation, "which guide subsequent local strategies" (Jääskeläinen 2009, p.384). Such product-oriented local strategies match for example Leppihalme's (2001) and Chesterman's (1997) strategies of direct transfer, paraphrasing, omission, cultural adaptation, among others. Even though all of these strategies can be useful in textual analysis, many have definition-related complexities for the studying of

culture specific concepts such as racial stereotyping given fantastic guises in genres of the fantastic.

Most of the translational schools of thought that are presently studied and developed, came into existence during the later decades of the 20th century, particularly during the 60s, 70s and 80s.

Prior to that period, translation was commonly dismissed as a lesser task that could easily be conducted by anyone with a fairly solid knowledge of any given foreign language. There were virtually no translation-specific studies, as they were often included as a side subject to linguistic or philological studies. However, during the aforementioned decades a revolution took place among scholars (including Roman Jakobson [1959], Warren Cowgill [1978] or George Lakoff [2003]), and the perception of translators and translation itself changed thoroughly: the role of translation in cultural and social development was highlighted, and many new approaches to its study and research arose (Álvarez & Vidal, 1996):

In the 1970s, the key word in Translation Studies was ‘history’. Polysystems theory invited reconsideration of the role of translation in literary history, and startling revisions of accepted knowledge were the result. That process is still going on, and the history of translation in theory and in practice is a rich field for scholars. (p. 22)

Furthermore, the sheer definition of *translation* as an activity has considerably shifted over the last few decades. Whereas it used to be considered as a purely mechanical work prior to the mid-20th century, nowadays its definition has been enriched and encompasses a broad range of nuances and socio-cultural implications (Martin, 2011):

Recent research in translation studies into the notion of ‘voice’ in translation has explored how the activity of translation can be considered a complex form of quotation, a re-enunciation of the source text and reanimation of it in ways that can be neutral but can also be interpretative, critical or dissociative (Hermans). I begin here by considering the translation as a virtual meeting point of two very different minds, Wakefield and Ségur being, as we shall see, from cultural and social backgrounds diametrically opposed – in itself a reflection of the range of people generating botanical writing in this period. (p. 30)

Translation is thus regarded presently as an intersectional activity that is deeply enmeshed with the cultural and society backgrounds of both the target and source languages. This, indeed, calls for the attention and care of the translator: upon translating any given text, it must not be regarded as an arid string of words, but as the byproduct of an underlying culture and society.

This should influence the choice of translation strategies, as well as shaping the translation process itself.

We can see that different strategies can be put to use to tackle different obstacles: for instance, Gorlée (2004) claims that translation is “in fact a complex process of diachronic and/or diaspatial reimagining, rethinking, remodelling, and recontextualization”. Leppihalme (1997) pinpoints that *translators need to be aware of TT readers*, considering their background when making potentially decisive translational choices; she advocated the use of domestication in order to convey culture-specific contexts into the target environment and readership. Moreover, Salo-oja (2004) underscores that all texts, regardless of their complexity, contain culture-charged items that may shape the understanding of the work they are used in depending on the upbringing or cultural background of the reader.

This aligns with the aforementioned schools of thought and translation scholars regarding the shift towards a target-oriented translation, that is, bearing in mind the cultural background and interests of target readers as a top priority upon translating a text. Thus, in the light of the previously quoted experts, this seems to be a commonplace in translation studies over the last few decades.

We can see that the domestication vs. foreignization dichotomy proves controversial when tackling source texts that are heavily influenced by cultural items. The translator is thus faced with a difficult choice: to adapt the original work to the target audience so readers can easily understand its content at risk of betraying the spirit of the source text or keep its foreignness at risk of hampering its understanding by the target readership. However, a compromise can be reached in certain cases by applying particular translation strategies: for instance, a foreign cultural item could be kept in the translation of a given text, but its translator might then add a footnote explaining it in great detail to target readers. The key point here is to find a way to convey the spirit and message of the source text to the target audience in a way that respects the work of the original author and, at the same time, enables the target readership to easily approach the resulting translation.

However, this may prove difficult when translating particularly tricky texts, such as poems: should the metrics and rhymes be kept at the expense of the exact content of the original poem, or should such content be faithfully preserved at the cost of losing the melodic beauty of the

source text? Sometimes there is no middle ground, and the translator cannot help but make choice between antagonizing options.

Such a choice, though, must be made with utmost care and respect towards both the author and the audience, and many parameters must be taken into account. For instance, many translators will decide between translation strategies depending on the purpose of the text they approach: in this way, a commercial intended for TV broadcasting may not be translated as if it were an adventure novel, an instruction manual or a news webpage, as each one of these textual categories call for different writing styles and aim for wildly different goals.

We may conclude that the principles and guidelines of Translation Studies have dramatically shifted throughout the twentieth century, and keep evolving swiftly well into the first decades of the ongoing century: the role of the professional translator as to how to handle the source text has gone from being a mere crafter or trader putting information across, to being a veritable author on its own, generating a brand new work that renders the rationale and spirit of the source text into a different culture, context and readership.

As for the main authors and translation scholars whose work is relevant to the concoction of this PhD dissertation, I have selected the following list on the basis of their theories and their links to the field of literature, with a special focus on the fantasy and science-fiction genres, as well as their approach to the discipline of terminology.

4.1.1. Eugene Nida (1914-2011) was an American linguist, hailed for creating the translation theory of dynamic and formal equivalence, as well as for his guidelines regarding the translation of the Bible. It is particularly interesting to the aim of this dissertation to highlight the differences that Nida established between formal and dynamic equivalence: the former focuses on the message itself in both form and content, whereas the latter underscores the relationship between the message and its receiver, claiming that such relationship should be the same as the one established between the source text and its original receivers in the source language (Bassnett, 1980).

The concept of equivalence, propounded by Nida, is central to the purpose of this dissertation, which revolves around the strife to find accurate translations for highly specific items in a series

of novel and particular contexts. Hence, Nida's theories and postulates will be extensively put to use in the upcoming practical chapter in this essay.

4.1.2. Jean Darbelnet (1904-1990) was a French linguist. Together with **Jean-Paul Vinay** (1910-1999), a Canadian translation scholar, he devised the renowned Vinay-Darbelnet theory, based upon the principles of comparative literature and language markers. This theory devises two different routes that the professional translator may pursue when approaching the translation of any given text: either choosing direct (or *literal* translation) or what is coined as *oblique translation*. Each choice entails the application of different translation techniques; for instance, direct translation typically implies the use of loanwords, calques and literal translation, whereas *oblique* translation calls for techniques such as transposition, modulation, equivalence and adaptation. Therefore, we can conclude that *oblique* translation revolves around conveying the underlying meaning of the source text into the target readership, rather than maintaining the form faithfully, and thus parallels can be drawn with Eugene Nida's theories concerning dynamic and formal equivalence (Moreno Paz, 2019). Literal or direct translation, on the other hand, hinges on copying the linguistic structures of the source text into the target language, and it is sometimes referred to as *natural* translation.

Many of these techniques are described in great detail as to how and when they should be applied: for instance, modulation is defined as a change of perspective or thought category. They also introduced the concept of *explicitation* for the first time in the history of Translation Studies as a modern discipline, defining it as "a stylistic translation technique which consists of making explicit in the target language what remains implicit in the source language because it is apparent from either the context or the situation" (Vinay and Darbelnet, 1995, p.342).

Equivalence, on the other hand, is said to be the process of replicating a situation of the original text in the target message by using a different wording. According to Vinay and Darbelnet, the proper use of equivalence enables us to preserve the stylistic impact of the original text, and the translation of problematic linguistic items (such as proverbs, idioms, or clichés) must be dealt with at the level of sense and not linguistic form (Panou, 2013). They also draw a distinction between what they call *full equivalents* (the utopic task of finding language pairs that convey exactly the same meaning in their respective languages) and more realistic equivalences, which

can be achieved through a thorough analysis of the source text, with the aid of glossaries and dictionaries, before turning to the translation into the target language.

By and large, Vinay and Darbelnet (1958, p.331) regard translation as “a wide-ranging discipline as it bases on the knowledge of two linguistic structures, two lexis, and two morphologies but moreover as it bases on two different cultures, literature, histories and geographies”.

Given how the empirical chapters of this dissertation have been devised in accordance with the principles of Comparative Linguistics, the Vinay-Darbelnet theory will be highly useful to achieve its purpose. The dichotomy between implicitation and explicitation is also relevant to its development, considering that different situations and contexts throughout the novels selected for its corpus will call for the use of one or the other, depending on each case.

4.1.3. Andrew Chesterman (1946-) is an English scholar in Translation Studies who laid a focus on semiotics and their usefulness to the discipline, claiming that “semiotics, too, might usefully enter the curriculum at this point, as a discipline offering a general conceptual framework in which matters translatorial can be pondered” (Chesterman, 1997, p.162). He also stresses the importance of multidisciplinary interactions in order to ensure a comprehensive approach to Translation Studies.

Commenting on the different existing translation strategies, Chesterman notes that a strategy can be defined as “a kind of process [...] to arrive at the best version they can think of, what they regard as the optimal translation, and that strategies, in the sense I shall use the term, are thus forms of explicitly textual manipulation. They are directly observable from the translation product itself, in comparison with the source text” (Chesterman, 1997, p.88-89). However, later on (Chesterman, 2005, p.19), he defines strategies as “a way of dealing with a specific communication problem, also pointing that some scholars prefer to keep ‘strategies’ for cases where the translator has a problem to solve”.

Diving deeper into the analysis of translation strategies, Chesterman draws a distinction between two main kinds: first of all, we can find global strategies that can affect the overall text on a textual or aesthetical level, and also local strategies that concern a single, specific translation problem (Chesterman, 1997). The author’s take on this issue is mainly product-

oriented, including procedures such as direct transfer, paraphrasing, omission, or cultural adaptation, in contrast to the so-called *comprehension strategies* (those that concern the cognitive analysis of the source text) (Chesterman, 1997).

Another important note is the distinction drawn between norms and conventions. According to the Baker and Saldanha (2009, p.191), conventions “are not binding and only express preferences”, whereas norms can be defined as constitutive or regulatory. The authors note that “the former concern what is or is not accepted as translation” (as opposed to adaptation, for instance), “and the latter concern translation choices at the lower levels” (Baker and Saldanha, 2009, p.191). On a final note, the quoted Baker and Saldanha (2009, p.196) also say that theory “describes practice in a way which offers a (partial) explanation for observed phenomena”.

Further on, we can also find the issue of translation universals, which he divides into two distinct categories, those being S-universals, universal differences between translations and their source texts, and T-universals, or universal differences between translations and comparable non-translated texts (Chesterman, 2004, p.39). He goes on to note that these universals can have what he calls explanatory force if they are backed by extensive empirical evidence (Chesterman, 2000, p.26). Chesterman always justifies the existence of translation universals as an inherent part of the translational process as a communicative act and its links to related fields of scientific knowledge, such as human cognition.

Chesterman’s insight and classifying of translation techniques will be used to fathom the guidelines to be used later in this dissertation, including both local and global strategies.

4.1.4. Gideon Toury (1942-2016) was an Israeli translation scholar and teacher of Comparative Literature and poetry who pioneered the field of Descriptive Translation Studies, which claims that the translation of texts can be approached from an empirical and systemic viewpoint by using the scientific method. He is also remarkable for his research into the field of pseudo-translation. However, one of his most relevant claims is that the main goal of translation is to fulfill a need in the target culture and, therefore, the target system should be an essential object of study. He also rejects the preconception that the main goal of translation theory is to improve the quality of translation, as theorists and scholars often push for their own agendas, rather than

caring for the greater good of the field (Bassnett, 1980). He also propounded the use of equivalence techniques in similar terms as many other contemporary translation scholars, as a means of conveying sense (rather than form) from the source text into the target readership. To him, any given relationship between a translation and its source text can be labelled as an equivalence of some kind. He also pinpoints the vital importance of acknowledging norms every time we approach a new text, claiming that “there is a point in assuming the existence of norms only in situations which allow for different kinds of behavior”, and he also draws a distinction between norms and universals (Toury, 1995, p.55).

Throughout his main academic works, Toury puts a focus on Descriptive Studies and the essential role that it plays in any useful translation theory (Hermans, 1985). He has also tackled extensively the issue of text comparison, stating that such task is always indirect, as the scholar always compares categories that they choose themselves and works in an artificial, hypothetical context. Besides, just juxtaposing a series of texts will not do, there has to be a wider framework of reference to be applied systematically. Both translational and textual strategies (that is, norms and models) are to be applied when comparing different texts, and a descriptive approach must be adopted in order to produce a high-quality result (Hermans, 1985).

Toury also propounds the concept of Adequate Translation (AT), a hypothetical reconstruction of the textual relations and functions of the source texts. This AT is to be regarded as the optimum of all the textemes (i.e., elements which possess textual functions) present in the source text (Hermans, 1985).

Toury’s empirical and systemic approach to translation seems fitting to the goal of this dissertation, since such methodology is to be followed when comparing the different, selected excerpts from the novels featured in its corpus.

4.1.5. J. C. Catford (1917-2009) was a Scottish linguist and phonetician who made far-reaching breakthroughs in the fields of language and translation. For instance, he showcased two different types of untranslatability, linguistic and cultural, depending on the nature of the problematic items in the source or target text (Bassnett, 1980). In the same vein, Catford notes that “linguistic untranslatability [...] is due to differences in the SL and the TL, whereas cultural untranslatability is due to the absence in the TL culture of a relevant situational feature for the

SL text” (as noted by Bassnett, 1980, p.39). The scholar also notes that untranslatability happens when “ambiguity or polysemy is functionally relevant in a text, or when situational features that are referred to in an original [...] are absent in the culture of the translating language” (as conveyed by Baker and Saldanha, 2009, p.302). He also ponders whether cultural untranslatability should be regarded as a more complex issue than a mere linguistic hurdle, as “for any item unknown in the receptor language a loanword could be imported or an explanatory phrase devised, even if that would result in an unusual, linguistically marked collocation” (Baker and Saldanha, 2009, p.302).

Catford also has a say in the highly controversial issue of equivalence, noting “the long tradition of its 'preoccupation with problems of 'equivalence' versus 'formal correspondence'” (Hermans, 1985, p.34).

However, Catford’s chief contribution in the field of Translation Studies boils down to his concepts of types and *shifts* of translation. These so-called *shifts* refer to “changes that take place during the translation process” (Panou, 2013, p.3). The author set the due criteria to identify three wide-reaching categories of translation (Panou, 2013, p.3):

Full translation is confronted with partial translation (depending on the extent of the translation).

Total translation contrasts with restricted translation (depending on the *levels of language* involved in the translation).

Finally, rank-bound is the opposite of unbounded translation (accordingly with the *grammatical or phonological rank at which equivalence is established*).

Concerning the aforementioned *shifts*, they are further defined as “departures from formal correspondence when translating from the SL to the TL” (Catford, 1965, p.73) and, once again, he distinguishes between two broad subdivisions: level shifts and category shifts. The

former are those in which a source-language linguistic item has a target-language equivalent on a different level, whereas the latter can be further broken down into four subsections (Catford, 1965, p.80):

- Structure-shifts involving change in grammatical structure.
- Unit-shifts involving changes in rank.
- Class-shifts involving changes in class.
- Intra-system shifts which “occur internally when source and target language systems share the same constitution but a non-corresponding term in the TL is selected when translating”.

He also notes that category shifts entail a series of vital, structural changes to the given text. Catford goes on to define translation as “the replacement of SL textual material by TL equivalent textual material” (1965, p.20), and he “does not mean equivalent in meaning” (Malmkjaer, 2005, p.24). The author also sets a boundary between formal correspondence and textual equivalence. The latter is defined as an *empirical, probabilistic* phenomenon. He thus claims that the chance that a given source item will be translated as a target item can be calculated accordingly to prior experience and “recast as a probabilistic translation” (Snell-Hornby, 1988, p.31). This approach has been widely applied in a variety of fields, such as machine or automated translation.

Along with Nida, Catford was the main pioneer of modern equivalence theories, as they both underscore the role of translation, not as the pursuit of equivalence of meaning, but rather as the search of interchangeable target text meanings, that is, “when the two relate to some of the same features of extra-linguistic reality” (Fawcett, 1997, p.56).

Catford sometimes comes under criticism due to his allegedly *simplistic* and *invented* sentences to illustrate the categories that he sets for translational equivalence, as well as limiting his scope to the level of the sentence. However, few alternatives have been proposed to replace his model (Baker, 2009). Thus, we can conclude that J. C. Catford was one of the forefront pioneers of

modern equivalence theories, and a key piece in the advancement of Translation Studies during the second half of the twentieth century.

Catford's notions of untranslatability and translational shifts are also to be tested in the coming, empirical chapters in this PhD dissertation, in which it will be seen whether certain, highly specific terminology can indeed be translated from English into Spanish without any significant semantic loss, or without tarnishing the intent devised by the original author.

4.1.6. James Stratton Holmes (1924-1986) was a Dutch poet, translator and translation scholar who also wrote under the pseudonyms of Jim Holmes and Jacob Lowland. He was also controversial for his particular take on translation equivalence, as he deemed this concept as *perverse* since, in his own opinion, it is impossible to achieve a perfect match between any given pair of terms or expressions in different languages (Bassnett, 1980).

Holmes is widely regarded as the founder of modern translation studies, a term that he coined in the 70s to present a new approach to the analysis of translation as a professional discipline. He strived to establish a broad-reaching discipline, underscoring previously neglected areas of study, such as *interpreting or translator training*. Moreover, he endeavored to map out the *territory* of translation studies, setting boundaries to the newly created field and pinpointing two main categories, defined as *pure* and *applied* studies. *Pure* studies have a two-fold goal: “to provide a description of the various translation phenomena as these occur; and, secondly, to develop general principles through which these phenomena can be adequately explained” (Panou, 2013, p.1). Holmes also notes that “the former objective falls under the rubric of descriptive translation studies (DTS) and the latter under the rubric of translation theory, both being subsections of pure translation studies” (Panou, 2013). As for the *applied* subsection of Holmes's new discipline, the author claims that it has a chiefly practical aim and is concerned with the following areas of knowledge and research:

Translation training (referring to teaching methods, testing techniques and curriculum planning), translation aids (referring to IT applications, dictionaries, translation software, on-line databases and the use of the internet), translation policy (drawing on the role of both translators and translations in society, as well as on the place and role of translating in society) and translation criticism (mainly addressing issues of revision and evaluation of translations). (Panou, 2013, p.1).

In doing so, Holmes's first and foremost goal was to create a new field of study in the same vein as natural sciences (with similarly shaped methods and structures), with an empirical and *historically oriented scholarly* approach, as a counter-reaction to what he deemed as "centuries-long speculative and prescriptive writing on translation". He wanted this fresh discipline to be *theoretical and descriptive*, its main purpose being "to describe, explain and predict translational phenomena" (Baker and Saldanha, 2009, p.77). Finally, he also labelled the translation process as a metaphorical *black box* (Holmes 1972, p.72), claiming that "any classification of shifts at this level has to be based on translation competence, that is, on the possible relationships and differences between systems or codes".

Some of Holmes's most noteworthy works and essays include *The Nature of Translation: Essays on the Theory and Practice of Literary Translation* (The Hague: Mouton, 1970), *Translated! Papers on Literary Translation and Translation Studies* (Amsterdam: Rodolpi, 1988), *Literature and Translation: New Perspectives in Literary Studies: with a Basic Bibliography of Books on Translation Studies* (Louvain, Acco, 1978), *The Name and Nature of Translation Studies* (Amsterdam, Dept. of General Literary Studies, 1975), and also *Forms of Verse Translation and the Translation of Verse Form* (1969).

In conclusion, Holmes's work is one of the main cornerstones of modern translation studies, paving the way for a renewed approach to the activity of professional translators from a practical and empirical viewpoint. Additionally, his wide-reaching contributions to the field have significantly shaped how the translational activity is understood from a historical and social standpoint.

4.1.7. André Lefevere (1945-1996) was a Belgian translation theorist and one of the greatest pioneers of modern Translation Studies, trying to "produce a comprehensive theory which can also be used as a guideline for the production of translations" (Bassnett, 1980, p.17). In doing so, he endeavored to inextricably link theory and practice, thus producing a model that would not only provide a professional translator with essential theoretical concepts, but also enable them to set out to elicit a functioning translation of any given source text (Bassnett, 1980).

Lefevere, who regards translation as a cultural process (rather than merely linguistic), tackles the well-known gulf between *loyal* and *free* translation, claiming that the professional translator should always act as a mediator between the source text and the receptor of the final translation. Both the informative, semantic content and also the illocutive potential have to be conveyed into the target language; the former is easily achievable, whereas the latter is much more difficult to attain (Moreno Paz, 2019). He addresses the highly controversial duality of *realia* and *irrealia* as well, especially with a focus on Eastern European studies, as he claims that authors must convey the concepts of a referential universe into its target equivalent, rather than simply translating words. Lefevere also underscores the role of *realia* and *irrealia* as a hurdle for the translator to overcome, as these items always have a sense of *otherness* to them, which may give away the resulting text as a translation.

As it already happened with Chesterman, Lefevere's classification of translational techniques and division between *loyal* and *free* translation will additionally be used to assemble the guidelines to tackle the different excerpts in both English and Spanish included in the empirical section of this dissertation.

4.1.8. Ritva Leppihalme (1945-) is a Finnish scholar who made several breakthroughs in the field of allusion translation and the study of cultural items. She also makes reference to the concepts of *realia* and *irrealia*, as well as their use in Translation Studies, claiming that “in the broad sense then, references to realia may include not only references to material items (machete, sari, gravad lax) but also culture-bound notions and phenomena, such as religious or educational concepts, taboos, values, institutions, etc.” (Leppihalme, 2011,p.126)

Regarding the use of translation strategies, Leppihalme states that these can be automatized by experienced translators, to the point of applying them unconsciously. This, of course, is not the case of more complex translation (such as dense, scientific or literary texts), but simpler works can be routinized once the due strategies have been fully assimilated (Leppihalme, 1997). She also claims that many strategies, for instance transfer, paraphrasing, omission, or cultural

adaptation have clear cultural implications and, therefore, must be regarded in a wider cultural-linguistic context.

Interestingly, Leppihalme also puts readers of translation in the limelight, underscoring their role in the translation process: she propounds that, even when the source text and the target text are essentially the same, source readers may differ from target readers, as the semiospheres they live in may evolve in different ways, affecting the “cultural anchors of the allusive content within the text” (Loponen, 2019, p.39). Therefore, translators need to take target readers into account, catering to their background knowledge and expectations. This entails not a literal translation, but an adaptation of the source text into the target culture, conveying all culture-specific items and contexts, and changing them as required, transforming connotations and intertextual references (Salo-oja 2004). Thus, the professional translator must be experienced in socio-cultural competences both in the source and also in the target language (Leppihalme,1997).

Another noteworthy aspect in Leppihalme’s work is the fact that she establishes a set of priorities and hierarchies to be followed when a professional translator approaches a new text. In her own words:

There is usually a need to establish a hierarchy of features/messages in the text, reflecting the hierarchy of the values the translator wishes to preserve in the target text, which in turn is based on a translationally relevant text analysis...These are then included in the translation by working from the top down, ie. starting with those that have been deemed the most important. (Leppihalme 1994, p.83)

This prioritizing calls for a global translation strategy depending on the *capabilities and need* of the target audience. In the words of Gutfeld (1990, p.146), “a translator has to decide what she can communicate to a particular audience taking into account its background knowledge”.

As mentioned before, Leppihalme pays special attention to the concept of allusion, which she understands as “intertextual references, figures of speech that refer to cultural phenomena outside the text itself” (Leppihalme 1997, p.6). She notes that allusions can be used as metaphors, or also as independent references.

Finally, the author also makes a case for highlighting reviewing and criticism, proposing a more comprehensive approach to translation review, and underpinning its importance when it comes to ensuring the quality of the target text (Leppihalme, 2000).

4.1.9. Lubomír Doležel (1922-2017) was a Czech literary theoretician who greatly contributed to the analysis and study of fictional worlds. Thus, Doležel claims that fictionalized cosmogonies are linked to the real world, but also “primarily they exist as independent constructs created by the reader through semiotic interpretation. He also states that the factual non-existence of the fictional worlds is no reason to not study them as holistic entities, even if the point of reference must be adjusted” (Doležel, 1998, p.145).

Doležel also brought about the revolutionary concept of *fictional encyclopedias*, that is, works encompassing the unreal knowledge of any given fantasy world, so that the reader can fully comprehend its nature upon approaching such universe. Doležel tackles the issue of fictionality as an inherent part of philosophy and modern logic. To him, the concept of fictionality is intersectional and therefore, in order to fully comprehend its nature, the professional translator or scholar should resort to the study of literature, semiotics, art history or anthropology, among other disciplines. However, he also defines it as a mainly semantic phenomenon that takes place along the *sign-world* axis (Moreno Paz, 2019).

One of Doležel’s most remarkable works is *Heterocosmica* (1998), in which he showcases and further develops the theoretical principles of Ferdinand de Saussure, a Swiss linguist and semiologist who claimed that the semantic structures of languages is created independently from the wider scheme of the world. That is, a word’s meaning is independent from its reference, and it is determined by the formal structure of the signifier.

Doležel further comments on the reference-meaning dichotomy by underscoring that there is no *fictional reference*, that is, made-up lexical items have no counterpart in the real world, even though they do contain semantic information. The fictional term, therefore, is neither true nor false, as it lies outside the concept of truth. According to his postulates, fictional language plays a chiefly aesthetic role in literary works, whereas scientific language serves a referential role (Moreno Paz, 2019).

Doležel's classification of fictional worlds, drawing a distinction between *primary* and *secondary* cosmogonies depending on their connection to the real world and the profusion of made-up lexical items, or *irrealia*. Thus, primary fictional worlds are based on fully fantasy-like, independent universes, whereas secondary worlds would be mainly iterations of real life. Doležel also underlines that these fantasy worlds can be heterogenous, combining different semantic domains in order to concoct a wider literary scheme (Doležel, 1998).

More importantly, the author draws a distinction between the so-called *world-imagining texts* (also referred to as I-texts) and *world-constructing texts* (or C-texts), the former being depictions of the real world that provide further information on it, while the latter precede the fictional worlds and determine their structure, bringing them into existence. *World-imagining texts*, being descriptions of the actual, living world, are subject to the absolute values of *true* and *false*, while *world-constructing texts* are free from such a boundary. While *imagining* texts are ruled by reference, those that are *constructing* set their own set of referential rules by creating a possible narrative world. On a similar note, the references that shape I-texts are fluid and changeable due to the ongoing process of validation and refutation; C-texts, on the other hand, remain unchanged once the author of a given fantasy world has finished its creation (Moreno Paz, 2019).

Diving further into the classification of fictional worlds, four main types can be set apart:

In a SW (world of states), only static objects with static physical features and fixed links are admitted. These are final, timeless worlds ruled by a classical, logical discourse.

The NW, or natural world, considers the possibility of the *natural force* that shapes and changes the objects of the fictional world, resulting in a dynamic, but lifeless universe. This is the discourse of natural science and the world of nature poetry.

An AW (Action World) is construed after a certain agent comes into action, to whom intentional changes are attributed, resulting in new actions and thoughts, which are triggered by specific mental events referred to as actions.

Finally, an AAW (Action Agent World) involves several agents that interact with one another.

Regarding the use of *irrealia*, Doležel claims that a physically feasible world may feature feasible *irrealia*, whereas unfeasible *irrealia* may feature in physically unfeasible worlds, be it homogenously supernatural, dual or hybrid (Moreno Paz, 2019).

In conclusion, Lubomír Doležel is a pivotal figure in the study of fictional literary worlds, and therefore his works and theories are paramount to the nature of this dissertation. His classification of cosmogonies and analysis of semantic items will be of great use when it comes to tackling the terminology in this thesis.

4.1.10. Mary Snell-Hornby (1940-) is a British-Austrian translator and scholar who raised the point that linguistics is to be regarded as a wide-spanning discipline that encompasses *cultural, situational and historical factors* (Snell-Hornby, 1988, p.19-20). She explicitly criticizes Catford's take on textual equivalence, deeming it *circular* and labelling his theories as *hopelessly inadequate and isolated and even absurdly simplistic* (Leonardi, 2007, p.87). Besides, Snell-Hornby goes on to berate the very notion of equivalence in the Anglosphere, claiming that it has become "so vague as to be useless" (1988, p.21), and she proposes a comprehensive redefinition of its scope.

However, above anything else, the author hails the role of the translator as a pivotal player in literary systems and the study of linguistics. Her emphasis on subjectivity, along with other similarly mind-shaped scholars, stems from two different influences: firstly, the "growing importance of research into the ethics of translation, and secondly, a much greater attention to the broader philosophical issues that underpin translation" (Bassnett, 1980, p.9). It can therefore be concluded that Mary Snell-Hornby is a major player in the fields of translation review and equivalence theories, and thus her work is of great importance to the purpose of this dissertation.

Having laid out the research carried out by the main scholars in the wider field of translation studies and linguistics throughout in recent decades, it is also important to underscore how such techniques and approaches will be applied practically in this dissertation. As it stands, a selection of the most noteworthy translation techniques will be provided in a table at the beginning of the practical chapter, featuring a brief definition of each technique, and shedding on how such approaches will be used to analyse and classify the collected items and samples.

Such list will feature the following techniques, previously commented in the theoretical framework in this dissertation: literal translation, adaptation (be it morphological, semantic, or cultural), calque, creation, omission (also known as deletion, and featuring reduction as a subvariety of incomplete omission), explanation and addition (alternatively known as expansion). An additional category will be presented for those cases in which several techniques are applied at once in order to translate one single sample, labelled as *mixed*.

To bring matters to a close, this description of keynote scholars and their respective strategies, techniques and approaches is intended to set a solid foundation for the study of translation in the particular case of the novels and semantic fields selected to the intents and purposes of this essay. Therefore, what follows is a guideline concocted from the main techniques already commented in this section that now comes to an end, which will be described in further detail and placed within the wider framework of this dissertation and its hypothesis.

5. Translation and analysis of botanical, scientific and fictional terminology

Following the theoretical instances of this PhD dissertation, in which its main hypothesis was proposed, the works constituting its corpus were presented and described, and its wider theoretical context was defined (commenting on prior researchers and their perusals on the field of botany, science-fiction literature and the translation of both), it is now time to introduce the key chapter of this essay, which will present the practical and empirical research of the aforementioned corpus. This chapter will unfold in accordance with the following structure: for

each relevant semantic category (including botanical terminology as well as other fields pertaining to, or related to it in the specific framework of each novel, such as fictional items that play a significant role in each plot, or medical terminology based on the medicinal uses of botany, as well as novel-specific and other remaining items), a data table will be shown, depicting key excerpts from the original works alongside the proposals for their translation into Spanish. For the novels that have already been translated into said target language (since the first one, *Seeders*, has not been officially translated yet), a second data table will be provided, this time portraying how the discussed items and sentences were conveyed by the selected professional translators in their published renditions of the novels.

Be it as it may, in each case the data will be sorted out according to the translational technique used in every example, and the usage of such strategies will be discussed and explained after each set of examples. It is worth mentioning that, for each given case, a proposal will be made firstly, and then such rendition will be compared with its counterpart in the selected published translation in Spanish, should there be one.

Finally, as a reminder and benchmark, in order to aid the forthcoming empirical work, here follows a table summing up the main translation techniques commented in the earlier, theoretical chapters of this dissertation, which will be later applied to classify and tackle the collected translation samples:

Technique	Definition
Literal translation	The process in which the grammar constructions of the original language are replaced by their closest equivalents in the target language. Delisle et al. (1999)
Adaptation (morphological)	Modifying the source text in a way that affects its order, grammar structure or form, but without bringing about any changes to its core meaning, that is, the information that was meant to be expressed

	in the original work. Vauquois and Boitet (1985)
Adaptation (semantic)	Modification of the source text, affecting the meaning conveyed in the original work partially or totally. Baker and Saldanha (2009)
Adaptation (cultural)	Modification of the source text, affecting the the cultural or societal conventions in the original work partially or totally. Chesterman (1997)
Addition (alternatively known as <i>expansion</i>)	“The explicitation of source information, either in the main body of a text or in a foreword, footnotes or a glossary”. Baker and Saldanha (2009, p.4)
Omission (alternatively known as <i>deletion</i> , with <i>reduction</i> as a subvariety)	Omission happens when some information or a particular item from the source text is erased from its translation, and therefore it is not represented in any way in the target language. In the subvariety of reduction, the omission is not complete, as the source text is only partly deleted. Chesterman (1997)
Calque	A direct translation technique in which a given source item is conveyed unaltered into the target language; because of this, calques are commonly considered as a category of loanwords and approached as such. Vinay and J. Darlbenet (1995)

Creation	“A more global replacement of the original text with a text that preserves only the essential message/ideas/functions of the original” Baker and Saldanha (2009, p.5)
Explanation	Providing a definition of a given term instead of its translation, commonly used in cases when the original item may not be understood by the target readership (due to being obscure or too alien for them), or it simply does not have a clear equivalent in the target language. Baker (1998)
Mixed approach	This makeshift category will be used whenever several translation techniques are used to convey a single sample. A breakdown will always be provided, depicting which particular approaches have been employed to translate each part of the item or items.

5.1. Botanical terminology

The terminology of botany, and its deep-reaching implications in the development of the three selected novels is the pivotal topic of this PhD dissertation, along with the analysis and application of due translation strategies to convey such terminology into the target language. The way botanical terminology is used, intertwining fiction and real science, and playing a particular role in the plot in each case, varies highly depending on the analyzed work:

- *Seeders*, the cornerstone story which inspired the leitmotiv of this PhD, tackles the highly interesting issues of plant neurobiology, the (fictional) implications of genetical plant engineering and the incredible possibility of communication between plants and humans by means of a parasitic fungal species, which works as a mediator between both realms. Some noteworthy terms concerning this field of expertise include items such as *mycorrhiza* (i.e., the actual, symbiotic relationship between a fungus and the roots of a plant), biology-related items like *stomata* (plant cells that regulate the pace of gas exchange) or more generic terms such as *gene pool* or *genus-species*. Albeit fantastic at its core, the novel provides us with a comprehensive, real botanical backdrop: all of the mentioned plant species in the story are real (with the obvious exception of the aforementioned fungus, although there exist real fungal species which have proved to parasite and control the minds of small insects with simple nervous systems, so maybe, after all, the scenario posed by A. J. Colucci is not that far-fetched...), and the author mentions a wide range of real scientific essays which clearly point towards complex communication between plants (including the works of Bangladeshi botanist and science-fiction writer Jagadish Chandra Bose, for instance), as well as the fact that they can feel external stimulus, reacting with due pain, panic or pleasure. Then again, some of the featured plant species and genus in the novel include common names such as *calabash* or *evergreens*, plant parts like *pistil* or *blades*, plant-related adjectives such as *flowery*, and also scientific botanical names, including *hedera helix* (ivy), *euonymus fortune* (winter creeper) or *lolium perenne* (ryegrass), among many others.

Besides its well-developed science-fiction, horror background, *Seeders* also makes an urgent plea for our modern society to act against climate change before an impending ecological catastrophe wreaks havoc all over the world. A. J. Colucci presents us with a world in which plants are utterly aware of the grim future that awaits them if humans carry on with their selfish, destructive lifestyle. As one of the core characters once says, “I’ve *seen* the future, Isabelle. Brown and white with lots of blue. But no green. No life.” (*Seeders*, p.181). Thus, plants come together to subjugate humans to their will with the crucial help of this lab-engineered fungus. In the new world, humankind will no longer be self-aware, but just another animal species abiding by the dictates of Mother Earth, surviving by merely fulfilling their primal needs. And who knows, as the

heroine of the story concludes at the disturbing end of the novel, maybe it is not such a terrible solution, all things considered...

Therefore, the main challenge upon comparing and analyzing the botanical terminology in *Seeders* will be the use of scientific knowledge in the plot, as well as discerning real science from fantasy. For example, the novel mentions some fictional (but content-wise feasible) treaties on botany, such as *The Underground Communication System of Environmental Stress Cues in Plants*, *Binaural Beats: Principles and Explorations* or *Time-Lapse Study of Plant Signaling. Behavior in the Northeastern Poplar. Signaling Response Nexus of a Root*. Therefore, every mentioned essay or paper must be double-checked to confirm whether it is fictional or real. The use of purely fictional *irrealia* also poses a challenge; for instance, we can find the so-called V-waves (that plants in the story allegedly use to communicate telepathically with each other), the occasionally-mentioned *Eden Project* and, above all, the title itself: in the novel, the *seeders* are the bodies (dead or still living) of human victims that the antagonist fungus uses to grow and reproduce before spreading to other hosts... but how could such a made-up term be translated into Spanish?

- In *The Day of the Triffids*, by contrast, we are faced with a classical *man versus nature* survival story with the exception that, once again, the plant antagonist is man-made, so we can also find some covert criticism against human hubris and the grim consequences that uncontrolled scientific progress may entail for the future of humankind. The core difference when comparing this story to the previous *Seeders*, however, is that, in this case, there is no empathy towards plants, no plea to respect the natural environment we live in: triffids have no feelings nor consciousness, they are nothing but voracious killing machines, driven by a cunning but primal instinct to find their prey. This inevitably leads towards a second major difference: the *scientific* component in this story is much simpler and shallower than in *Seeders*, as the survivalist narrative feature is given a much more relevant role. We know that triffids were originally grown in farms to be processed for its priced vegetal oil, that they thrive in tropical climates and are moving, carnivore plants equipped with a deadly, venomous whip-like appendix. They are not sighted, which gives them a decisive edge in their fight against humans when an

unspecified cosmic event renders most of humankind blind (it is never explained or even implied whether this event was brought up by triffids to trigger the demise of humankind or, on the contrary, it was completely unrelated and coincidental). We are also told that this species reproduces by spores carried by the wind with a worrisome speed. Therefore, most of the botanical terminology in this work concerns the anatomy of triffids, with terms such as *sting*, *leathery*, *venomous* or *root-mass*.

The point here is that the only explained aspects about triffids are those who prove relevant to the humans fighting them. Nothing is told about what they do when people are not present. Bearing all of this in mind, the main difficulty when studying the use of botanical terminology in this novel will be conveying accurately this constant sense of danger and threat into Spanish.

- As for the third and last novel that comprises the main corpus of this PhD dissertation, *The Crucible of Time*, it poses a radically different viewpoint on botany from the previous two novels. In this case, the author has built a whole species of extraterrestrial plant-like beings completely from scratch, complete with their own culture and unique idiosyncrasy. Because of this, the literary world is far more detached from reality than in *Seeders* or *The Night of the Triffids*, which poses completely new challenges to the scholar approaching the text from a linguistic perspective: how could we translate, or even analyze, a biological feature that has no equivalent whatsoever in our tangible reality? The adventurous creatures that inhabit the world of *The Crucible of Time* are sentient, moving plants who exude pheromones depending on their mood, prey on other living beings instead on feeding through photosynthesis and descend from an ancient kin of flying predators. Their bodies consist in a series of intricate but fragile tubular structures arranged in a humanoid fashion, covered in a leaf-like cape. These tubes can be inflated or deflated at will, and they bleed sap-like blood when punctured. They have an only eye, and claws instead of hands. Hence, as it already happened previously on *The Day of the Triffids*, the vast majority of botany-related terminology in this novel concerns the anatomy of the fictional species that the plot revolves around, showing an abundance of terms and *irrealia* like *dreamness*,

Moreover, as the novel is laid out as an epic saga spanning across centuries of alien history, the translator also has to tackle an ever-changing culture which features several evolving languages, gadgets and beliefs, following the growth of these ambitious creatures from a Medievaesque stage of civilization to the conquest of outer space.

As such, the translation of this story poses a daring challenge: to render an entirely fictional plant-like species, together with its unique, evolving culture, from English into Spanish.

5.1.1. Spanish translations of botanical terminology

Following the previous overview of botanical terminology in the three selected novels, the aforementioned terms and expressions will now be compared to their counterpart in published Spanish translations.

Since the first novel, *Seeders* by A. J. Colucci, has not been translated into Spanish as of yet, a new translation for the selected items will therefore be provided.

In this first chapter of the empirical research, a distinction can be drawn between different kinds of botanical terminology. Let us begin with a classification of plant species that are mentioned throughout the three novels, and how such denominations can be conveyed into Spanish.

The first novel in the corpus, *Seeders*, is particularly rich in this field, featuring a plethora of mentioned species, using both common and scientific names. However, as it has been noted before, it is not possible to resort to any published translation for reference; therefore, the terms in the following table will be accompanied by my own proposals, alongside an explanation of the due translation procedures and strategies to convey such items into the target language.

As an introduction, let us tackle the translation of common plant names before resorting to more complicate issues. Here follows a template featuring a list of widely known species:

Original item	Spanish translation	Page
Cultural adaptation		
There were so many memories of her father in the study; a giant globe he used to teach her geography, calabash pipe that belonged to his father, a ladybug paperweight that Isabelle made from a rock when she was five.	Había muchos recuerdos de su padre en aquel estudio; un globo terráqueo gigante que usaba para enseñarle geografía, una pipa hecha con una calabaza de peregrino que había pertenecido a su padre, un pisapapeles de mariquita que Isabelle había hecho con una piedra a los cinco años.	47
Mixed (Cultural adaptation + Literal translation)		
There were conifers , of course; pine , spruce , and hemlock just like in New York. But there were some broad-leaf varieties that weren't in his collection, basswood , chokecherry , and speckled alder .	Había coníferas , por supuesto; pinos , píceas y cicuta , igual que en Nueva York. Pero había algunas variedades de hoja ancha que no estaban en su colección. Tilos , cerezos de Virginia y alisos grises .	105

From this template, it may be deducted that the most common strategy is, by far, literal translation, distantly followed by calques and, finally, a few cases of cultural adaptation. This comes down to the fact that many of the mentioned species are common and well known all over the world (or at least in most English and Spanish-speaking countries), so every English denomination already has a coined Spanish equivalent waiting to be retrieved.

The aforementioned isolated cases of cultural adaptation (such as *calabash* translated as *Calabaza de peregrino*) can be justified once we look into the historical context of the Spanish term. In this case, the target expression (which translates literally as *pilgrim pumpkin*) was coined after pilgrims walking the *Camino de Santiago* (*Way of Saint James*), meandering

through Northern Spain, used emptied calabashes to store water or food during the Middle Ages.

Other Spanish translation include the location of the species in its denomination. This can be clearly seen in the case of the chokecherry, which is translated as *cerezo de Virginia*; also, the red cedar, known in Spanish as *sabina colorada de Virginia*. In both cases, the addition can be justified by the fact that neither of the mentioned species are commonly found in Spanish-speaking regions, and thus the potential readers could use a hint of where they could find these kinds of trees.

The scientific, Latin denominations, on the other hand, pose no challenge to the translator, as they are to remain unchanged in the target text. At any rate, here follows a list of the more remarkable scientific names of plant species featured in the novel, in accordance with Linnaean taxonomy:

- *Dianthus caryophyllus* (carnation)
- *Lolium perenne* (ryegrass)
- *Euonymus fortune* (winter creeper)
- *Hedera helix* (ivy)
- *Thuja occidentalis* (white cedar)
- *Arborvitae* (Thuja)
- *Thujopsis dolabrata* (cypress)
- *Mimosa pudica* (does not have a common name)
- *Claviceps* (ergot)
- *Viridiplantae* (literally Latin for *green plants*, comprising all kinds of both terrestrial and aquatic organisms)
- *Armillaria solidipes* (honey fungi)
- *Arctostaphylos uva-ursi* (bearberry)

- *Populus tremuloides* (aspen poplar)
- *Helianthus annuus* (sunflower)
- *Aspergillus* (a genus of mold)
- *Ophiocordyceps unilateralis* (fungus species)
- *Cordyceps* (fungus species)

Further on, the analysis of highly specialized botanical terminology (for instance, items concerning the anatomy of plants) entails a deeper insight, as its translation must be carried out with utmost care in order to prevent any loss or shift of meaning. Here follows a list containing such items:

Original item	Spanish translation	Page
Mixed (Literal translation + Calque)		
“Yes, the dark mass could be sclerotium , and those threadlike stalks most certainly resemble some kind of endophyte , but none I’ve ever seen. Its reproduction and life cycle are completely different from ergot or any other kind of Claviceps , and the fact that it grows on everything; well, it could be some kind of Neurospora mold mutation .”	- Sí, la masa oscura podría ser esclerocio , y esos tallos filosos se asemejan, con toda probabilidad, a alguna clase de endófito , pero ninguno que haya visto jamás. Su reproducción y su ciclo vital son completamente diferentes a los del cornezuelo o cualquier otro tipo de Claviceps , y el hecho de que crezca en todas partes... bueno, podría ser alguna forma de mutación del moho Neurospora .	134

This wasn't unusual. Ninety percent of plants on earth form mycorrhizas, symbiotic relationships with fungi .	Esto no era infrecuente. El noventa por ciento de las plantas de la Tierra forman micorrizas, relaciones simbióticas con hongos .	159
Most of the fungus was soft and fluid, but there were tiny shoots of a purplish growth protruding from the floral structure like minigrains of rice . Some of the fruiting bodies beneath his fingertip dropped to the ground, where he saw other tiny pods . He looked at his fingers, brushed with purple spores , and it reminded him of something.	La mayor parte del hongo era suave y fluida, pero había pequeños brotes de un recrecimiento purpúreo que sobresalían de la estructura floral como granos diminutos de arroz . Algunos de los órganos fructíferos bajo las yemas de sus dedos cayeron al suelo, donde vio otras vainas minúsculas. Se miró los dedos, manchados de esporas púrpuras, y le recordó a algo.	111

In this case, we can see that the most commonly used translation strategies are, once again, literal translation and calque, although some special cases will be tackled later on. The profusion of calques can probably be ascribed to the fact that the original text uses an extensive range of Latin Greek-rooted terms and expressions that share the very same cognate in Spanish. Many examples of this can be found in the template above, including *neurospora*, *mycorrhiza* or *sclerotium*, among many others. It is of utmost importance, however, to correctly adapt every Greek or Latin prefix and term into its Spanish morphology: for instance, English *ph* always results in *f* in Spanish, and the lexical base *phyto* is adapted into *fito*.

Nevertheless, as mentioned before, some English items prove more challenging to translate and require the use of more elaborate translation strategies. A good example could be the expression *fruiting bodies*, which can be handled in different ways: a possible translation could be *cuerpos fructíferos*, although other correct options include *órganos fructíferos* or even just *frutos*. However, I have finally opted for the expression *órganos de fructificación*, as it seems to convey the meaning of the original item while preserving a scientific register and tone (for

instance, the term *órgano* is more precise and accurate than the much more generic *cuerpo*, which may not be necessarily associated with the field of botany or biology).

Thus, to bring this chapter to an end, it may be said that botanical terminology, being an specialized field of knowledge, calls for a prior research and understanding; even though, more often than not, these terms have direct equivalents in Spanish (particularly when it comes to scientific Latin names, which are often the same, or at least very similar in both languages), sometimes it will be necessary to apply a certain degree of adaptation, be it semantic, morphological or even cultural. Because of this, every case needs to be considered on an individual basis, paying attention to any possible nuance or translation choice.

Moving on to the second novel, *The Day of the Triffids*, we can also find a number of botany-related terms, although most of them will inevitably refer to this particular made-up species, rather than actual, real-life plants. Moreover, in this case we can compare the original items to published Spanish translations, as well as the proposals on this dissertation. Here follows a selection of remarkable plant-related terms and expression featured in this novel, alongside several approaches and strategies on how they may be conveyed into the target language.

Original item	Page	Spanish translation
Mixed (Literal translation + Calque)		
Even the regular inhabitant of such a district found it difficult to detect a motionless triffid cunningly lurking beside a jungle path .	19	Incluso a los nativos de tales regiones les resultaba difícil detectar un trífido inanimado que acechara astutamente junto a un sendero selvático .
There was no great interest, either, in the three little leafless sticks at the base of the stem . There was a light notion that they might have something to do with the reproductive system – that system which tends to be a sort of botanical glory-hole for all parts of	20	Tampoco despertaron un gran interés las tres ramas sin hojas en la base del tallo . Se tenía una vaga idea de que podrían formar parte del aparato reproductor , ese aparato que tiende a ser una especie de cajón de sastre botánico para todas las partes de

doubtful purpose until they can be sorted out and more specifically assigned later on. It was assumed, consequently, that their characteristic of suddenly losing their immobility and rattling a rapid tattoo against the main stem was some strange form of triffidian amatory exuberance .		propósito dudoso hasta que se puedan clasificar de forma más específica más adelante. Se asumió, por lo tanto, que su característica de perder la inmovilidad de forma repentina y lanzarse a la carrera contra su tallo principal era alguna forma extraña de exuberancia amatoria trifídica .
Literal translation		
It was found that it took about two years for the lost sting to be dangerously replaced, so that an annual pruning assured that they were in a state of safety where they could provide vast amusement for the children.	19	Se descubrió que el peligroso aguijón tardaba unos dos años en volver a crecer, así que una poda anual garantizaba que estuvieran en unas condiciones de seguridad que les permitieran ser una gran diversión para los niños.
But in the tropics , particularly in the dense forest areas , the quickly became a scourge .	19	Pero en los trópicos , particularmente en zonas forestales densas , no tardaron en convertirse en una plaga .
And a number of other mysterious things not even beginning with “tri” - though almost all centered on the feature of that active, three-pronged root .	18	Y otras cosas misteriosas que ni siquiera comenzaban por <i>tri</i> , aunque casi todas se centraban en aquella característica y activa raíz de tres protuberancias .
Every year we were pushing the northern limit of growth for food plants a little farther back.	14	Cada año empujábamos el límite de crecimiento de las plantas comestibles un poco más al norte.

It can be seen here that these terms and expressions are commonly translated into Spanish by means of either literal translation or morphological adaptation, even though the use of other highly specific strategies (such as semantic adaptation or calque) is not unheard of.

As for the use of literal translation, it can be justified in a hefty number of cases in which the original item has a clear equivalent in the target language. This commonly happens when the referred term is rather generic or well-known by the readership, rather than particularly obscure or scientific: for instance, the English expression *jungle path* can be easily conveyed into Spanish as *sendero selvático* and *pruning* means *podar*. Some other terms and words, pertaining to a higher register, present the translator with several, equally correct translation options; for example, the term *scourge* has been translated here as *plaga*, but it could also have been conveyed as *peste*.

Regarding the common use of morphological adaptation as a translation strategy in this chapter, it is used when it is overdue to change the structure or appearance of the source item in order to keep its original meaning in the target language. A fine example of this could be translation of *reproductive system* as *aparato reproductor* in Spanish; this implies that the word *system* is conveyed as *aparato*, rather than its literal equivalent, *sistema*, so that the naturalness of the item is preserved, and the translation does not stand out in the text. This can also be seen in the translation of *three-pronged root* as *raíz de tres protuberancias*: in this second case, the English compound *three-pronged* is further explained in Spanish by means of the syntagm *de tres protuberancias*, given that this word-formation resource is not present in the target language.

Semantic adaptation seems more uncommon, but some prime examples of this strategy can still be found in the preceding template: *motionless triffid*, for instance, is translated as *trífido inanimado* (the semantic shift here would reside in the word *inanimado*, which does not just imply lack of motion, as the English term does, but also lack of life itself). In this case, the use of the aforementioned strategy is motivated by a matter of fluency and naturalness in the target language, as the lack of movement is commonly associated with lifelessness in the target language, and thus *inanimado* comes off as a much more natural option in this context than a literally translated *inmóvil*. Another example of semantic adaptation can be examined in the translation of the expression *limit of growth for food plants*, which is conveyed as *límite de crecimiento de las plantas comestibles* in Spanish. The point here is that *food plants* is translated as *plantas comestibles*, *comestible* being Spanish for *edible*, rather than simply *food*. The

semantic shift here entails that the range of plants referred to is broadened, encompassing not only those which are commonly grown for human consumption, but also any plant that may be eaten. Once again, the rationale behind this translation choice is that of idiomaticity in the target language, given that the word *comestible* is ubiquitous in Spanish when talking about crops and the wider field of agriculture.

Calques are also present here, occasionally appearing as if conveying a fictional *irrealis* into the target language as devised by the original author, without any alteration that may disrupt the intention or content of the source item. This can be clearly seen in the translation of *triffid* as its Spanish counterpart, *trífido*. It can be seen here that, despite a minor spelling adjustment in order to adapt the item to the rules of Spanish grammar (avoiding the use of the double *f*, adding a common final *o* in order to make the translated term more natural-sounding and adding an accent mark over the first *i* to mark the stress in the word), the core of the original item remains exactly the same, being a made-up item used to refer to the main antagonistic species in the novel.

Finally, it is also important to bring our attention to the translation of the *irrealis* *triffid* as *trífido*. Analysing this is paramount to the translation of the novel as a whole, since it appears in the very title of the story, and it designates the main antagonist faced by the characters in it. It is relevant to underline how the original *irrealis* was created by using Greek and Latin elements (chiefly the root *tri*), which will seemingly make it easier to convey from English into Spanish, given how such items abound in both languages (since Spanish stems directly from Latin itself, whilst English is a Germanic language, albeit greatly influenced by Latin, and particularly French, which is Romance as well).

To finish off this point, it can be concluded that botanical terminology in *The Day of the Triffids* is abundant, and it deeply intertwines reality and fiction, posing a major challenge to the professional translator. It is paramount, then, to discern which terms are purely fictional, which ones are strictly scientific and, even more importantly, which ones are a mixture of real and fantasy traits. In each case, the due translation strategy is to be applied: a real botanical term with a direct equivalent in the target language will probably be translated literally, whereas the translation of a partially or totally fictional item will usually require the use of more complex techniques: it will sometimes be necessary to adapt the item to some degree, to further explain it in the target language or, if the context calls for it, use a loanword or calque.

Following the preceding analysis of these mentioned proposal, we shall now look into the published Spanish translation of the novel. The chosen version, in this case, is the one completed by José Valdivieso in 1974. Let us see how this professional translator tackled the aforementioned items back in the day:

Spanish translation	Page
Omission	
Se suponía que estaban relacionadas de algún modo con el sistema reproductivo , ese sistema que tiende a ser indiscriminado refugio de todas las partes de la planta de no muy seguro propósito, hasta que se les asigna alguna función específica. Algunos creían, por lo tanto, que esa repentina movilidad de las ramitas y ese su alegre repiqueteo contra el tallo eran una extraña demostración de exuberancia amatoria .	30
Mixed (Literal translation + Calque)	
El viajero no advertía la presencia de un trífido entre los espesos matorrales y era golpeado al acercarse por el venenoso aguijón . Aun los naturales de aquellas regiones no veían fácilmente al trífido que acechaba inmóvil a un lado del sendero .	29
Literal translation	
Todos los años llevábamos un poco más al norte el límite de crecimiento de las plantas alimenticias . Las cosechas surgían rápidamente en campos que hasta hacía poco habían sido tundras o tierras estériles . En todas las estaciones, también, se conquistaban desiertos, viejos y nuevos, para que crecieran en ellos alimentos y pastos . Pues la alimentación a nuestro problema más urgente, y el desarrollo de los planes de regeneración y el avance de las líneas de cultivo eran seguidos en los mapas con una atención similar a aquella que la generación anterior había puesto en los frentes de batalla. Tal cambio de interés, de las espadas a los arados , fue sin duda un	18/19

adelanto social, pero los optimistas cayeron en el error de creer que había habido un cambio en el espíritu humano.	
La gente se sorprendió, y hasta se disgustó un poco, cuando supo que la especie era carnívora y que las moscas y los otros insectos que caían en el cáliz eran digeridos por aquella substancia pegajosa . Nosotros, los que vivíamos en zonas templadas, no ignorábamos la existencia de plantas insectívoras , pero no estábamos acostumbrados a verlas fuera de los invernaderos , y las considerábamos, en cierto modo, algo indecentes, o por lo menos impropias.	29

As it can be seen in the preceding template, the most common strategy applied in this published translation is literal translation, albeit closely followed by a hefty number of cases of morphological or semantic adaptation. Firstly, it can be seen how literal translation is widely used to convey common botanical terminology into the target language; for example, the term *reproductive system* can easily be conveyed as *sistema reproductivo* (it should be noted that the same Latin-based cognates are shared in both languages, although the chosen Spanish translation comes off as a near-calque, while the most common denomination in Spain would be *aparato reproductor*; however, considering that the selected rendition of the novel was carried out by an Argentinian translator, it can be asserted that such translational choice would indeed be widely accepted in Argentina. Dialectal variations should be borne in mind at all times when analysing translated items, especially when it comes to worldwide languages boasting hundreds of millions of speakers, as is the case with both English and Spanish), and *venomous sting* is translated as *venenoso aguijón*. In other cases, the equivalence is not as obvious due to changing cognates from one language to another, but the original term still has an exact counterpart in the target language. This would be the case of the word *scourge*, which can be translated directly as *plaga*, or *hothouse*, meaning *invernadero* in Spanish. In all of the aforementioned cases, we are dealing with general well-known terms, all of whom have direct equivalents in the target language.

Regarding the abundant number of cases of morphological adaptation, this strategy is notably used to adjust the grammar or structure of a source item so that it conforms with the rules and idiomaticity of the target language, without modifying its meaning or underlying implications.

This can clearly be observed, for instance, in the translation of *quick crops* as the longer sentence *las cosechas surgían rápidamente*, which implies the addition of a verb (*surgir*, meaning *to spring up*), and also replacing the original adjective *quick* with the adverb *rápidamente* (which translates as *quickly*). This whole overhaul of the original item is probably caused by the will to adapt the translation of the original text to the rules and naturalness of the target language, as a literal translation in this case (something along the lines of *cosechas rápidas*) would most likely feel outlandish to most Spanish-speaking readers.

In addition to morphological adaptation, semantic adaptation entails a deeper degree of change, altering the very content of the source item so that the overall target text still conveys the core meaning as devised by the original author. This technique is most commonly applied to items which do not exist in the target language (or culture) in its same exact form, and it can be seen in the preceding template, in the translation of items such as *fingering its stalk*, which is translated into Spanish as *inspeccionó el tallo*: the adaptation here, hence, resides in the verb *fingering* (implying a repeated and delicate movement with one's fingers) and its counterpart in the translation, *inspeccionar* (which translates as *to inspect* and refers to a much more generic kind of research, not bearing the physical implications carried by the English verb *to finger*).

Omission is also used sporadically, cutting off part of the information conveyed in the original text; an example of this could be the translation of *Triffidian amatory exuberance* as *exuberancia amorosa*, obviously omitting the fact that this so-called exuberance is displayed by triffids themselves. This probably comes down to the fact that the Spanish translator took this information for granted, and thus deemed that it could be deleted from the target text without affecting its content, and also making it briefer and easier to read.

Some differences can also be underlined when comparing these translations to the proposals analyzed before: for instance, the item *botanical glory-hole* is translated as *cajón de sastre botánico* in the aforementioned proposals (hence the broader concept of *hole* is preserved, with the Spanish word *cajón* meaning *drawer*), whereas it is conveyed as *indiscriminado refugio* (which roughly translates as *all-purpose shelter*) in the published translation. By and large, the professional translator seems to apply a higher degree of both semantic and morphological adaptation in most cases. This can also be seen in *reproductive system*, conveyed as *aparato reproductor* in the proposal and *sistema reproductivo* in the published translation; once again, the official Spanish translator seems to stick closer to the original item, form-wise.

Lastly, the third novel in this corpus, *The Crucible of Time*, also features a wide array of botanical or botany-related terms; in this case, most of them pertain once again to the field of fantasy, as the plot takes place in a fictional alien world. Additionally, just as it happened previously with *The Day of the Triffids*, official Spanish translations can also be found and used for comparison purposes. Here follows a table including a selection of noteworthy botanical terms in this novel:

Original item	Page	Spanish translation
Literal translation		
In fact, the plants were decaying like everything else in the vicinity, and the mud along the banks was actually bare, whereas ordinarily it would have been fledged with shoots sprung from the riverside vegetation .	860	En realidad, las plantas se estaban marchitando como todo lo demás en las inmediaciones, y el barro de las orillas estaba desierto cuando, en condiciones normales, habría estado repleto de brotes germinados de vegetación ribereña .
(As the pheromones mingled in the taut still air with what the rotting plants exuded , but far fiercer...)	858	(Mientras las feromonas se mezclaban con el aire pútrido y estancado con los efluvios de las plantas marchitas , pero mucho más intensas...)
Correct! Well, if a mindless plant can find a way to spread beyond its isolated patch, why shouldn't we?	551	¡Exacto! Bueno, si una planta descerebrada puede encontrar la forma de expandirse más allá de su parche de tierra aislado, ¿por qué no íbamos a poder nosotros?
Mixed (Creation + Calque + Literal translation)		
And, after checking that the cylinder's course was clear of obstructions and that all the stations from which reports were to	1032	Y, después de comprobar que el curso del cilindro estaba libre de obstáculos y que todas las estaciones desde las que se

be made were functional, she slid back a plank of stiffbark in the control house's floor and imposed her full weight on something Chybee could not clearly see but which she guessed to be a modified form of mishle, one of the rare secondary growths known as flashplants which, after the passage of a thunderstorm, could kill animal prey by discharging a violent spark, and would then let down tendrils to digest the carcass.		emitían informes estaban en funcionamiento, deslizó una plancha de duricorteza del suelo de la sala de control y presionó a plomo algo que Chybee no pudo ver con claridad, pero que asumió como una forma modificada de mishle, una variedad extraña de crecimiento secundario conocida como destelliplanta, la cual, después de una tormenta, era capaz de abatir a una presa animal descargando un fuerte destello, y entonces soltaba sus zarcillos para digerir el cadáver.
It was as though the surrounding plants, both Gveestian and natural, had bowed away from it.	834	Era como si todas las plantas de los alrededores, tanto las Gveestianas como las naturales, se hubieran apartado.
For a while longer the fact that Skilluck and his comrades -surviving on what they had stored during their season of good eating but otherwise, save mentally, in little better shape than anyone else- struggled along the frost-rimmed branchways to deliver doses of creshban, together with what scraps of fruit or leaf or funqi-pulp their exotic plantings on the pumptrees yielded, counted heavily in their favor, while the chaplains, who had disgraced themselves by their affair on the wharf, lost countenance.	324	Durante un tiempo el hecho de que Suertehábil y sus camaradas (que sobrevivían con lo que habían guardado durante la temporada de buenos alimentos pero, por lo demás, salvo en lo mental, a duras penas estaban en mejor forma que el resto) se abrieran paso a través de las ramas cubiertas de escarcha para entregar dosis de creshban, junto con los restos de fruta, hojas o pulpa de funqi que les proporcionaban sus cultivos exóticos en los árbolbombeadores, contó enormemente a su favor, mientras que los capellanes, que habían caído en desgracia tras el episodio de los muelles, perdieron su aprobación.

Why should anyone worry about tending foot-plants , then? Why should anyone care if the rain-channels got stopped up? Why should anyone object if a patch of mold started growing on her or his mantle?	1041	¿Para qué debería nadie preocuparse de cuidar de las podoplasmas ? ¿Qué le importaría a nadie si los pluviocanales se atascaran? ¿Por qué se quejaría nadie si le empezara a crecer una mancha de moho en el manto?

Most of the aforementioned items are conveyed into the target language by applying either literal translation or also morphological adaptation, although cases of semantic adaptation, calque and even creation are not uncommon.

First of all, as it can already be seen in many cases throughout this chapter, literal translation is abundantly used in cases in which there is a clear, direct equivalent in the target language. This can happen, for example, with existing species of plants or animals, or tools or behaviors shared by both the source and target cultures. This can be seen in the translation of terms such as *riverside vegetation* as *vegetación ribereña*, both having the same exact meaning, as it is a common natural/geographical term referring to the array of plants growing on the banks of a river. Other representative examples of this translation technique may include less obvious options such as the English term *tendrils*, which is translated as *zarcillos*: both words still bear the same meaning, even if their roots and forms are radically different. Literal translation can also be applied to compounds with little difficulty, as long as the original compound pertains to a general field of knowledge and has an easily found equivalent in the target language: that would be the case of *rock-plants*, which can easily be conveyed into Spanish as *plantas roca*, with the only minor adjustment of dropping the slash in the English item. Thus, it may be concluded that this widespread translation strategy can be applied whenever there is a direct equivalent in the target language, bearing the same meaning and underlying nuances.

As for morphological adaptation, there is also an abundance of cases showing that, in some cases, a superficial change in the form of a word is necessary in order to convey the same meaning that was expressed in the original text. Amongst the many examples of this strategy in the preceding template, a few uses could be underlined, such as the translation of *high-yielding secondary growths* as *cultivos secundarios muy productivos*: in this case, the adapted part of the item would be *high-yielding*, conveyed in Spanish as *muy productivos* (a compound turns

into an adjective modified by an intensifier; once again, this kind of slashed compounds are extremely odd in Spanish, and should be avoided when possible), as well as the translation of *growths* as *cultivos*, rather than a more literal (but hardly intelligible in this context) *crecimientos*. Other examples of this translation strategy include longer excerpts, such as *taut still air with what the rotting plants exuded*, which is conveyed in Spanish as *un aire pútrido y estancado con los efluvios de las plantas marchitas*. Several morphological shifts can be observed in this case: for instance, the indefinite article *un* is added at the beginning of the sentence out of idiomaticity, and *rotting plants* is conveyed as *plantas marchitas*, thus turning a gerundive verb into a past participle form. This goes to show that some changes to the grammar and structure of a sentence may render it more natural-sounding and idiomatic in the target language without affecting the meaning and content expressed in it.

Regarding the use of semantic adaptation in this template, it happens when the original does not exist in the target language in its exact form and with the very same nuance, and thus the translator needs to adjust the superficial meaning of said term in order to preserve its core implications in the translated text. In this case, this can be seen in the translation of the item *mindless plant* as *planta descerebrada* in Spanish. The semantic shift here resides in the fact that the target-language adjective *descerebrada* literally means *brainless*, which is not the same as the English word *mindless* because it refers to a physical organ, rather than the intangible realm of the mind. However, the former elicits the latter, and therefore the underlying meaning of the source item remains the same in the target text; in addition to that, there is also the issue of idiomaticity and naturalness: a literal translation of the source item, resulting in *planta sin mente*, would be easily understood by the Spanish-speaking readership, but it would most likely be felt as an odd exercise of word-building, far less common than the everyday derogatory term seen before, *descerebrada/o*. Hence, it is important to bear in mind that the frequency of use and naturalness of a word or expression also exerts a high degree of leverage in deciding what translation strategy to apply, besides the meaning itself of both the source and also target item.

Besides the aforementioned strategies, a few noteworthy cases of calque can also be found, chiefly regarding made-up terms (or *irrealia*) that bear no resemblance to real-life items, and therefore call for a completely fictional counterpart. For instance, regarding the expression *Gveestian plants*, since this refers to the lab-engineered plants created by a fictional character named Gveest, there is no solution but to reproduce the name of said character and its adjectivized form in Spanish, thus being *plantas Gveestianas* (the only additions here would be

the plural suffix -s and the feminine-gendered suffix -a at the end of said adjective, as required by the rules of Spanish grammar). Another noteworthy example showcasing this strategy could be the fictional term *funqi*, as well as its derived compound *funqi-pulp*, used later in the novel. The key difference here, compared to the first example in this paragraph, is that, even though the word itself is made-up, in this case it does bear a rather obvious resemblance to a real-life entity: that is, fungi. In the story, this so-called *funqi* (whose very denomination is quite obviously inspired by the existing term *fungi*) is presented as a mushroom-like growth used for feeding, or sometimes as a luminescent tool. So, what should the professional translator do in such a case? Since the cognate *fungi-* also exists in Spanish, present in words such as *fungicida*, and it can be thoroughly understood by the average Spanish-speaking reader, it seems reasonable to keep the original item just as it appears in the source text, since this would not hinder the understandability of its content in the target language. As for its previously mentioned, related compound, *funqi-pulp*, its translation into Spanish seems to pose few challenges as well: it would be enough to translate the term *pulp* literally (*pulpa*, in Spanish), keep the term *funqi* just as it is, and drop the slash in the compound (as mentioned before in this chapter, as required by the usage of Spanish grammar), thus resulting in *pulpa de funqi*. In this case, the original *irrealis* would be left unchanged in order to underline the idea that it is fictional and alien. That is, the Latin root *fun* implies a fungal species, but it is important to stress the otherworldliness of its nature, hence the decision not to adapt the original item.

Finally, the use of creation as a translation strategy is particularly remarkable due to the fact that it is hardly found (if at all) in other categories or tables in this chapter. This comes down to the fact that made-up compounds, even when all of their components are actual words, often prove difficult to translate, as they make reference to an overall concept that has no equivalent in the real world. Thus, the most appropriate strategy in this case is to concoct a new fictional term in the target language by using real Spanish words, just as it happened in the original English text. This can be seen, for instance, in the term *chowtrees*, meaning a particular species of fictional trees used as nourishment. As it has been mentioned just before, this item consists of two existing words, *tree*, and *chow* (referring to food or the action of gobbling it down), but the union of these parts gives rise to a new, fictional *irrealis*. Hence, the proposed Spanish translation for this term would be *masticarboles*, joining the verb *masticar* (to masticate, to gobble down) and *árbol* (simply meaning *tree*), thus preserving the nuances and implication of

the original item. A very similar procedure can be observed in the translation of *warmplants* as *calidoplangas*, or *toughtrees* as *reciárboles*.

Another relevant example of creation, this time involving a slightly different translation procedure, would be the term *foot-plants*, translated as *podoplangas* in Spanish. In this case, the original compound drops its slash, and the term *foot* is replaced by the Greek root *podo-* (still bearing the same meaning), much more common in Spanish when referring to scientific or technical terminology. It is relevant to underline that Greek roots and prefixes or suffixes are a common occurrence in Spanish, particularly when it comes to highbrow terms or registers, therefore the use of the lexical base *podo* comes across as natural in the target language.

After seeing how the translation of this whole list of items has been tackled in the preceding proposal, let us now see how this process was handled in a published translation of the novel. For all intents and purposes, the translations shown as follows belong to Mária Averbach, and the translated version was published in 1995:

Spanish translation	Page
Mixed (Calque + Creation + Literal translation)	
Primero se estudiarían los daños sufridos por el proyecto para poder enviar un informe a Chisp y, después, una expedición iría al otro lado de la cuenca para tomar muestras de plantas y ver si contenían organismos infecciosos , aunque por allí no se hubiese encontrado ninguno.	171
Allí, temblando de excitación, Arranth partió la cera y sacó un tapón fabricado con planta-esponja . Incluyó el tubo, lo agitó y extrajo de él un rollo de documentos escritos sobre una corteza blanca desconocida para ellos.	114
Así aprendió cómo se habían inventado los musculadores y los nervógrafos — una red de estos últimos, conectada a plantas sensibles , informaba de los resultados obtenidos en corrales y lagunas — y también todo cuanto se sabía sobre la capacidad de flotación de los arrastra-en-las-nubes , cuyas vejigas	143

hinchadas de gas habían sido la primera prueba de que el aire no era una sustancia sino una mezcla de sustancias.	
—Como sea —resumió—, nuestra hipótesis es que en las primeras etapas, había las mismas posibilidades de que la implantación de un brote diera como resultado un hijo «macho», como el que implantaba , que de que la receptora, cuyas hormonas entraban en fase reproductiva mediante la impregnación , se impusiera al invasor y naciese una hembra. Conocemos organismos parásitos , sobre todo entre los jenneqs , que todavía dependen de las hormonas del anfitrión para brotar y cuyos brotos pueden permanecer inactivos durante una veintena de años o más.	141
La mandaron a buscar muestras de plantas muertas de la parte superior de la presa mientras Byra instalaba un microscopio para examinarlas y Awb seguía a Thilling hacia los mejores puntos de observación desde donde obtener una imagen panorámica antes de bajar al lago para tomar primeros planos del barro desnudo y los cutinates podridos .	185
Literal translation	
¡Recurriremos a las plantas silvestres como nuestros antepasados!	151
(Mientras las feromonas se mezclaban en el aire tenso con lo que exudaban las plantas en proceso de podredumbre , un olor cada vez más fuerte...)	183

When looking into the published translation and the choices made by its translator, it can be noted that the most commonly applied strategy is, once again, literal translation, whose use is widespread when conveying common botanical terminology that has direct equivalents in Spanish. This shows, for instance, in the translation of terms such as *infective organisms* as *organismos infecciosos* (moreover, the items in both languages share the same Latin roots), *sensitive plants* as *plantas sensibles* (once again, the same cognates are used in both languages) or *wild plants* as *plantas silvestres* (the main difference in this last example would be the translation of the Germanic-rooted adjective *wild* into its Latin counterpart *silvestre* but, despite

the cognate shift, both words are still common and easily identifiable in their respective languages).

One can find, however, a number of other, different approaches in this chapter, which are put to use when the given source item cannot be translated literally. For example, morphological adaptation implies a change in the structure or form of the item without altering its meaning. This can be clearly seen in the translation of the word *implanter* as *el que implantaba* in Spanish (lit. *he who implants*), rather than a much more literal *implantador/a* (depending on the gender of the subject), or also in the case of *mindless plant* as *una planta sin inteligencia* (lit. a plant with no intelligence); in this second example, it can be seen that the Spanish translation is much more grammatically complex and lengthy than the original English item because of the fact that the target language does not have a suffix equivalent to *-less*, marking absence of a certain quality, and thus calls for a longer grammar structure to convey such information.

Besides morphological adaptation, a number of cases of semantic adaptation, which entails a certain change in the nuances or content of the original item in order to preserve its core meaning in the target language. This is commonly used when the concept or reality expressed in the source language is culture-bound and there is not an exact equivalent in the target language and can be seen in the preceding template in the case of the following excerpt: *Taut still air with what the rotting plants exuded*, which is translated as *El aire tenso con lo que exudaban las plantas en proceso de podredumbre*. It is apparent here, for instance, how the English syntagm *rotting plants* has been translated as a much more complex and longer *las plantas en proceso de podredumbre* (which would roughly translate as *the plants in the process of rotting*); hence, a noun modified by a single adjective is replaced by the very same noun accompanied by a lengthy prepositional syntagm featuring two other nouns. This breaks the consistence of the original item, and could be replaced by a shorter, more literal translation such as *plantas podridas* or *plantas que se pudrían*. Besides, the expression *aire tenso*, albeit a literal, grammatically correct translation of *taut air*, sounds odd and unnatural in Spanish, to the point that the average Spanish-speaking reader might not fully grasp what the text means by that; therefore, I propose a more idiomatic translation of this particular term, such as *aire cargado*.

Another translation technique that can be analyzed here is omission, that is, to erase part of the information which was present in the original text with the aim of preserving its idiomaticity or naturalness towards the target readership. This can be seen in a single case in this chapter, that

being the translation of *Gveestian plants* as *las (plantas) gveestianas*. In this case, the translator relies on the overall context to assume that the reader knows that the issue being discussed is plants, and therefore proceeds to omit it from the source-language version, deeming it unnecessary. Another, similar case of omission would be the translation of *off-white bark* as *corteza blanca*. In this second example, the English compound *off-white* implies that this particular bark has an unhealthy, ill-looking shade of white, whereas this information is completely amiss in the Spanish translation, as the target text simply asserts that the bark is white. It is hard to discern whether this second omission was actually an accident, or maybe it was intended by the translator, although the former seems more likely, as it would not make sense to intentionally omit a relevant nuance that may shape the perception of the discussed item.

Calques are also occasionally used in the aforementioned template, meaning that the source item is conveyed into the target language either with its same exact form, or possibly with just a minor spelling adjustment. Some representative examples of this strategy in the prior text include the fictional scientific term *cutinates*, which stays the same in the Spanish translation, given that there is no equivalent in the target language and the source item is already foreignizing in the English text.

Lastly, it is important to bring our attention towards one last translation technique, creation. This consists in concocting a brand-new term in the target language to make reference to a novel concept, which will commonly be an *irrealis*. This approach is most often used in science-fiction translation, such as this one, in order to convey made-up concepts and settings devised by the original author of the text. In this case, the use of creation seems clear, for instance, in the translation of *funqi* as *honguis*, *pumptrees* as *arbolbombeadores* or *glowplants* as *brilloplantas*. It can be seen, in the light of these examples, that the use of creation is almost always based on real-life referents to some degree, even if the resulting term itself is fictional. As the author of the original text devises fantasy plants from existing species, the translation of this items will also be inevitable based on the Spanish denominations of such existing plants. For instance, both *funqi* and *honguis* are based on real-life *fungus* (in Spanish *hongos*), while the remaining two examples derive from the union of the base term *tree* or *plant* and the corresponding lexical base in each case, *pump* and *glow*. In Spanish, the translation of the base terms is easily solved literally as *arbol* and *plantas*, whereas the handling of the English prefixes seems more challenging, as the base *pump* becomes the term *bombeadores* in the first case,

while *glow* keeps its position as the root *brillo*. In both cases, thus, existing terms are combined to elicit a fictional lexical item, albeit the formation process varies slightly in each case depending on the grammar rules of the source and target languages.

Therefore, in conclusion, it can be reckoned that the items featured in this published Spanish translation are handled by means of a wide range of techniques depending on the nature of each term and expression. Although literal translation is still the most common approach in this chapter, there are a sizeable number of cases in which other strategies are required; many examples of adaptation (be it morphological or semantic), calques, omission or creation have been shown here.

Upon comparison of these translations with the ones proposed before, some noteworthy dissensions can be noted, such as / as per usual, the official translator / however, there are a number of items which are translated in the same way in both versions, chiefly the fictional *irrealia* designating fantasy species in the depicted alien world (i.e., *jenneqs*, *crashban*, *mishle* or *funqi*, among others).

In conclusion, it can be stated that botanical terminology in science-fiction literature poses a wide-ranging variety of challenges to the professional translator, including fairly uncommon approaches such as creation or calque; the main challenge here is to discern real botanical terms from fictional *irrealia*, drawing the boundaries between reality and fiction and applying the most adequate strategy in each case: real-world items can generally be tackled by using literal translation or, sometimes, morphological adaptation, whereas made-up terminology will call for the use of the aforementioned, less common approaches.

5.2. Fictional terminology

Besides the pivotal use of botanical terminology in the novels that comprise the corpus of this PhD dissertation, the three of them are science-fiction works at their core. This means that, although they are anchored to the real world to a greater or lesser extent (greater when it comes to the first novel, *Seeders*, less so regarding the last one, *The Crucible of Time*), they all feature

a series of fictional elements that have been made up in order to create a conflict that a number of characters must attempt to resolve. As we previously saw, this *fictional* component varies greatly from novel to novel, both in use and also in dimension:

- First and foremost, it seems quite apparent that *Seeders* is the most *realistic* story out of the three featured in this dissertation, as it has more *science* than *fiction* in it. A. J. Colucci stays true to reality when she depicts, in great detail, the wide array of trees and flowers that thrive on the minute island off the Canadian coast on which the story takes place. She also reaches out to real essays and scientific papers by renowned botanists and neurobiologists when she explains the complex communication processes of plants, and how they can develop an extensive variety of feelings even if they are deprived of a central nervous system.

There are only two blatantly fictional elements in the novel: first of all, the lab-engineered fungus that twists the minds of its hosts to make them abide by the commands of plants is obviously nonexistent. And here comes one of the main plot twists in the story: throughout the story, it is believed that said fungus drives its hosts mad, leading them to attack fellow humans and deforming their bodies with harrowing black, protruding veins. However, this is not the purpose of the fungus: in order to properly translate plant thoughts into a human brain, it firstly needs to parasite a *living* human so as to learn how we function as a species. However, the scientist that crafted the fungus could not infect any of his living subjects with it, as they struggled to break free, and were ultimately killed. Thus, the fungus had to parasite lifeless corpses, and it only managed to get a faint idea of how a human body functions so, when it starts infecting the living characters of the story, the messages it sends are distorted and tainted with death. However, by the end of the story, this fungus finally manages to fully parasite a living human being, so now it can properly subjugate humans to the thoughts of plants without driving them into madness and self-destruction.

The second fictional feature is, now again, depicting plants as beings intelligent enough to plot against humankind, and using a fungal species as a mediator to reach out to their minds.

We can conclude that, in this case, the main challenge to any translator approaching this text would be to discern clearly the thin line between science and fiction, as the story is highly realistic, so this task can prove difficult.

- Regarding *The Night of the Triffids*, it also resorts to depicting a fictional plant species that poses an urgent danger to the characters in the story. However, in this case, the focus is laid on survivalism, rather than an analytical and scientific approach to the made-up antagonist; therefore, the used fictional terminology is much simpler and more straightforward than in the previous novel. Thus, a translator approaching this work will have to convey the menacing features of triffids into the target language, portraying faithfully the sense of threat and struggle for survival that the original author intended to create.

It is important to note that, although *The Night of the Triffids* is clearly more *fantastic* than *Seeders* (as it portrays an unprecedented worldwide cataclysm, rather than a subtle but creeping takeover), it is still firmly anchored to the real world (or, at the very least, what the real world was back in the 50s): the depicted characters are human beings with human needs and fears, trying to escape the city of London in the face of an apocalyptic event.

Finally, the third novel, *The Crucible of Time*, stands out as a much more fantastic story than the preceding works: this time, we are faced with an alien world that, albeit fairly Earth-like, seems to have little in common with our tangible reality. The depicted species can barely be classified as *animal*, displaying apparent plant-like features, and their society and culture seems to wildly differ from any possible human counterpart. This poses a challenge to the approaching translator or linguist but, at the same time, it also gives them a clear advantage: they need not discern reality from fiction, because everything is fiction. There is no need to keep the story *realistic* because it is not, so they can let their imagination run riot. Now again, of course, they still have to abide by the cosmogony concocted by the original author, respecting the due terminology and cultural items, fictional or not.

5.2.1. Spanish translations of fictional terminology

In Spanish, we can see that most of the aforementioned terms are faced in different ways for each novel. Now again, since *Seeders* has not been translated into this language so far, the original terms will be compared to my own proposals.

Original item	Spanish translation	Page
Literal translation		
Across the cover The Eden Project was prominently written in black marker.	En la portada estaba escrito de forma llamativa El Proyecto Edén con rotulador negro.	76
She didn't even want to think about the telepathic plants .	En las plantas telepáticas prefería no pensar siquiera.	138
Semantic adaptation		
The word Seeders sprang out at him in bold red marker. He flipped around the middle pages and found Seeders several more times, sometimes in block letters or scribbled like a child.	La palabra Matrices le llamó la atención, marcada con rotulador rojo brillante. Hojeó las páginas centrales y encontró Matrices varias veces más, a veces escrita en bloques o garabateada de forma infantil.	78
Mixed (Cultural adaptation + Literal translation)		
He was five years old in London theater and Mother took him to see an old black-and-white film, Invasion of the Body Snatchers . It was about aliens taking	Tenía cinco años en un cine londinense, y Madre lo llevó a ver una película antigua en blanco y negro, La invasión de los ultracuerpos .	214

over a small town, and it terrified him. As their victims fell asleep, the aliens would place a pod beside their bed. Overnight, it would replicate their DNA and by morning a perfect clone would emerge from the pod , kill the victim, and take his place in the world.	Trataba sobre unos alienígenas que invadían un pueblo pequeño, y le aterrorizó. Cuando las víctimas se dormían, los alienígenas depositaban una vaina junto a sus camas. Durante la noche replicaban su ADN , y por la mañana un clon perfecto emergía de la vaina , mataba a la víctima y ocupaba su lugar en el mundo.	

The translation of the title itself, *Seeders*, deserves to be noted in particular, since it is a made-up word that has a far-reaching influence on the development and understanding of the novel as a whole. A literal or direct translation is out of question, since there is no real equivalent in Spanish to represent this completely fictional reality (in the story, the so-called *seeders* are the human hosts that the parasitic fungus infects in order to reproduce and learn about the workings of the human anatomy). Therefore, it is necessary to strive to adapt the term so that it conveys its underlying meaning in the target language but, at the same time, doing so without uncovering the mystery behind the title too soon.

In this case, I have opted for a semantic adaptation in order to convey the gist of the original term (that these *seeders* are vessels for the fungus to grow and evolve) without being too revealing and spoiling the surprise factor from the very beginning. The chosen term in Spanish, therefore, is *matriz* (pl. matrices), which roughly translates as *womb*. However, this proposal is not without faults, as the botanical flair included in the original item is lost, and there is also the fact that, while *seeders* is a fictional term in English, *matriz* exists and is well-used in Spanish.

Nevertheless, *matriz* would still fulfil the main purpose intended by the author: to effectively designate an *irrealis* item that plays a central role in the unfolding of the devised plot, whilst serving as the title of the novel, enticing potential readers without giving away core information.

Other fictional items, on the other hand, can easily be conveyed into Spanish without losing any significant nuance due to the fact that, in most cases, there is an already well-established

cultural equivalent in the target culture. For instance, the Biblical concept of Eden can be intuitively translated into the nearly identical calque *Edén*, which only requires a minor morphological adaptation. The fact that English and Spanish broadly share the same Judeo-Christian, Greek-Latin influenced cultural reality is of great help in this case, as it allows for an easy, natural translation of terms such as *telepathic*, *mind* or *control*.

The term *plant* and its derivatives, however, call for a deeper insight. Although it could be easily translated into commonly used *planta*, the Greek lexical base *fito* (meaning the same exact thing) provides a more academical or scientific context. Although the base *phyto-* also exists in English, its equivalent *fito-* is noticeably more common in everyday Spanish, probably due to the fact that, being a Romance language, it is closer to Greek and Latin cognates.

Lastly, it is important to translate accurately the mentioned titles of sci-fi movies or novels. In this case, the cult film *Invasion of the Body Snatchers* is brought up throughout the early stages of the novel. The Spanish-speaking translator is thus faced with the quandary of opting for the generic Latin American translation of the movie title, *La invasión de los exhumadores* (lit. *The Invasion of the Exhumers*), as opposed to Mexico's *Los usurpadores de cuerpos* (lit. *The Body Usurpers*) and Spain's *La invasión de los ultracuerpos* (lit. *The Invasion of the Ultrabodies*). Given such array of choices, the professional translator must take into account the potential readership of the target text, as well as other geographical and cultural implications. Being a Spaniard, and producing this dissertation for a Spanish university, I have finally decided to stick with the European Spanish version of the title, *La invasión de los ultracuerpos*.

Thus, in conclusion, the main challenge in this chapter is to remain consistent upon translating the title of the novel and other relevant *irrealia* throughout the text, in order to stay true to the nature of the cosmogony created by the original author.

Let us move on to the use of fictional terminology in *The Day of the Triffids*, the second novel in this dissertation. Once again, we can find an abundance of *irrealia* here, given that the story revolves around a hypothetical apocalypse brought about by a destructive cosmic event and, later on, the carnage caused by a fictional species of moving, carnivore plants. A selection of the most relevant terms pertaining to this field is shown in the following template:

Original item	Page	Spanish translation
Cultural adaptation		
This time they got into print, all right. But the much-handled stories, written up with that blend of cautiously defensive frivolity which the press habitually employed to cover themselves in matters regarding sea serpents, flying saucers , thought transference , and other irregular phenomena , prevented anyone from realizing that these accomplished plants at all resembled the quiet, respectable weed beside our rubbish heap.	17	Esta vez llegaron a la imprenta, de acuerdo. Pero las historias manidas, escritas con esa mezcla de frivolidad cauta y defensiva que la prensa usa habitualmente para cubrir asuntos como serpientes marinas, platillos volantes , la transferencia de pensamientos y otros fenómenos inusuales , evitaron que nadie se diera cuenta de que estas plantas crecidas se parecieran en nada al matojo callado y respetable que había junto a nuestro montón de la basura.

When it comes to this second novel, it can be claimed that the scarce fictional elements not pertaining to the realm of trifles themselves (these have already been tackled in the preceding section) are common items belonging to pop culture, and thus can be easily conveyed into Spanish by means of literal translation, as seen in the case of *thought transference*, which is literally translated as *transferencia de pensamientos* (each word of the source item has an exact, direct equivalent in the target language). There are, however, a few examples that call for more complex approaches, even if the term itself is commonly used. This would be the case, for instance, of the English *irrealis* called *flying saucer*, which is translated into Spanish as *platillo volante*. Both expressions evoke the same image (that of an old-fashioned UFO, commonly represented in films and magazines during the 50s and 60s, with a characteristic oval shape), but their literal meaning differs, with the English item referring to a common kitchen tool, whereas the Spanish one draws parallels with a dish and its usual oval-like shape. Still, even though there is a significant semantic shift in this translation, the procedure entails little difficulty since both languages have clearly defined denominations for the very same concept.

Afterwards, in the published translation of the book, these terms are handled differently. Here follows a glimpse of how its published translator has tackled them:

Spanish translation	Page
Semantic adaptation	
Pero las excesivamente elaboradas historias, redactadas con esa mezcla de prudencia y frivolidad que la prensa emplea habitualmente con las serpientes marinas, los fenómenos ocultos , y la transmisión del pensamiento y otros hechos irregulares , impidieron que alguien llegase a comprender que esas notables plantas fuesen hermanas del tranquilo y respetable arbusto que crecía en un rincón de nuestro jardín.	26

The most usual translation technique now is clearly semantic adaptation: it can be seen how the original *irrealis* (*flying saucer*) is notoriously replaced with the much more generic and vaguer *fenómenos ocultos* (which literally translates as *hidden phenomena* and could be broadly understood as any occurrence that may strike the reader as mysterious or odd). It seems difficult to justify why the official translator would avoid a more faithful translation of the original item, when the very same *irrealis* (i.e., an alien spaceship shaped like a saucer) also exists in the target culture and is even referred to in a fairly similar way, *platillo volante* (literally *flying dish/plate*, the kitchenware reference therefore remains the same). It may be reckoned that the translator deemed the original *irrealis* as too obscure or niche for the average Spanish-speaking reader but, once again, this claim can hardly be supported when discussing such a widespread science-fiction cliché. A literal translation (or at least a lesser degree of adaptation) would be overdue in this particular case.

The presence of this technique seems even more remarkable upon consideration of other items in the same excerpt, which are tackled in a far more straightforward way by simply being translated literally: *thought transference* is conveyed as *transmisión del pensamiento* without any ado, and *irregular phenomena* similarly becomes *hechos irregulares* (in this second case, however, it could be wagered that *phenomena* and *hechos* [literally *facts/occurrences*] are not

directly equivalent, and thus the translator would be incurring into a case of morphological or semantic adaptation). All of this seems to highlight the oddity of previously translating *flying saucers* as *fenómenos ocultos*, perhaps raising the possibility that this irregular translation might be a slip of the translator's mind.

Some differences can be pinpointed when comparing this published translation with the proposals seen before in this dissertation, including the translation of the aforementioned *flying saucers*; it is proposed to convey this particular *irrealis* into the target language by means of literal translation (the already discussed *platillos volantes*), rather than resorting to semantic adaptation unfoundedly.

As for the other items present in the excerpt, these are tackled by means of literal translation, albeit in a slightly different fashion when compared to the choices made by the official translator: that is, *thought transfer* is conveyed as *transferencia de pensamientos* instead of *transmisión del pensamiento*, while *irregular phenomena* turns into *fenómenos inusuales*. The former is arguably a more literal translation than the published one, since Spanish *transferencia* seems closer to the original item, *transfer*, than the term *transmisión*, chosen in the official version. As for the latter, it proves more difficult, given how the English adjective *irregular* and its identical Spanish counterpart seem to bear different nuances: whereas the English term is used here as a synonym for *odd* or *weird*, its Spanish version is commonly understood to refer to either something shady (as in not fully compliant with the law) or also shoddy, poorly made. In this way, the translation choice *hechos irregulares* could easily be misunderstood by the average Spanish-speaking reader as referring to an underhand or borderline illegal action, rather than the actual meaning intended by the original author (i.e., an oddity). In this particular case, the Spanish adjective *inusual* (literally *unusual*) seems to convey the implications of the source item more faithfully; on the other hand, there is no apparent reason to replace the Latin cognate *phenomena* with Spanish *hechos* when the target language already has that very same cognate in a nearly identical form, *fenómenos*.

It may thus be concluded that there are differences between these official translations and the ones proposed before, chiefly the fact the professional translation seems to deviate from the original English items, resorting to various degrees of adaptation, whereas the proposals in this dissertation remain more literal to the roots devised by the author.

Finally, a vast array of *irrealia* can also be found in the third and last novel featured in this dissertation, *The Crucible of Time*, especially considering that, in this case, the whole action takes place in an entirely fictional setting. Once again, let us take a look at the most remarkable fictional items in the story:

Original item	Page	Spanish translations
Literal translation		
Cylinders had been flung skyward first to where half the mass of the air was below, then four-fifths, then nine-tenths, the magic altitude from which the drivers could reach escape velocity .	1282	Los cilindros se habían lanzado al cielo, primero hasta donde la mitad de la masa del aire quedaba por debajo, después a cuatro-quintos, y luego a nueve-décimos, la altitud mágica desde la que los pilotos podían alcanzar la velocidad de escape .
You want to see one of these famous space-cylinders , and there aren't apt to be any of them grown on our side of the world!	1185	- ¡Quieres ver uno de estos famosos cilindros espaciales , y no es posible criar ninguno en nuestro lado del mundo!
Mixed (Calque + Literal translation + Creation + Morphological adaptation)		
The first part of the bright was spent in making a careful record of the damage caused by the landslide, and Awb followed Thilling from place to place carrying bulky light-tight packs of the sensitized sheets she still referred to as "leaves" in memory of a more primitive technology .	806	La primera parte del día la dedicaron a realizar un registro detallado de los daños causados por el alud, y Awb siguió a Thilling de sitio en sitio cargando con fardos abultados y apretados de las láminas sensitivizadas a las que aún se refería

		como <i>hojas</i> en memoria a una tecnología más primitiva .

The most usual translation technique in this template is literal translation, although the majority of the items present here are actually carried into the target language by means of mixed approaches featuring (besides literal translation itself) calques, creation, and morphological adaptation.

Regarding the use of literal translation, it takes place upon conveying easily understood and non-obscure items such as *magic altitude*, *escape velocity* or *space-cylinders*, which do not entail any particular challenge for the translator, as they all have clearly defined equivalents in the target language.

As for the cases featuring mixed techniques, they span a wide array of examples: for instance, some *irrealia* compounds require the use of creation in order to produce equally fictional concepts in the target text. This can be seen in the translation of *nervographs* (SPA *nervógrafos*) or *recordimals* (SPA *grabanimales*), both of which are the result of blending existing terms to create a unreal denomination. This process is replicated in Spanish by simply translating each real-life component integrating the original *irrealia*.

Calques are widespread as far as translation of proper nouns is concerned, as it has already been seen in preceding chapters. In this particular case, we can witness it in items such as *Awb* or *Thilling*, both designating characters in the story, or *junq* (this item referring to an animal species).

Finally, morphological adaptation is also anecdotally used in the translation of the syntagm *on the verge of **spaceflight***, which is conveyed into Spanish as *a punto de alcanzar **el espacio***, rather than a more literal *alcanzar el **vuelo espacial***. This is due to idiomaticity and naturalness, since the former option is already coined in everyday Spanish whereas the latter, albeit completely correct from a semantic and grammatical viewpoint, sounds slightly more verbose and artificial.

In the published translation, these items are handled as follows:

Spanish translations	Page
Morphological adaptation	
Se habían lanzado cilindros al cielo primero hasta la mitad de la capa atmosférica, luego hasta cuatro quintos, luego hasta nueve décimos, la altitud mágica desde la cual los movilizadores podían alcanzar la velocidad de salida .	268
Mixed (Calque + Literal translation + Creation)	
Habrías perdido la oportunidad de despreciar a mis amigas que inventaron los nervógrafos intercontinentales y los arroja-cargas y los grabanimales , y que ahora están decididas a conseguir flotadores y dominar el vuelo en la atmósfera , el primer paso en el camino hacia el espacio.	199
Literal translation	
—¿Te refieres a la idea de que nuestros antepasados estaban al borde del vuelo espacial y por eso las criaturas de otros mundos arrojaron sobre ellos el Meteorito Mayor ?	211

In this case, the terms are translated by means of a blend of literal translation, calque and creation, albeit there is a single case of unaltered literal translation, and another one involving morphological adaptation.

The case tackled through literal translation refers to a non-obscure *irrealis*, *Greatest Meteorite*, which is transparently conveyed into the target text as *Meteorito Mayor*, thus preserving the nuances and meaning of the original term.

As for morphological adaptation, it concerns the translation of the compound *escape velocity* as *velocidad de salida* (ENG *exit speed/velocity*), instead of its coined, literal Spanish equivalent, *velocidad de escape*. The adaptation does not seem to be justified in this particular case, given how the source item already has a well-established counterpart in the target language that the translator can easily resort to.

The mixed cases include samples of calques (for instance, in the aforementioned proper nouns of *Awb* and *Thilling*, and the species names as *junq*), creation (e.g. *nervographs*, *recordimals* and

freight-pitchens conveyed as *nervógrafos*, *grabanimales* and *arroja-cargas*, respectively), as well as literal translation itself (for example, in the transposition of *Fleet* as *Flota*, which in this case works as a transparent *irrealis*, since it refers to a real-life concept applied in a fictional environment).

The differences between the official Spanish version and the proposals analysed prior to this can be mostly seen in the fact that literal translation is more commonly used in the latter, whereas the official Spanish translator opts for a more frequent use of adaptative and mixed approaches including smatterings of calque and creation. For instance, upon translating the technical English item *escape velocity*, the published text chooses to convey it as *velocidad de salida* (ENG *exit velocity*) instead of remaining closer to the original by keeping the word *escape*, which also exists in Spanish, thus resulting in *velocidad de escape*.

To bring matters to a close, it can finally be stated that the most commonly used techniques in the translation of fictional terminology in the sampled novels are morphological adaptation, creation, calques and, occasionally, literal translation as well. However, it is important to note that these strategies are rarely used as isolates: more often than not, they appear to be intertwined and blended in a single sentence or paragraph. For example, it is completely feasible to find a case of literal translation immediately followed by a calque and a newly-created *irrealis*. Therefore, it is paramount to devise a joint translational approach in order to tackle wildly different items and terms that may be closely interwoven.

5.3. Medical and scientific terminology

Medical and technical or scientific terminology also plays a vital role in the selected works, either directly or indirectly. Since all of these novels lay their focus on botany and its fictional implications, and plants are living beings capable of suffering, feeling, getting sick or dying, it is only logical for medicine and science to play an essential role here, as well. Let us briefly examine how medical and technical/scientific items are tackled in each of the novels:

- *Seeders* is undoubtedly the most medicine/science-heavy story out of the three works that comprise this dissertation. Most of the lexical items pertaining to this field concern the inner nature of plants: how they feel, how they hurt and how they communicate. For instance, we can find terms and expressions such as *plant signaling abilities*, *hyper-responsive*, *sentient*, *cell-to-cell connections* or *firing system*. The author spares us no detail as to how plants (and also fungi) carry out all of these processes on a scientific level. Then again, it is sometimes hard to discern where does real science end, and where does fiction begin.

The novel, however, also features a fair share of human-related medical items. Most of these refer to mental health and neural or nervous processes, as the complexity of the human mind plays a vital role in the plot. Once again, the level of detail and accuracy in scientific descriptions is certainly noteworthy. Some of the most remarkable lexical items pertaining to this field include field related definitions such as *molecular neurophysiology*, or really specific terms like *protoplast fusion*, *protease inhibitors* or *molecular genetic mutations*; other, on the other hand, refer to mind and psychology, including *mental disease*, *mind-altering substances* or *full-blown panic*. Finally, there are also items concerning physical diseases or injury; for instance, we can find terms like *physically ill*, *deathly ill*, *tracking blood flow*, *toxic shock syndrome* or *irregular breaths*.

The Night of the Triffids, by contrast, is remarkably prosaic and straightforward when it comes to medical and scientific terminology. Since it is a predominantly survivalist story, most of the terms and expressions pertaining to this field revolve around wounds, infectious diseases and the aggressive nature of triffids, and even these aspects are approached in a somewhat sober and austere manner. That is, the author only highlights those items and elements that may pose a danger of death to the characters in the story, without diving into any deeper topics. Therefore, one might find medical-related terms and expressions such as *venomous*, *slender stinging weapon*, *sighted*, *blind*, *crop diseases*, *contagious disease* or *incubation period*.

Finally, *The Crucible of Time* is very rich in medical, technical and scientific items, albeit in a radically different way than the first novel in this corpus, *Seeders*. In this case, as it has been previously mentioned, all of the built-up cosmogony is entirely fictional, bearing no equivalence to any real-life counterpart. Therefore, any translator approaching this text will have to face the challenge of concocting a completely fictional environment while abiding by the principles of the source author. This includes the protagonist species with its unique biology, as well as their surrounding natural environment. Some remarkable terms concerning the field of medicine or health, albeit in a highly fictional fashion, may include *dreamness*, *puncture* or *pheromones*.

5.3.1. Spanish translations of medical and scientific terminology

The translation of highly specialized medical terminology into the target language calls for careful prior research in order to accurately convey all nuances and technical meaning.

Upon approaching the lexical items in each of the three novels, we can see that the field of medical or scientific terminology is present in all of them in one way or another, as the three stories present us with characters who sustain injuries, suffer from diseases and embark on thorough research to find a way to solve such predicaments. Let us now have a closer look at how this terminology is handled in *Seeders*, the first novel comprising the corpus in this dissertation:

Original item	Spanish translation	Page
Literal translation		
“The symptoms are pretty diverse. Nervous dysfunction, dizziness, headaches, hallucinations. ” She was counting on her fingers. “ Twisting, contorting, massive pain, crawling	- Los síntomas son bastante diversos. Disfunción nerviosa, mareos, dolores de cabeza, alucinaciones. -Iba contando con los dedos- Convulsiones, contorsiones,	307/308

sensations, psychosis, delirium. It can even cause gangrene .”	dolor insoportable, sensaciones reptantes, psicosis, delirio. Incluso puede causar gangrena .	
“Your father came up with just the right genetic components .”	- Su padre descubrió justo los componentes genéticos adecuados.	313
She was groggy from the blow to her head, but she wasn’t afraid.	Estaba aturdida por el golpe en la cabeza, pero no tenía miedo.	299

Many different translation strategies can be found in this extensive chapter, even though literal translation accounts for the majority of the selected cases, as previously seen.

Once again, English terms and expressions featuring Greek or Latin roots and lexical bases can be easily translated into Spanish, as such cognates have direct equivalent in the target language, albeit slightly modified in form. Thus, English *delirium* translates as *delirio*, and *ergotamine* is adapted as *ergotamine*, both sharing Latin or Greek roots.

Other commonly used terms pertaining to this field can also be literally translated, as their Spanish equivalents are strikingly similar; for instance, *genetic components* would turn into *componentes genéticos*, *vascular vein* becomes *vena vascular* and *gangrene* would be *gangrena*, among others.

Regarding the translation of other, more challenging items, it can be noted that other, more complex strategies are commonly used; for instance, that would be the case of semantic adaptation, which implies a shift in the overall meaning of the original item in order to preserve its more profound nuances or implications in the greater scheme of the novel. This happens, for examples, when translating terms such as *groggy*, whose meaning may be represented differently in Spanish; even though the calque *grogui* is sometimes used in everyday speech, it is not acknowledged by Spanish grammar authorities.

In conclusion, it may be stated that these items are often generic medical terminology, based upon Latin or Greek lexical bases and, therefore, easily translatable into a Romance language

such as Spanish by means of literal translation. However, some other terms and expressions in this chapter prove more challenging because of the fact that the original author sometimes adds fantasy items to the plot, making it difficult for the translator to draw the boundary between what is real science and what is a figment of the author's imagination. This situation, thus, requires a particular approach for each item, since their nature highly varies from one case to another: while real medical terms, as seen before, almost always have direct equivalents in Spanish, this second category of completely or partially fictional items will entail, more often than not, the use of more complex strategies in order to convey the intention of the source text to the target readership. This will often involve the use of techniques such as morphological or semantic adaptations, or the occasional addition of a calque or loanword.

Next on, the second novel, *The Day of the Triffids*, also features a number of medical and scientific terms, as usual in science-fiction stories, although to a much lesser degree than in the first novel, as the focus here lies on survivalism, rather than research and botany itself, as it happened in *Seeders*. At any rate, a selection of recurring terms and expressions pertaining to this field can also be analyzed, as follows:

Original item	Page	Spanish translation
Literat translation		
The back of her dress was torn, and the flesh beneath showed red weals .	30/31	Tenía el vestido rasgado por la espalda, y la piel al descubierto estaba marcada de ampollas enrojecidas .
A small, sparrow like man whose name I did not catch rubbed it in that the health of each was the concern of all, and that any suspicion of illness should be reported at once, since the effects of a contagious disease among us would be serious.	61/62	Un hombre pequeño, con aspecto de gorrión, cuyo nombre no recuerdo, sacó a colación que la salud de cada uno de nosotros era problema de todos, y que cualquier sospecha de malestar debería informarse de inmediato, ya que los efectos de una

		enfermedad contagiosa entre nosotros serían serios.
But actually alarming was the discovery that the whorl topping a triffid's stem could lash out as a slender stinging weapon ten feet long, capable of discharging enough poison to kill a man if it struck squarely on his unprotected skin.	19	Pero lo verdaderamente alarmante fue el descubrimiento de que el verticilo que coronaba el tallo de los trífidos podía desplegar una esbelta arma punzante de tres metros de longitud, capaz de inyectar el suficiente veneno como para matar a un hombre si le golpeaba de lleno la piel desnuda.
Dennis, feeling the raised weal , had guessed it for what it was. In spite of their blindness , he and Mary had somehow contrived to apply hot fomentations , she heating the kettle while he put on a tourniquet and did his best to suck out the poison . After that they had had to carry her up to bed, where she stayed for several days while the effect of the poison wore off.	113	Dennis, al palpar la herida inflamada , dedujo lo que era. A pesar de su ceguera , él y Mary se las apañaron para aplicarle unos emplastos calientes , y ella puso la tetera en el fuego mientras él le aplicaba un torniquete y le succionaba el veneno lo mejor que podía. Después tuvieron que subirla a la cama, donde se quedó durante varios días mientras los efectos del veneno se disipaban.

It can be seen that, more often than not, the translation of these items is tackled through either literal translation or also morphological adaptation, with an additional calque that will be analysed particularly later on.

As for the cases of literal translation, these are recurrent when tackling common medical terms and expressions which have relatable, direct equivalents in Spanish; many examples of this can be found throughout the preceding table, such as *contagious disease* (which translates as *enfermedad contagiosa* in Spanish, *contagious* also sharing the same cognate as *contagiosa/o*),

venomous sting (*picadura venenosa* in Spanish; it should be noted that, just as it happened before, the adjectives *venomous* and *venenosa/o* also share the same cognate) or *suck out the poison* (translated into Spanish as *succionar el veneno*; in this case there is no cognate correlation, but still all of the terms in the original item have direct equivalents in the target language).

Morphological adaptation is also used abundantly throughout the text in cases when the equivalent in the target language does not match the original term grammar-wise. Once again, this can be seen in many examples from the preceding template, such as *red weals*, translated as *llagas enrojecidas*; in this case, the basic adjective *red* is translated as the far more complex *enrojecidas*, bearing both a prefix and also a suffix, since a literal translation (i.e., *llagas rojas*) would be grammatically correct but far less frequent in use, and probably slightly odd to the average Spanish-speaking reader.

Another clear example of this translation strategy could be the following, longer excerpt: *Enough poison to kill a man if struck squarely on his unprotected skin*, translated as *suficiente veneno para matar a un hombre si lo golpea de lleno con la piel al descubierto*. Let us see what kind of morphological or grammar shifts are applied here: first of all, the translation of the word *squarely* can be tricky, since there does not seem to be any single adverb in Spanish which completely matches the meaning and nuances of the original term. Therefore, it would be more adequate to use a syntagm bearing the full meaning of the aforementioned term; in this case, the chosen option has been *de lleno*, which roughly bears the same meaning as *squarely*. Secondly, the syntagm *unprotected skin* is translated as *con la piel al descubierto*, which also entails a semantic and grammar shift; the Spanish translation simply means *with bare skin*, rather than conveying the word *unprotected* (a literal translation, *con la piel desprotegida*, would also have been grammatically correct, but the frequency of use and naturalness of the translation would have been affected, as it has already been seen prior to this point), and the grammar structure of the original item is also altered: while the English text merely features a noun modified by an adjective, the selected Spanish translation consists of a prepositional syntagm, also featuring a noun, and adjective and two definite articles, thus presenting a much more complex structure. However, it must be borne in mind that this is a rather frequent occurrence when translating from English into Spanish, since the former language typically resorts to a wider range of nouns, adverbs, and adjectives in order to convey meaning, whereas the latter is more reliant on detailed grammar structures to express such nuances.

There is also a remarkable case of calque; the word *tourniquet* (which itself is a crude calque from French) is conveyed as *torniquete* in Spanish, with just a minor phonetical adaptation.

Following these perusals, it may be concluded that the medical terminology in *The Day of the Triffids* is typically rather generic and does not pose any challenging hurdles to overcome, since most of the terms present here can be translated literally or with minor adjustments in order to conform with the grammar rules of idiomaticity of the target language. However, this does not mean that the professional translator should not proceed carefully, by any means: it is important not to fall for false friends and find the exact equivalent in the target language for every term in the source text, even if the translation might seem obvious sometimes due to cognate correlation and similar contexts.

In the published translation, these items are sometimes conveyed in diverging ways. Here follows a template depicting how the chosen professional translator has managed them, along with a categorisation including the strategy applied in each case:

Spanish translation	Page
Morphological adaptation	
Dennis, tocando las ampollas sospechó de qué se trataba. A pesar de su ceguera él y Mary lograron de algún modo ponerle a Joan algunos fomentos calientes . Mary calentó el agua y su marido aplicó al brazo de Joan un torniquete y trató de sacar, todo lo posible, el veneno . Luego tuvieron que llevar a la mujer a la cama, donde se pasó varios días.	155
El vestido de la joven estaba roto en la espalda, y en la carne se veían algunas manchas rojas .	43
El descubrimiento de que el enroscado extremo del tallo podía estirarse hasta alcanzar una longitud de tres metros y descargar además bastante veneno como para matar a un hombre si llegaba a tocarle la piel, fue de veras alarmante .	29

It can be reckoned that the most common strategy used here is, once again, literal translation, although some items in the preceding excerpts are seemingly problematic and may call for more complex translation techniques. Let us take a closer look at it.

Regarding the first excerpt, it can be seen that the official translation stays remarkably close to the original text, conveying literally terms such as *weal* (SPA *ampolla*), *blindness* (SPA *ceguera*) or *tourniquet* (SPA *torniquete*, albeit both the English and the Spanish terms are calques from French *tourniquet*). The translator also opts for a very close translation of the item *hot fomentations*, which is conveyed into Spanish as *fomentos calientes*, which is absolutely correct, though most Spanish-speaking readers may be more acquainted with other similarly related words such as *ungüento* or *pomada*.

The translation of the expression *suck out the poison* seems to be of particular interest: it is carried into Spanish as *sacar, todo lo posible, el veneno*, which both adds and also subtracts semantic items from the original text. On the one hand, the circumstantial complement of manner *todo lo posible* (ENG *as much as possible*) is added out of the blue, perhaps to offset the loss of the English verb *suck out*, which is replaced with the similar sounding, but much more generic *sacar* (ENG *take out*). In this case, there is no justifiable reason not to use a more faithful translation for the verb *suck out*, which in exchange would also spare the translator from having to add complementary information in order to make it up for the aforementioned inaccuracy. In conclusion, the English verb *suck out* would be better off translated as *succionar* in Spanish.

Moving on to the second excerpt, it seems rather remarkable how the term *weal* is translated differently even though the author uses it in the same context and with the same meaning as we saw in the preceding paragraph: if the translator initially conveyed it as *ampolla* (which would be a faithful, literal translation), it is now translated as *mancha* (which would be a much more generic term, a wildcard of sorts broadly meaning *stain* or *rash*). There is a chance that the official Spanish translator actually intended this change as a way of avoiding repetition; however, since this is a medical term with a fairly narrow meaning, it would be advisable to keep a single, coherent translational choice throughout the text.

Finally, regarding the third excerpt, this includes a considerably complex expression that may prove difficult to translate, *discharging enough poison to kill a man if it struck squarely on his unprotected skin*. The official translator has chosen to convey it as *bastante veneno como para*

matar a un hombre si llegaba a tocarle la piel, fue de veras alarmante. A few differences can be noticed here, chiefly regarding the omission of adjectives and the addition of a subordinate sentence. As for the former, it can be how both *squarely* and also *unprotected* are dropped from the original text, thus affecting, or at least nuancing, the meaning it harbors. As it already happened before, this loss is partially offset by adding an additional subordinate sentence which was not present in the source text, pointing out the fact that the information expressed is concerning or alarming. Once again, it would probably be easier to find an accurate translation for both *squarely* and *unprotected*. In the proposals found in this dissertation, these translational challenges are dealt with by conveying the sentence as follows: *inyectar el suficiente veneno como para matar a un hombre si le golpeaba de lleno la piel desnuda*. In this case, the prepositional compound *de lleno* would carry the meaning of the adverb *squarely*, whereas the adjective *unprotected* is replaced with the Spanish term *desnuda* (meaning *bare*), although other alternatives, like *desprotegida*, could also be completely correct.

When comparing these official translations with their respective counterparts in the dissertation proposals, it may be underscored how the professional translator sometimes seems to diverge from the vocabulary and expressions employed by the original author, often turning to omissions or additions, and thus altering the layout and nuances of the source text. The proposals found in this dissertation endeavor to remain closer to the terminology and morphology envisaged by the English-speaking author, commonly opting for literal translation as a means of conveying these items into Spanish.

Finally, regarding the last novel in the corpus, *The Crucible of Time*, medical terms are abundant although, once again, the vast majority of them are purely fictional, as the entire setting they take place in. Here follows a list of the most remarkable items pertaining to this category:

Original item	Page	Spanish translation
Literat translation		
“After your departure plague ran wild among us . Never were such horror witnessed by a living eye! People died where they stood, their bodies fell into	152/153	- Tras vuestra partida, la plaga se propagó entre nosotros . ¡Ningún ojo vivo había presenciado jamás

the lake and river until the water grew so foul that the very fish were poisoned . Those who survived lost their reason and fled under the lash of horrid dreams . Most went south. I doubt they escaped like me and my companions. Our northern route must have saved us. It seems the plague loves heat .”		tales horrores! La gente moría de pie, sus cuerpos caían al lago y el río hasta que el agua se emponzoñó tanto que hasta los peces se envenenaron . Aquellos que sobrevivieron perdieron la razón y huyeron bajo el azote de sueños horribles . La mayor parte se dirigió al sur. Dudo que escaparan, como mis compañeros y yo. Nuestra ruta norteña debe de habernos salvado, parece que a la plaga le gusta el calor .
When even the Count presently approved of outcrossing , and had let his own daughter choose a foreigner for her mate, it was the fashionable thing. Besides, the sacerdotes maintained that no plague could smite those who defied boldly, so...	171	Cuando incluso el Conde aprobó en persona los mestizajes , y permitió que su propia hija escogiera a un extranjero por compañero, se convirtió en algo glamuroso. Además, los ministros sostenían que ninguna plaga podía hacer mella en aquellos que la desafiaban con osadía, así que...
Mixed (Creation + Literal translation)		
Later, Jing reflected it was as well they concluded their compact at that juncture, for the first person to meet them within the castle reported	77	Mas tarde, Jing dictaminó que así fue al concluir su pacto en aquella encrucijada, ya que la primera persona que los recibió en el castillo

Drakh's death: the best of Twig's cleanlickers had failed to purify his wound .		les informó de la muerte de Drakh: los mejores limpialamedores de Rama habían sido incapaces de purificar su herida .
All of them bore plague-scars . Apparently the illness began with sacs of fluid under the skin , accompanied by fever and delirium . If they burst outward , the patient might survive, at the cost of being marked for life. If they burst inward , the victim died. Applying cleanlickers was useless; none could digest the foul matter exuded by the sores .	160/161	Todos ellos mostraban cicatrices de la plaga . Al parecer, la enfermedad empezaba con bolsas de fluido bajo la piel , acompañadas de fiebre y delirio . Si reventaban hacia afuera , el paciente podría sobrevivir, aunque a costa de quedar marcado de por vida. Si reventaban hacia adentro , la víctima moría. Era inútil aplicar limpialamedores ; ninguno podía digerir la ponzoña que emanaba de las heridas .
And the doctor had saved not only Drakh's life (so far, Jing amended wryly, for the licker was weakening and the sorbers it passed repeated over his wound were turning yellow) but also the mission they had been sent on.	27	Y el médico no solo le había salvado la vida a Drakh (de momento, se corrigió Jing amargamente, ya que el lamedor se estaba debilitando y los sorbedores que le pasaban una y otra vez por la herida amarilleaban), sino también la misión que habían emprendido.

Most of the items in this template are translated by using the well-known technique of literal translation, although cases of morphological and semantic adaptation are not unheard of.

As usual, many cases of literal translation are used when the cognates for the item in both languages are related, or also when the term or expression itself is clear or common enough not to pose any real challenge for its translation. Many representative examples of this can be found

throughout this chapter, including the translation of *horrid dreams* as *sueños horribles* (here we can see that the cognate *horri-* is shared by both languages, and the remaining items are very common and generic), the word *outcrossing* as *mestizaje* (the cognates are radically different in this case, but the correlation between both terms is still clear, as both of them convey the same meaning) or *illness* as *enfermedad*.

As for morphological adaptation, it is used in a few cases in order to adjust grammatical or lexical aspects of certain original items which cannot be conveyed literally into Spanish due to unbridgeable divergences between such language and English, and thus must be slightly modified on a superficial level in order to keep their core meaning unaltered. For instance, the English compound *plague-scars* is translated as *cicatrices de la plaga* in Spanish, hence replacing a single word with a fully-fledged noun syntagm in order to avoid a sense of oddity or unnaturalness in the target text whilst preserving the meaning intended by the author of the source work.

Regarding semantic adaptation, some remarkable examples can be found in which the superficial meaning of the original item is shifted in order to keep its wider, deeper implications in the target text. For example, this can be seen in the translation of *cleanlickers* as *purificadores*: this particular case refers to a fictional species of leech-like beings, used by the characters in the story to suck out poison or infected fluids, and thus clean feasting wounds. It is also important to note that a related species, the *lickers*, are also mentioned earlier in the novel, but both *irrealia* should be translated differently in order to keep the distinction of the source text in Spanish. Thus, since the aforementioned *lickers* has already been translated as *succionadores*, a new translation has to be found for these related *cleanlickers* in order to avoid an ill-sounding repetition in the target text. A distinct, accurate Spanish equivalent for this *irrealis* could be the proposed *limpialamedores*; in this case, the core meaning of the item stays the same, since the root *limpia* means *clean* or *cleanse*, whereas the word *lamedor* literally translates as *lickers*. Thus, a unique and brand-new *irrealis* is produced without affecting the underlying nuances or implications of the original text.

Other relevant example of this strategy could be the translation as *foul matter* as *ponzoña*. In this case, the shift resides in the fact the English term refers to a much wider spectrum of matter than the Spanish one, and it is also a compound syntagm, including a noun modified by an adjective, whereas its translation in the target language is merely a noun. Thus, the source item

is reduced in order to convey its meaning accurately by means of a natural-sounding term in Spanish. If the translator wanted to remain more literal or faithful to the English syntagm, they could also opt for *materia ponzoñosa/corrupta/infectada* (ENG *foul/corrupt/infected matter*), which is also grammatically and semantically correct, albeit slightly less frequent and more long-worded.

Some examples of calques can also be found, even if the use of this translation strategy is merely anecdotal in this chapter. This approach is used in two cases: firstly, in the translation of *delirium* as *delirio*; this first use can be easily explained by the fact that English uses a calque from Latin, and the Spanish word is simply a slightly derived version of that Latin word. The second case of this technique is also similar, with the word *sorbers* translated as *sorbedores*. However, this time, the original word is used to designate yet another fictional species of leech-like medicinal animals, and thus bears no resemblance to any real-life equivalent. As it stands, the word itself used to refer to these animals is, once again, an existing term used to designate an inexistent concept, and thus constitutes a non-obscure *irrealis* that can be easily conveyed into the target language.

As a final remark, it may be reckoned that the medical (or related) terminology in *The Crucible of Time* is mainly generic and intertwined with the fictional *irrealia* defining the world created by the author, which poses a significant challenge to the translator approaching this text.

On the other hand, in the published Spanish translation of the novel, the professional translator tackles the preceding items in a slightly different way, as it can be seen as follows:

Spanish translation	Page
Morphological adaptation	
Cuando os fuisteis, la plaga se desató entre nosotros. Nunca se habían visto horrores tales. La gente moría de pie, allí donde estuviera, los cuerpos caían al lago y al río. El agua se pudrió y hasta los peces murieron envenenados . Los que sobrevivieron perdieron la razón y huyeron acosados por horrendas ensoñaciones . La mayoría se encaminó al sur. Dudo que hayan podido escapar	37

como hemos hecho yo y mis compañeros. Supongo que lo que nos salvó fue que tomamos la ruta hacia el norte. Parece que la plaga ama el calor.	
Ahora que incluso el Conde aprobaba el apareamiento con extranjeros y había dejado que su propia hija eligiera a un desconocido como compañero, la idea se había puesto de moda.	41
Creation	
Y el doctor no sólo había salvado la vida de Drakh (por ahora, se corrigió amargamente Jing, porque el lamedor se estaba debilitando y los absorbentes que pasaba una y otra vez sobre la herida se iban volviendo amarillos) sino también la misión que los había llevado allí.	11
Al parecer la enfermedad empezaba con ampollas bajo la piel , acompañadas de fiebre y delirio . Si esas ampollas estallaban hacia fuera , el paciente podía sobrevivir, aunque marcado de por vida. Si estallaban hacia dentro , la muerte era segura. Aplicar limpialamedores era inútil; ninguno de ellos podía digerir la sucia materia que exudaban las heridas .	39
Literal translation	
Por eso se burlaban de los sacerdotes, cuyo poder había ido decreciendo de generación en generación a pesar de sus autoinfligidas privaciones.	12

Most remarkable items in the preceding text samples are tackled by the official translator by applying creation and literal translation as recurring translation techniques. The former can be seen when translating fictional items, *irrealia*, devised by the original author as an integral part of his particular cosmogony. Since these items have no equivalent counterparts in real life, the professional translator approaching this text has no option but to also concoct a brand new *irrealis* resembling the original one in the source text. In this particular excerpt, this is most easily seen in the English *irrealis cleanlickers*, which happen to be some sort of leech-like parasite used for medical purposes, chiefly purging feasting wounds. However, the official Spanish translator has chosen to convey this *irrealis* into the target language differently depending on the context: whereas it is translated as *lamedores* at first (which would pose a

case of semantic reduction, since such a term is simply Spanish for *lickers*, thus dropping the *clean* part of the source term), it can also be read as *limpialamedores* later on in the translated text (the second option would clearly be closer to the original *irrealis*, with the first part of the compound, *limpia*, standing for the English *clean* in *cleanlickers*). As previously stated, it would be advisable to keep consistency throughout the translated text, especially upon dealing with particularly sensitive terminology such as the *irrealia* tackled in this dissertation. In this particular case, *limpialamedores* seems to be a preferable choice for the proposed item.

As regards the use of literal translation, it is recurrently used when tackling most other remarkable items in the preceding text samples, including *delirium* (conveyed as an almost identical *delirio*, both words sharing the same Latin root), *plague* as *plaga* (same case) or *foul matter* as *sucia materia*. Some other cases, however, do display a certain degree of adaptation or semantic shift: the translation of *horrid dreams* could be brought up at this point, as it has been carried into Spanish as *horrendas ensoñaciones*, with the word *ensoñaciones* bearing more complex implications than English *dreams* (*ensoñación* would rather imply the idea of *daydreaming* or *imagining*, whereas *dream* is akin to Spanish *sueño*).

Some noteworthy differences may also be noticed when comparing this published translation with the proposals included in this dissertation. Most remarkably regarding the translation of *irrealia* and the use of literal translation. For starters, it would be overdue to choose one single, consistent translation for the *irrealis cleanlickers*, preferably *limpialamedores*, which would accurately convey the nuances intended in the source text, as previously seen. Some other striking differences may include the translation of *horrid dreams* as *sueños horribles*, rather than *horrendas ensoñaciones* (*sueños* being a more literal translation for *dreams*, and the adjective *horribles* being its most common collocation in Spanish, albeit its meaning differs slightly compared to English *horrid*), or also the term *outcrossing*, which is conveyed as *mestizaje* in the dissertation proposal, while in the published translation it reads as *apareamiento con extranjeros*: in this example, the first proposal aims for a concise, literal translation of the source item, whereas the professional translator has opted for a lengthy explanation that ensures clarity and intelligibility. Regarding this case, given that the English term *outcrossing* is mildly technical but also easily understood by the average reader, it might be preferable to opt for a briefer, closer translation, rather than a long-worded explanatory sentence.

We can thus draw a few conclusions regarding the translation of medical terminology in this novel, chiefly the urge to maintain consistency across the whole text when translating highly specific items (even more so when such terms are *irrealia* made up by the original author), and also the recommendation of using literal translation, when possible, in order to avoid potential loss of alteration of meaning when conveying highly specialized excerpts.

In the light of the previous examples, it may be concluded that the translation of medical or scientific terminology in science-fiction literature plays a pivotal role in the creation of fictional cosmogonies and the concoction of *irrealia*, and thus calls for, above anything else, an utmost respect and faithfulness for the universe created by the original author and its implications for the potential readership.

5.4. Other terminology

Other cases of relevant terminology or lexical units are also noteworthy throughout the corpus of this dissertation. They mostly refer to completely made-up concepts that are linked to each fictional cosmogony and bear no resemblance to any real-life equivalent.

- In *Seeders*, there are two unique made-up concepts: the title itself, and the fictional parasitic fungi that plays the role of the main antagonist. The title in particular poses a huge challenge to the professional translator approaching the novel, as the chosen translation will greatly impact the reception of the novel in the target market. Other potentially troublesome lexical items may include *hertz*, *armyworm*, *carat*, *meat chauvinism* or *ring-around-the-rosey*.

- In *The Night of the Triffids*, the most remarkable made-up token is, undoubtedly, the species of triffids. This fictional species comes with a series of associated biological features that must be carefully translated in order not to distort the image created by the original author.

- In *The Crucible of Time*, the whole story takes place in an entirely made-up cosmogony, thus being the most difficult novel out of the selected three to work with. Everything, from the orography of the planet to the protagonist plant-like species, including their beliefs, rites, languages, taboos, technology, or the animals they co-exist with, have to be taken into account when translating this novel into any given target language.

5.4.1 Spanish translations of the remaining terminology

Original item	Spanish translation	Page
Literal translation		
A fly buzzed over the plate of biscuits. Below, Sean was fixed in frozen contemplation .	Una mosca zumbaba sobre el plato de galletas. Debajo, Sean estaba fijo en una contemplación gélida .	319
The purge of emotion left her light-headed and numb.	La purga emocional la dejó aturdida y entumecida.	319
She looked at Jules, swaying with a hazy far-off gaze , as if hypnotized by its rays.	Miró a Jules, zarandeándose con la mirada perdida y nublada , como si sus rayos la hipnotizaran.	302
Explanation		
It had become popular in the sixties as a form of meditation and there were even claims that it enhanced the power of ESP or telepathy.	Se había vuelto popular en los sesenta como forma de meditación, e incluso se afirmaba que mejoraba el poder de la percepción extrasensorial o la telepatía.	109
Cultural adaptation		

Then the trees were spinning around in a circle, a different game, ring-around-the-rosy , and it made Susan dizzy.	Entonces los árboles giraron en círculos, un juego distinto, Al corro de la patata , y Susan se sintió mareada.	106
Morphological adaptation		
Monica squinted hard at the words. “The goddess Hanus... han... ham... ham-ass. ”	Mónica miró las palabras y entrecerró los ojos. - La diosa Jano... Jan... Jam... Jam...ón.	74
“Plants and humans are nothing more than living machines and our actions are merely electrical signals going off at specific times and places in our bodies.”	- Las plantas y los humanos no somos más que máquinas biológicas , y nuestras acciones son simples señales eléctricas que se desencadenan en momentos y lugares específicos de nuestros cuerpos.	96

In this lengthy list of examples featuring terminology that may not be placed in previous chapters, it can be seen that wildly different terms posing unique translation challenges, also call for different approaches and strategies.

More often than not, there is a direct equivalent in Spanish for the items mentioned in the preceding list, although such equivalents are not always obvious and require prior research before reaching a consensus on the way to proceed. For instance, *frozen contemplation* can easily be conveyed into the target language as *contemplación gélida* or *helada* (that is, both elements in the item would be translated into their most obvious counterparts in Spanish) but, on the other hand, it might not be crystal clear that *light-headed* is a synonym for *stunned* or *confused* and, therefore, should be conveyed into the target text as *aturdido*. That is, even cases of literal translation need a previous background research and careful choice-making.

Sometimes, however, a literal or direct translation is out of question, and one or more aspects of the original term must be modified in order to ensure the intelligibility and naturalness of the

target text. Morphological adaptations, for instance, entail a noticeable change in structure or form so that the underlying meaning of the original word stays the same; this can be seen in the translation of *living machines* as *máquinas biológicas*, rather than *máquinas vivas*, which would be a grammatically correct but odd and not entirely clear translation. In this case, the Spanish adjective *biológicas* underlines the fact that the source item refers to living beings as natural (or non-artificial) mechanisms that operate as man-made gadgets. On a humorous note, the *Hanus* – *ham-ass* line (uttered by Monica while attempting to unscramble one of the main riddles in the novel) can be faithfully conveyed into Spanish by applying a minor adjustment, since English *ham* resembles the beginning of Spanish *jamón*, meaning the same thing, and thus resulting in *Jano...ja...món*.

Semantic adaptation, however, implies a deeper change than seen before, since the meaning itself is modified in order to preserve the cohesion of the overall message. Then again, some examples can be brought up here, such as the translation of *human habitation* as *presencia humana*. Even though *habitation* and *presencia* (Spanish for *presence*, the resemblance being apparent) do differ in meaning and nuance (*habitation* typically refers to a longer-lasting lingering or appearance than presence), the shift serves the purpose of conveying the original message into the target language in a natural-sounding way: that is, the fact that there is consistent evidence of lasting human population in a given area. Other items pertaining to this category may include *hazy far-off gaze*, translated as *mirada perdida y nublada*, in which *hazy* is loosely conveyed as *nublada* (literally meaning *cloudy*, rather than *hazy* or *foggy*) and *far-off* is replaced with *perdida* (meaning *lost* or *astray*, rather than *far-off*). Once again, a minor shift in meaning is used to convey the underlying message of the item accurately.

Cultural adaptation, on the other hand, is far less common but provides a noteworthy case for academical research and commentary. The main culture-bound item in this chapter is *Ring-around-the-rosy* (*rosy* is alternatively spelled as *rosie* in some cases), the title of a popular kids' song in English-speaking countries, particularly in the UK. Since such a tune would not be commonly known in the Spanish-speaking world, it could be wise to look for an equivalent song for children in the target language. For the intents and purposes of this particular case, the tune called *Al corro de la patata*. The aforementioned tunes share similar catchy lyrics, featuring easy rhymes for kids to remember easily, and the general scope and tone of both songs is broadly the same. The only noteworthy difference between both items would be that the English tune pertains to the realm of flowers and plants, whereas its chosen Spanish counterpart

revolves around food; such a distinction, however, does not affect the underlying meaning and role of both tunes.

Finally, a few cases of explanation can also be found throughout the text. This translation strategy entails that a challenging item in the original language (due to its cultural, grammar or metaphorical implications) is fully explained in the source language in order to ensure the intelligibility of the resulting text, rather than chose a single equivalent. Some examples of this technique would include the acronym *ESP* translated as *percepción extrasensorial* in Spanish, rather than an equivalent acronym. In this case, an explanation is chosen due to the fact that this concept is far less mentioned in Spanish-speaking world than in English-speaking countries. Yet another fair example of this could be the *Zenith circa 1980*, which is translated as *un televisor Zenith the alrededor de 1980*, since such appliance brand is not well-known in Spanish-speaking nations.

In conclusion, it can be seen that this final chapter, compiling all kinds of items that do not fit quite well in the preceding templates, also shows a wide range of approaches and strategies. Even though literal (or direct) translation is still the most common resource, sometimes the professional translator has to resort to more precise and specific techniques, such as the ones already mentioned here: adaptations of many kinds (morphological, cultural, semantic), or explanations, among many others.

Later on, in *The Day of the Triffids*, it is also possible to find terms and expressions that do not fit previous categories. Here follows a brief template featuring a few noteworthy examples of this:

Original item	Page	Spanish translation
Literal translation		
It was the appearance of the triffids which really decided the matter for us. Indeed, they did a lot more than that for me. They provided me with a job and	13	Fue la aparición de los trífidos lo que realmente nos hizo tomar una decisión. Y, de hecho, para mí fueron mucho más que eso. Me proveyeron de un trabajo y

comfortably supported me. They also on several occasions almost took my life. On the other hand, I have to admit that they preserved it, too, for it was a triffid sting that had landed me in hospital on the critical occasion of the 'comet debris."		me mantuvieron con comodidad. Asimismo, en varias ocasiones, casi me costaron la vida. Por otra parte, debo admitir que también me la salvaron, ya que fue una picadura de trífido lo que me llevó al hospital en aquel momento crítico de los <i>restos del cometa</i> .
Creation		
TRICHOTS TRINITS TRICUSPS TRIPEDALS TRIGENATES TRIPEDS TRIGONS TRIQUETS TRILOGS TRIPODS TRIDENTATES TRIPPETS	18	TRICHOTS TRINITS TRICOPAS TRIPEDALES TRIGENADOS TRÍPEDOS TRIQUETAS TRÍGONAS TRÍPODES TRÍLOGOS TRÍPEDOS TRIDENTADOS
Mixed (Literal translation + Creation + Explanation)		
It was assumed, consequently, that their characteristic of suddenly losing their immobility and rattling a rapid tattoo against the main stem was some strange form of triffidian amatory exuberance .	20	En consecuencia, se asumió que su característica de perder la inmovilidad repentinamente y repiquetear con furia contra el tallo principal era alguna forma extraña de exuberancia amatoria trifídica .

Most of the items showcased in this chapter are tackled through mixed approaches featuring elements from literal translation, creation and occasionally, also explanation. However, it is also important to highlight the use of literal translation independently, as well as a remarkable case of creation.

Starting with the use of literal translation, this technique can be noticed in items which are consistently repeated throughout the novel and do not bear any cryptic implications, since all of them have a direct equivalent in Spanish. For instance, this can be seen in the item *comet debris*, translated as *restos del cometa*, *triffid guns and masks* as *máscaras y pistolas para trífidos* or *infertility rate* conveyed as *tasa de infertilidad*. In all previous cases, every term chosen in the target text bears the same meaning and nuances as their original English counterparts.

Moving on to the presence of creation, it is featured in a single case in which the original author presents a series of denominations in Latin (or *dog Latin*, as the narrator states) brought up by scientists in the novel to refer to the newly engineered plant species playing the role of the main antagonist, before finally agreeing on the term *triffid*. As previously stated, these *irrealia* use Latin-sounding cognates mixed with English morphemes and syntagms in order to give off a vaguely scientific appearance (by mimicking the structure of Linnaean taxonomy, which has already been extensively analyzed in the theoretical frame in this dissertation) while still seeming approachable and intelligible to the English-speaking reader, even if they are not acquainted at all with the Latin language. The same has been attempted in the target text, which at least first would seem easier, since Spanish is a Romance language itself and, therefore, the combination of Latin and Spanish cognates should seem less jarring than in the source text. However, it is still paramount to produce consistent and coherent *irrealia* that can be easily understood by the target readership, just as it happened in the original work.

As for cases of mixed translational techniques and approaches, these blend traits and elements from some of the aforementioned techniques. For example, in the syntagm *triffidian amatory exuberance* (SPA *exuberancia amatoria trífidica*), the noun *exuberance* and the adjective *amatory* are translated literally (which is a given in this case, since both terms are quite obviously Latin-rooted), whilst the fictional adjective *triffidian* calls for a dash of creation, since it makes reference to the quality of being triffid-like, and therefore features the main *irrealis* in the novel. The same process takes place upon translating the compound *triffid nurseries* (SPA *criaderos de trífidos*), which also features a real-life concept applied to the fictional realm of triffids.

Some of the items, on the hand, include traits from explanation. This can be clearly seen in the translation of the Mediaevalsque terms *seigneur*, *serfs* and *villeins*. Apparently, all three of them

have direct equivalents in Spanish; *señor*, *siervos* and *villanos*, respectively. However, the former bears further implications and nuances that have to be explicitly expressed in the target text. As it stands, the English item *seigneur* (literally a crude loanword from French, this word meaning *lord* or *sir* in said language, just like *señor* in Spanish) does not refer to any kind of *lord*, but specifically the lord of a fiefdom in a Medieval context. Therefore, it is highly advisable to convey such term into the target language as *señor feudal* (ENG *fiefdom lord/master*), rather than *señor* alone.

In the published translation, the aforementioned terms are tackled quite differently, as it can be seen as follows:

Spanish translation	Page
Mixed (Literal translation + Creation)	
Fue la aparición de los trífidos lo que terminó por decidir el asunto. En realidad, hicieron por mí mucho más que eso. Me proporcionaron un empleo y una cómoda renta. En varias ocasiones casi me quitaron también la vida. Por otra parte tengo que admitir que me la salvaron, pues fue el aguijón de un trífido lo que me llevó al hospital en aquel momento crítico de la aparición de « los restos del cometa ».	18
Semantic adaptation	
—Sí —dije—. Por eso vamos a Clerkenwell . Hay allí un lugar donde se fabrican armas y máscaras contra trífidos ; las mejores del mundo.	54
—Íbamos a proveemos hoy —añadí—. Así que no tenemos prácticamente nada, excepto cierta cantidad de fusiles antítrífidos .	74
En mi primer viaje de exploración a Londres fui solo y volví con cajones de armas contra trífidos , papel, piezas de maquinaria, los libros y la máquina de escribir con alfabeto Braille que Dennis tanto deseaba, y el lujo de bebidas, dulces, discos, y más libros para el resto de nosotros.	162

Creation	
Trícodos Trínitos Tricornos Tripedales Trigenados Trípodos Trígonos Triquetes Trileños Trípodes Tridentados Trípetos	28
Omission	
Algunos creían, por lo tanto, que esa repentina movilidad de las ramitas y ese su alegre repiqueteo contra el tallo eran una extraña demostración de exuberancia amatoria .	30
Literal translation	
—Y cuide que las ventanillas de la cabina cierren bien —sugerí—. Hay muchos criaderos de trífidos en los alrededores de Londres, particularmente en el Oeste.	113
—Querida —dije—, ¿me ves realmente como un señor que dirige a siervos y villanos con un látigo? Y eso en el caso de que los trífidos no terminen antes conmigo.	188

Most of the items in this category are translated through either a mixture of literal translation and creation, literal translation itself or semantic adaptation. However, two outlying cases of omission and creation, respectively, can also be found here.

Starting out by looking into the cases of mixed techniques, as already pointed out earlier on, these refer to non-obscure, real-life concepts which are applied to the world of triffids; *aguijón de un trífido* (ENG *triffid sting*) or *infertilidad de las semillas de trífido* (ENG *infertility rate of triffid seeds*).

Semantic adaptation also plays a crucial role in this chapter, albeit the featured semantic shifts seem rather unjustified in some cases. For instance, it is noteworthy how the English item *triffid guns* is somehow as a more generic *armas* (ENG *weapons*) *contra* *trífidos* for no apparent reason, and the same happens upon translating *triffid bolts* also as *armas* (whilst the original term make reference to the bolt-shaped ammunition used to load triffid guns, not the weapon itself) as well as *anti-triffid gear* which, in turn, suddenly becomes a much more specific *fusiles* (ENG *rifles*) *antitrífidos*. As mentioned before, these semantic changes are largely unfounded, given how the original items are already intelligible and transparent enough, so there is no reason to make them more generic or specific.

As regards the use of literal translation, it is also employed when translating non-obscure English terms such as *nurseries*, *seigneur*, *serfs* and *villeins*. However, as already underscored earlier on, the French loanword *seigneur* does not refer to any kind of *lord* when used in English, and therefore should be further explained as *señor feudal* in Spanish, rather than just *señor*.

A noteworthy, outlying case of omission is also remarkable, albeit it is unclear whether such occurrence was intentional, or perhaps just a typo made by the official translator. This particular case concerns the translation of the English syntagm *triffidian amatory exuberance*. When conveyed into the published Spanish translation, the adjectival *irrealis triffidian* drops out from the resulting syntagm, which thus becomes *exuberancia amatoria*. Since there is no apparent reason to delete such a term, as it is a pivotal and profusely used concept throughout the story, this seems to be most likely a slip of the translator's mind.

Finally, a remaining case of creation is also to be commented, concerning the already mentioned cognates in pseudo-Latin that imitate Linnaean nomenclature and are presented as alternate denominations for triffids. The chosen adaptations and translations for the original items are broadly in line with those proposed earlier, although the official translator seems to apply a higher degree of semantic shift, bringing the terms closer to modern Spanish and further away from Latin. For instance, the Spanish letter ñ is used in the word *trileños*.

Finally, when it comes to the third novel discussed in this dissertation, *The Crucible of Time*, some interesting items can be found as well, as it may be seen in the following data table:

Original item	Page	Spanish translation
Creation		
A sun bloomed, with its retinue of planets, moons and comets. One was the budworld .	10	Un sol centelleó, con su retícula de planetas, lunas y cometas. Uno de ellos era el mundocapullo .
[...] like a jewel on a pad of swart-fur .	15	[...] Como una joya en un retazo de pelajoscuro .
Pastures on which grazed meatimals and furnimals .	54	Campos en los que pastaban carnimales y pielnimaes .
Calque		
Now the sun was down, the barq was growing tired.	13	Ahora el sol se estaba poniendo, y el barq se canasaba.
Because tradition told of merchants from Geys and Yown and Elgwim [...]	18	Ya que la tradición hablaba de mercaderes de Gey , Yown y Elgwim [...]
Mixed (Calque, Literal translation, Creation)		
Ayi-Huat Jing , court astrologer and envoy plenipotentiary of His Most Puissant Majesty Waw-Yint, Lord of the Five-Score Islands of Ntah .	15	Ayi-Huat Jing , astrólogo de la corte y prelado plenipotenciario de Su Potentísima Majestad Waw-Yint, Señor de las Cinco Docenas de Islas de Ntah .
Everything he was told fascinated Wellearn , and above all he was seized by the tales of the New Star which Chard and Shash and Embery recounted.	259	Todo lo que le contaron fascinó a Bienganado y, sobre todo, quedó estupefacto por las historias de la Estrella Nueva que Chard , Shash y Ascu le narraron.

His store of pearlseeds from the Lake was less than half-exhausted, for they grew stranger and more precious as they traveled [...]	18	Su reserva de semillaperlas del Lago aún estaba a más de la mitad, ya que se volvían cada vez más exóticas y preciosas conforme viajaban [...]
One alone had survived to accompany him into the branchways of the great city of Forb , where first he had encountered learned men as he regarded learning.	20 / 21	Solo uno había sobrevivido para acompañarlo a las postrimerías de la gran ciudad de Forb , donde encontró por primera vez a hombres versados en lo referente a los estudios.
“This is Keepfire! Tell Master Jing what you think of this home of yours, Keepfire! ”	66	- ¡Este es Guardafuego! ¡Cuéntale al Maestro Jing lo que piensas de tu hogar, Guardafuego!
Literal translation		
The Bridge of Heaven -what these northerners called the Maker’s Sling-	15	El Puente del Cielo (lo que estos norteños conocían como el Arco del Creador)
Did he not -they responded in shocked tones- acknowledge the example of the Maker of All , who daily surveyed the world with His all-seeing eye , the sun, and nightly dispatched fiery bolts by way of warning that His way must be adhered to on pain of uttermost destruction?	24 / 25	¿Acaso no -respondieron con incredulidad- reconocía el ejemplo del Creador de Todo , que durante el día supervisa el mundo con Su ojo omnisciente , el sol, y por la noche profiere rayos enfurecidos como forma de advertirnos que debemos adherirnos a Su camino so pena de sufrir el dolor de la destrucción absoluta?

The chief of them, the doctor said, had taken refuge with the Count of Thorn .	29	Su jefe, según dijo el doctor, se había refugiado con el Conde de Espina .
“Sir, Scholar Twig is at the observatory with Shine , and they have shown me yet more marvels! Come at once!”	162	- Señor, el académico Vara está en el observatorio con Brillo , ¡y me han mostrado todavía más maravillas! ¡Venid ya!
“This is Hedge , this is Bush , this is _“	35	- Este es Seto , este es Arbusto , este es...
Explanation		
Jing’s lifelong faith in the beneficence of the universe had been shaken, but he was not about to enter someone else’s fever-dream .	25 / 26	La fe que Jing había mantenido toda su vida en la benignidad del universo se había tambaleado, pero no iba a rendirse a las ensoñaciones febriles de nadie.

This time, the most common strategy put to use to convey these items into the target language is creation, although literal translation and calques also play a crucial role in many cases.

Calques are also recurrent throughout this chapter, given the abundance of fictional nouns, both common and proper, that bear no resemblance to any real-life counterpart. In these cases, there is no choice but to faithfully convey such nouns as they were represented in the original text.

Creation is also widely used as a translation strategy at this point, given how many of the items included in the preceding table are not real words present in real-life speech, but constructs or figments devised by the original author to designate fictional traits or elements pertaining to their particular cosmogony. These, however, are often the result of merging two or more existing terms, which enables their translation into the target translation by conveying the different particles composing it. This can be clearly seen, for instance, in the conveying of the item *pearlseeds*, which, as stated previously, is composed by the union of the existing nouns *pearl* and *seed*, even though the new, resulting item is completely fictional and does not

designate any real concept. Therefore, the translator only needs to convene both particles literally into the target language, thus concocting a similar *irrealis* made up of two *realia*; in this case, that would be *semillaperlas*, which consists of the Spanish terms *semilla* (ENG *seed*) and *perla* (ENG *pearl*). The same process is sometimes applied to proper nouns in the source text, specifically when these express a particular feature or trait defining the character that it designates: let us take the proper noun *Welllearn* as an example. Here, once again, we find two real-life words which are joined in order to elicit a brand new, completely fictional *irrealis*. Hence, the semantic items *well* and *earn* (intended as a bare infinitive) are used to pinpoint the respective personality traits that define said character. Therefore, just as it happened before, it suffices for the translator to convey these two separate items into the target language to produce an equivalent *irrealis* in Spanish infused with the same meaning and nuances; more particularly, the adverb *well* is translated as *bien*, whereas *earn* is conveyed as *ganado* (which is a past participle tense, rather than an infinitive, but seems more natural-sounding as the ending particle of a proper noun in Spanish), which in turn make for the item *Bienganado*.

Mixed cases in this chapter refer to items tackled by using several translation techniques at the same time, chiefly calque, literal translation and creation, to a greater or lesser extent. For instance, in the long-worded denomination *His Most Puissant Majesty Waw-Yint, Lord of the Five-Score Islands of Ntah*, it may be noted that most of the items featured here can be translated by means of literal translation, but some others (namely *Waw-Yint*, being a proper noun, and the toponym *Ntah*) are to be conveyed exactly as they appear in the source text in the common language, thus applying calque as a translational approach due to the fact that they are entirely fictional *irrealia* without any kind of reference in the real world.

Regarding the use of literal translation, it is very commonly employed in cases when an *irrealia* is completely transparent, i.e. it is fully made up of existing, non-obscure items which can be easily translated into the target language. A clear example of this could be the translation of *Bridge of Heaven* as *Puente del Cielo*, or *Count of Thorn* as *Conde de Espina*. In both cases, the original *irrealia* consist of real, everyday words although they still refer to fictional titles, toponyms, or celestial bodies, and hence entail no further challenges for the professional translator approaching them.

Finally, there is a single case of explanation in which an English compound is translated as longer noun syntagm, owing to the fact that using a similar compound in Spanish would come

off as unnatural. In said case, the original *irrealis fever-dream* is convened as *ensoñaciones febriles* (which roughly translates as *feverish daydreams* in English).

In the published Spanish translation, the aforementioned items and *irrealia* are also tackled by employing a wide array of translational approaches, which are put to use as follows:

Spanish translation	Page
Creation	
Apareció un sol con su séquito de planetas, lunas y cometas. Uno de ellos era Mundocapullo .	7
Habían entrenado a los paredarbustos para que formaran una barrera circular de protección contra el viento y los rizomas servían de escalones rudimentarios desde los que mirar por encima de ella y observar de cerca el horizonte.	17
—¡Él es Guardiandelfuego ! Cuéntale al maestro Jing lo que piensas de esta casa tuya, Guardiandelfuego .	19
Calque	
Ahora que el sol se había puesto, la barq se estaba cansando.	9
Porque la tradición hablaba de mercaderes de Geys y Yown y Elgwim [...]	10
Mixed (Literal translation + Calque + Creation)	
Ayi-Huat Jing , astrólogo de la corte y enviado plenipotenciario de Su Más Poderosa Majestad Waw-Yint, Señor de las Cinco Veintenas de Islas de Ntah .	9
Uno sólo había sobrevivido para acompañarlo hasta las inmediaciones de la gran ciudad de Forb , donde había encontrado por primera vez lo que él había considerado como hombres de estudio.	10
—Señor, ¡el Académico Varilla está en el observatorio con Brillo ! ¡Me mostraron más maravillas! ¡Venid ahora mismo!	39

Describió el clima subtropical de Ntah y luego siguió con una visión general del Lago y sus alrededores: los puentes de enredadera que cruzaban de isla en isla [...]	25
Literal translation	
El Puente del Cielo —lo que los nortños llamaban Honda del Hacedor —	9
¿Acaso él no reconocía —le contestaron ellos sorprendidos— el ejemplo del Hacedor de Todo , que cada día vigilaba el mundo con Su ojo que-todo-lo-ve , el sol, y que de noche lanzaba feroces rayos como advertencia de que todos debían seguir Sus enseñanzas so pena de la destrucción más terrible?	11

In this case, the most common strategies applied are literal translation, creation, and calques, whilst a few of the examples compiled here also show the use of mixed approaches.

First of all, regarding the use of calques, these are employed, as per usual, when the original author uses a completely fictional *irrealis* to refer to a character, speech, or landmark pertaining to their particular cosmogony. This would be the case of *Drakh* (a side character), *Shreeban* (an ethnic group) or *Forb* (the name of a fictional city). There is, however, a particular case which deserves to be underlined: a series of incantations or litanies uttered in a made-up language as follows: *Oh-hya-na-ut thra-t-ywat insk-y-trt ah-bng-Ilytr-heethwa ib yong hr-ph-tnwef-r heesh-Ilytr-kwu-qtr-annibyong*. In all of these cases, the featured items are to be left unchanged in the target language, since all of them refer to *irrealia* without any kind of reference or equivalence in the real world.

As for cases of creation, they come into play when *irrealia* concepts designating completely alien realities are to be tackled, which includes either animal (*gnomons*) or vegetal (*plio bark*) species, as well as fictional celestial bodies (*budworld*), among others. Let us see a few telling examples here: for instance, the aforementioned item *budworld*, which refer to the home planet of the dominant species depicted in the novel, can be conveyed into Spanish by simply translating each part of the semantic compound (that is, *bud* and *world*) literally, which will thus result in a new *irrealis* with an equivalent meaning, *mundocapullo* (*mundo* being *world*, whereas *capullo* means bud: in Spanish, contrary to what happens in English, the noun is commonly placed before its defining adjective, and not the other way around). Thus, although

both parts comprising the new word have a transparent, real-life meaning, their merging makes for a fictional *irrealis*.

A similar process can be beheld in the translation of *plio**bark* as *plio**corteza*: this case is even simpler, as the prefix *plio* (from Greek *pleion*, meaning *more* or *greater*) remains unchanged, and only the main noun *bark* is to be translated as *corteza*. Additionally, the *irrealis* coined as *paredarbustos* stems from the items *pared* (ENG *wall*) and *arbusto* (ENG *hedge* or *shrub*), once again designating a fictional vegetal species, just like *joyárbol*, which results from the blending of *joya* (ENG *jewel*) and *árbol* (ENG *tree*). The translation of the English *irrealis* *snowbelong* (referring to an animal species), however, differs slightly from these previous examples, albeit the core procedure is still the same: in this case, the source item is conveyed as *delanieve*, literally meaning *fromthesnow*; thus, a compound featuring a noun + verb becomes a different one consisting of preposition + noun, hence altering the grammatical composition of the original item, but not its meaning.

The technique of creation is also widespread when it comes to translating proper nouns bearing an underlying meaning, typically concerning the nature or defining traits of the character that they pertain to. This can be noticed in items such as *Keepfire*, translated into the target text as *Guardiandelfuego*, literally meaning *keeper of the fire*, thus striking the reader as a noticeably more long-worded noun than the original one, although its meaning and nuances are preserved.

This not only applied to sentient characters, but also to the denominations of fictional planets, which often include clues hinting to their hue, shape or astronomical behavior. Thus, the English items *Swiftyouth*, *Steadyman*, *Stolidchurl*, *Stumpalong* and *Sluggard*, all of which describe the main defining traits of their respective celestial bodies, are translated into Spanish as *Brevejuventud*, *Bravohombre*, *Brutoinsensible*, *Bogalento* and *Blando*, respectively. All of these translations broadly convey the adjectives and nouns expressed in the original text, albeit some of them are not fully accurate: for example, *Steadyman* is conveyed as *Bravohombre*, hence implying that the English adjective is akin to Spanish *bravo*, which does not hold true, as the latter is equivalent to *brave*, whereas a more accurate translation for *steady* could be either *firme* or *constante*. Roughly the same applies to the source item *Sluggard* and its Spanish counterpart, *Blando*, which literally translates as *soft* and, therefore, is not in line with the meaning intended by the English *irrealis*, which could be conveyed much more accurately as something along the lines of *renqueante*.

Literal translation, on the other hand, is used when tackling non-obscure *irrealia* referring to fictional toponyms, astronomical phenomena or proper nouns made up of actual, real-life terms: for instance, the *irrealis* from the source text known as *Bridge of Heaven* can be simply translated into Spanish as *Puente del Cielo*, bearing the same exact meaning. This process broadly applies to other items as well, such as *Honda del Hacedor* (ENG *Maker's Sling*), *Hacedor de Todo* (ENG *Maker of All*), *Conde de Espina* (ENG *Count of Thorn*), *Ojo del Hacedor* (ENG *Maker's Eye*), *Manto del Hacedor* (ENG *Maker's Mantle*) or *Su ojo que-todo-lo-ve* (ENG *His all-seeing eye*), all of which broadly convey the same nuances and implications devised by the source author in the original work.

This technique also comes into play upon translating proper nouns that also constitute generic concepts or adjectives: for instance, the character named *Rainbow* in the source text is easily translatable as *Arco Iris* in Spanish, which designates the same natural phenomenon. The same applied to other characters, such as *Shine*, which in turn becomes *Brillo*.

Formal or official denominations can also be translated literally: the English formulae *court astrologer and envoy plenipotentiary of His Most Puissant Majesty Waw-Yint, Lord of the Five-Score Islands of Ntah* is thus conveyed as *astrólogo de la corte y enviado plenipotenciario de Su Más Poderosa Majestad Waw-Yint, Señor de las Cinco Veintenas de Islas de Ntah* in the target language, while the fictional proper noun *Waw-Yint* is left untouched.

As mentioned before, some cases in the preceding table feature mixed translational approaches, mostly blending the use of literal translation with calques, as it can be seen, for example, in the translation of the syntagm *the great city of Forb*, conveyed into Spanish as *la gran ciudad de Forb*. Therefore, all items are translated literally save the name of the city itself, which is preserved as a raw calque owing to the fact that it is a completely made-up *irrealis*. Other cases of mixed translation may include the English proper noun compound *Scholar Twig*: the noun complement *scholar* can be conveyed literally as *académico*, whereas the core item *twig*, describing the nature or physical appearance of said character, may be adapted into the target text as *varilla*, bearing almost the same meaning.

To close this chapter, it can be stated that, in the light of previous research, the translation approaches used to handle the translation of novel-specific terminology, heavily influenced by the presence of *irrealia*, differs wildly depending on the nature of such items, although the use of creation and adaptative techniques is widespread throughout the preceding chapters.

However, literal translation and especially calques also play a pivotal role in the translation of these *irrealia* and are often entangled and merged with other approaches so, in the end, each particular item calls for a fully customized handling, bearing in mind the scope and defining traits of each *irrealis*.

5.5. Other highly relevant terminology in Seeders

5.5.1. Fictional statements regarding plants

Original item	Spanish Translation	Page
Literal translation		
It went on to describe something called V-waves, oscillations made by trees to communicate with each other.	Continuaba describiendo algo llamado ondas V, oscilaciones que hacen los árboles para comunicarse.	78
Morphological adaptation		
“So, did he uncover something that would change the world?” “ He claims that plants were communicating with him, in <i>English</i>, no less. That’s a bit far-fetched for even my imagination. ”	- Entonces, ¿descubrió algo que cambiaría el mundo? - Afirma, nada menos, que las plantas se comunicaban con él en <i>inglés</i>. Eso es algo descabellado hasta para mi imaginación.	80

We can see here a few examples of fictional claims made by different characters throughout the novel as regards the field of botany and plant communication. The first case refers to the

possibility that trees may reach out to each other by means of visibly tilting or oscillating its branches; there is no evidence, so far, that this is true or even feasible at all.

The second claim is even more fantastic than the first one, as it is stated that a plant is communicating with a human being in his own native language. Both claims serve the purpose of showcasing how the author interweaves fantasy and real science in her story, leaving the reader doubting whether what they are reading is something feasible, or a dark figment of her imagination.

5.5.2. Real statements regarding plants

Original item	Spanish translation	Page
Literal translation		
“That’s a good example. You see, the Venus flytrap has four sensor hairs that an insect must trip twice, within twenty seconds, in order for the trap to close. This shows the plant has memory, and logic , really. What’s more, plants can make decisions . [...]”	- Es un buen ejemplo. Observa, la venus atrapamoscas tiene cuatro folículos sensoriales con los que un insecto debe tropezar dos veces, en un plazo de veinte segundos, para que la trampa se cierre. Esto demuestra que la planta tiene memoria y, en realidad, lógica . Es más, las plantas pueden tomar decisiones . [...]	97
“You see, plants have a system of tracking and signaling that’s just as effective as our own. they can use all five senses without the almighty nervous system .”	- Ya lo ves, las plantas tienen un sistema de localización y señalización que es tan efectivo como el nuestro. Pueden usar los cinco sentidos sin el todopoderoso sistema nervioso .	97

The sun. If only she understood his message. Jules's words repeated in her ear. <i>Plants don't know the difference between thoughts and reality.</i>	El sol. Si tan solo hubiera comprendido su mensaje. Las palabras de Jules se repitieron en sus oídos. <i>Las plantas no saben la diferencia entre los pensamientos y la realidad.</i>	301
Reduction		
"For example, a dodder has no leaves to make its own food, so it has to get nutrients by attacking other plants, using its sense of smell to find its victims. There could be ten different species nearby and it will always smell out the most succulent. Then it reaches across the soil and wraps itself around the plant several times, attaching suckers that penetrate its prey to extract the nutrients."	- Por ejemplo, una cuscuta no tiene hojas para fabricar su propio alimento, así que tiene que obtener nutrientes atacando a otras plantas, usando su sentido del olfato para encontrar a sus víctimas. Podría haber diez especies diferentes cerca, y siempre olería a la más succulenta. Luego se desplaza por el suelo y se enrosca varias veces en torno a la planta, adhiriendo ventosas que penetran a la presa para extraer los nutrientes.	97
Morphological adaptation		
Plants do have memory, and we've also learned that they can distinguish between odors.	Las plantas, en efecto, tienen memoria, y también sabemos que pueden distinguir entre olores.	97

In this case we can find a number of claims regarding the world of plants, all of which are at least partly true, even though they are sometimes presented in a shocking or unconventional way.

For example, the first sentence in the preceding template claims that plants are able to *smell* (*sense* would probably be a more adequate verb) scents and react to them accordingly. This is supported by the fact that, as stated by botanists such as Baluska, Mancuso, Volkmann, and Barlow in scholarly magazines like *Plant Signaling and Behaviour* (2009), many species of plants have been proven to have radicles and adminicles that mimic some sort of nervous system, even though vegetal species are irremediably without a brain. These networks of radicles and adminicle-like terminations, however, allow for a certain degree of sentience and awareness of the outer world, thus enabling the plant to interact with its surrounding environment, albeit such interactions will always greatly differ from those observed in the animal kingdom due to stark physiological divergences. This can be seen in the following excerpt from the aforementioned scholarly article:

It is hardly an exaggeration to say that the tip of the radicle thus endowed [with sensitivity] and having the power of directing the movements of the adjoining parts, acts like the brain of one of the lower animals; the brain being seated within the anterior end of the body, receiving impressions from the sense-organs, and directing the several movements. (p.1121)

Secondly, we can find a statement claiming that plants have some sort of memory and are able to identify a number of scents that they have previously smelt. Once again, this can be verified by the fact that plants have been scientifically proven to have some sort of intelligence that allows them to perceive their surroundings and react accordingly. As Mancuso and Viola (2015, p.XII) point out in their book entitled *Brilliant Green*, “we jealously guard terms like *intelligence* -and *learning* and *memory* and *communication*- as the monopolies of animals.”

This, therefore, entails the fact that plants are indeed able to receive information from external stimuli, store such data in a way that greatly resembles animal memory, and learn from it in order to avoid dangers or seek out beneficial behavioral patterns in the future. All of this thus means that plants are indeed intelligent despite being deprived of a brain or a complex nervous system. The aforementioned Mancuso and Viola go on to confirm that “plants are starting to be regarded as beings capable of calculation and choice, learning and memory.” (p.2)

There has been a significant shift in the way plants are perceived and viewed by botanists, biologists, and other similarly kindred scholars in recent years. Just a few decades ago, any claims that the vegetal kingdom is capable of an actual intelligence, with plants being able to make decisions after carefully studying external signals and marker from the outer world, would have been met with derision and dismissed as far-fetched. However, there is an ever-increasing number of scholars who now approach plant studies from a radically different perspective to the point of ushering the emergence of new scientific disciplines such as plant neurobiology, which tackles botany from the certainty that vegetal species do have a nervous-like system that makes them aware of their environment. Some other experts who also agree on this recent consensus include the following:

Currently, there is a general agreement that higher plants are not only able to receive diverse signals from the environment but that they also possess mechanisms for rapid signal transmission. Moreover, plants can effectively process information obtained from their surroundings and can show learning behaviour which involves goal-seeking, error-assessment, and memory mechanisms (THELLIER et al., 1982; KNIGHT et al., 1998; GOH et al., 2003; TREWAVAS, 2002, 2003). Plants can also communicate this information with neighbouring plants (DICKE & BRUIN, 2001; BRUIN & DICKE, 2001). (Baluska, Barlow, Mancuso and Volkmann, 2004, p.2)

Thus, authors such as Thellier, Knight, Goh, Trewavas, Dicke and Bruin can attest to the fact that plants do have complex mechanisms that allow for signal and information processing, and that they also can learn from past mistakes by remembering them, as well as consciously acting

towards achieving a particular goal, in a way not too dissimilar from what can be seen in animal species, although the same goals are accomplished by significantly different means.

The third sentence in the list states that plants can actually make decisions and choices based on their sensorial stimuli, which can then be assured additionally by looking further into Mancuso's and Viola's works, who go on to state that "plants are definitely not passive automatic organisms. On the contrary, [...]they possess a sensory-based cognition which leads to behavior, decisions and even displays of prototypic intelligence." (Baluska, Barlow, Mancuso and Volkmann, 2009, p.1121)

This goes to show that plant cognition is active and behavioural, which means that plants are capable of making decisions in accordance with their external context, as previously stated. Having set this, many authors also move on to ponder what kind of stimuli can trigger different reactions in plant species, noticing that:

Plant action potentials can be induced by wounding as well as by several environmental stimuli: for example, mechanical stress, temperature, light, gravity, and even in response to the plant hormone, auxin (DAVIES & SHUSTER, 1981; RHODES et al., 1996; PICKARD, 1984; DAVIES, 1987; WILDON et al., 1992; SHIMMEN, 2001a). (Baluska, Barlow, Mancuso and Volkmann, 2004, p.2)

This assertion shows that there is a wide array of environmental circumstances and stimuli that may elicit accordingly reactions in plants: for instance, if sunlight is scarce the plant will choose to grow towards sunnier spots, while the action of gravity or extreme temperature can also affect plant growth and morphology in significant ways. Other common stimuli that can trigger noticeable responses in vegetal species include hormonal segregation, which can be used, for example, in order to warn surrounding plants of a looming danger. This also gives rise to a new theory regarding the nature of plant intelligence, as

“there is always movement in progress, and its amplitude, or direction, or both, have only to be modified for the good of the plant in relation with internal or external stimuli.” (Charles and Francis Darwin, 1880, p.4)

In this case, it can be seen that plants are therefore never still or passive, as it may appear in plain sight; on the contrary, plant growth is constant and goes on so far as the specimen stays alive. The vegetal, therefore, has the ability of directing such never-ending growth and movement in a way that it may deem most beneficial to its survival; for instance, as mentioned before, it may direct its branches and leaves so that they reach the sunniest spots in its vicinity in order to carry out photosynthesis more easily, or also to avoid extreme, potentially harmful temperature (for example, seeking shelter in the shade if it is too hot).

Going back to plant radicles and the essential role they play in plant sensitivity and intelligence, it is important to note how receptive these can be, allowing plants to perceive even the slightest external stimuli. This was already scientifically proven as early as in the 19th century, when Charles Darwin and his son Francis claimed the following fact in their work entitled *The Power of Movement in Plants* (1880):

[...] With the radicles of seedlings, the tip is sensitive to various stimuli, especially to very slight pressure, and when thus excited, transmits an influence to the upper part, causing it to bend from the pressed side. On the other hand, if the tip is subjected to the vapour of water proceeding from one side, the upper part of the radicle bends towards this side. Again it is the tip, as stated by Ciesielski, though denied by others, which is sensitive to the attraction of gravity, and by transmission causes the adjoining parts of the radicle to bend towards the centre of the earth. (p. 4)

This excerpt points towards the sensitivity of radicles in seedlings or saplings in particular, stating that, during this state of development, the tip of the radicle is especially receptive to external stimuli owing to its immaturity, similarly to what can be seen in many infant or juvenile animals. Charles and Francis Darwin point that, when stimulated, these aforementioned radicles elicit a spontaneous response that can be likened to those produced by an animal nervous system upon being subject to an unexpected, external reaction; that is, the radicle bends or leans

towards one side or the other depending on where the external stimulus was received. Therefore, this serves as further evidence to confirm that plants are able to perceive their surroundings in a wide gamut of nuances, even without a brain or a complex nervous system.

Accordingly, the Darwins also discuss the different sensitivities that can be sensed by vegetal species, thoroughly explaining how the plant reacts in one way or another depending on the kind of stimulus applied to it, thus acting with an unmistakable kind of intelligence:

We thus see that with seedling plants the tip of the radicle is endowed with diverse kinds of sensitiveness; and that the tip directs the adjoining growing parts to bend to or from the exciting cause, according to the needs of the plant. The sides of the radicle are also sensitive to contact, but in a widely different manner. Gravitation, though a less powerful cause of movement than the other above specified stimuli, is ever present; so that it ultimately prevails and determines the downward growth of the root. (Darwin, 1880, p.552)

It can thus be concluded that plants are indeed able to communicate with the environment in which they live, being fully aware of surrounding circumstances and reacting in accordance with them in order to avoid impending danger, warn other plants of such dangers or seize potential benefits and resources. Even though they are without a brain or the complex nervous system that can be found in animal species, vegetal species have their own means to perceive their surroundings accurately and practically, so the preceding statements featured in *Seeders* still hold true.

The following claim revolves around the botanical concept of mycorrhiza, a common symbiotic relationship established between a fungus and a plant in order to strengthen each other. As the sentence in the novel says, this kind of symbiotic bond is extremely common and can be found in up to 90% of all plant species.

Finally, the last claim in the previous template seems obvious and straightforward: in the novel, infected plants have the ability to read human minds and manipulate them accordingly. However, as it stands, none of this is possible in real life.

In conclusion, as we can see here, the novel and its plot sit on a solid foundation of real, well-researched science, giving the story a semblance of realness that enhances the confusion and

horror brought about by its fictional elements. When translating such a text from English into Spanish, it is paramount to preserve this delicate balance of fantasy and reality, which calls for a careful, well-planned approach.

Throughout this whole section, a detailed analysis has been carried out in order to provide a revealing picture as to how several types of key markers (linked either directly or indirectly with the particular field of botany) can be tackled in the three selected novels comprising this dissertation corpus, spanning different literary styles, plots and background contexts, providing translation proposals and comparing them with their respective counterparts in published Spanish versions. Thus, having conducted the empirical chapter of this essay, it is now time to lay out the collected results in order to draw the due conclusions, depicting which translational approaches are best suited for each situation and terminological field. Therefore, in the upcoming section, a visual representation of such collected results will be shown in order to provide a clear glimpse into the completed work in this paper.

5.6. Transmedial translation in *The Day of the Triffids*

Over the course of the last sections in this dissertation, a thorough analysis has been conducted in order to show how an extensive selection of significant items have been translated, both in published Spanish translation and also in the proposals provided in this essay. It would also be insightful, however, to analyze how a science-fiction story has been translated from a transmedial viewpoint: that is, how it has been conveyed from its original written form into an audiovisual medium.

Given how the one of the works comprising the corpus in this dissertation, *The Day of the Triffids*, was chosen partly due to its widespread popularity in the science-fiction community and its bountiful adaptations in the form of movies and TV series, it seems like the ideal story to choose in order to provide a brief glimpse into how the main *irrealia* and key items in said novel have been translated into Spanish once the original work was adapted into such audiovisual means.

For this occasion, two different adaptations have been selected: firstly, the 1962 movie; secondly, the first out of the six episodes comprising a TV mini-series aired in 1981, almost two decades later.

However, before delving into the analysis of both audiovisual pieces, it seems paramount to briefly reflect on the sheer concept of transmediality. Commenting on its nature, Loponen (2019) asserts that the fantasy genre is inherently transmedial, which entails that written stories are constantly adapted into audiovisual (films and television shows) and interactive (videogames) formats, and even such iterations are susceptible to be readapted into other media, thus feeding a loop that constantly enriches fantasy and science-fiction stories.

Loponen (2019) builds on this concept to assert that transmedial adaptation can also serve the purpose of providing a glimpse into the societies or times when they were elicited. This implies that the study of transmediality can also be applied from a cultural and diachronic viewpoint, thus offering us a valuable context and background to the works which are studied.

Transmedial studies, nevertheless, are not without controversy, as pointed out by Roine (2016), “the whole concept of transmediality has been criticised by researchers with an essentialist view on different media, where every mediated phenomenon is bound to its mediality, cultural context and perceptual circumstances.” (p. 26)

Hence, we will attempt to challenge this notion by providing an analysis of two different transmedial adaptation for the aforementioned *The Day of the Triffids*.

Thus, starting with the 1962 movie, it can be seen that its very title already seems controversial from a translational viewpoint: while it aired in the English-speaking world as *The Day of The Triffids* (thus respecting the original novel), its name suddenly changes to *La Semilla del Espacio* in Spain (ENG *The Seed from Space*) and *La Amenaza Verde* in Latin America (ENG *The Green Menace*).

While the Latin American title stills offers an useful piece of information that helps the viewers understand the plot of the movie (there is a plant which is dangerous and potentially deadly), the Spanish one seems misguided in the idea that it implicitly suggests that triffids are alien, which is untrue (they are lab-engineered but originate on planet Earth), probably conflating the nature of the triffids with the meteor shower that blinds most of humankind at the beginning of the story, even though the original work heavily implies that they are to separate, most likely unrelated events.

Hence, here follows a table featuring the most noteworthy *irrealia* and botanical terms in the source work, and how they compare to its Spanish-dubbed version (with Antón Rubal voicing the protagonist and narrator in the novel, Bill Masen, and Trinidad Morenza as Karen Goodwin):

Original item	Spanish translation
The Day of the Triffids	La Semilla del Espacio (lit. <i>The Seed from Space</i>)
Triffid	<i>Triffidus erectus</i> (0:00:55) and trífido (0:58:12)
Rootlet hairs	Raíces (lit. <i>roots</i>) (0:22:00)
Venomous sting	Picadura mortal (lit. <i>deadly sting</i>) (0:21:58)

The scarcity of scientific terminology and *irrealia* in the movie, when compared to the original movie, seems certainly remarkable, with only a handful of basic denominations scattered throughout the film, all of which have been translated literally (except for the title itself, which has already been commented), due to their simplicity. It appears that this first audio-visual adaptation of the story relies heavily on action and survival, rather than the purely science-fiction factor, which also played a significant role in the source work.

There are, however, a few statements throughout the movie concerning the nature of triffids, which did not appear on the novel. For instance, one of the main characters claims that such plants “do not seem to have a central nervous system, nor a bloodstream” (SPA “No parece tener sistema nervioso central ni circulación” [0:50:39]) and, shortly after, it is also asserted that “they have sensory responses, and they consume and give off energy” (SPA Tienen respuestas sensoriales y consumen y desprenden energía [1:08:55]). Towards the end of the film (1:22:45) the main character also finds out that triffids are attracted by noise. All of this is in line with the depiction of triffids provided in the source text, albeit expressed in a slightly different manner due to the inner workings of an audiovisual narration, in contrast with a literary text. In a similar vein, triffids are also said to reproduce by means of wind-borne seeds (0:58:47), and they are also immune to common chemical compounds (1:08:35).

Nevertheless, some significant variations can also be spotted in the story and its narration. The most outrageous one is, perhaps, the fact that triffids are explicitly said to come from outer space, rather than being a lab-engineered plant species, initially grown and harvested from financial purposes. This seems vital owing to the fact that it entirely erases the early phase of the source story, which is devoted to explaining the origin of triffids and their wider implications, and further enhances the *pulp* and action-packed nature of the film by leaving its more scientific traits aside.

Yet another significant change lies in the fact that, towards the end of the movie, it is revealed that sea water proves fatal for triffids, as they dissolve when doused with it. Once again, this is not present in the novel, and it provides a happy ending on a lighter note, catering for younger audiences.

Finally, it is also worth mentioning that, due to the material and technological limitations of the movie industry in the 60s, the portrayal of triffids differs slightly from its depiction in the source text. As they appear in the film, they seem sturdier and clumsier than their novel counterparts, although the overall physical appearance remains faithful to the original text.

In conclusion, it is notable how, in order to adapt the novel by John Wyndham to a fast-paced audiovisual format, and make his story friendlier to wider audiences, the movie adaptation opts to remove a sizeable part of the science-fiction terminology present in the source work, and it also shows a lighter, less bleak version of its post-apocalyptic world.

As for the 1981 TV series, it seems noteworthy that its title has been translated literally this time, rather than adapting it on a semantic level: that is, whereas the original title still remains *The Day of the Triffids* (once again, the same as in the original work), its Spanish counterpart is *El Día de los Trífidos* instead of *La Semilla del Espacio* or *La Amenaza Verde*. This may be ascribed to the fact that, by the early 80s, this story had already become widespread and popular throughout the Spanish-speaking world, and the potential viewers would easily identify what a triffid is even before watching the show. That is, the *irrealis* had become naturalized.

In the earlier movie, however, the original story was still largely unknown among Spanish-speaking viewers, and the due translators probably thought that such an unfamiliar term may leave the viewership unfazed, thus opting for explanatory alternatives that would explicitly unravel the nature of the story.

Once again, here follows a table containing the main botanical items in the work, as well as its most remarkable *irrealia*, alongside a comparison with their subtitled Spanish counterparts in the 1981 TV series:

Original item	Spanish translation
The Day of the Triffids	El Día de los Trífidos (lit. <i>The Day of the Triffids</i>)
Triffid	Trífido (lit. <i>Triffid</i>) (0:03:24) “Trif” (0:03:38) Tres Pies (lit. <i>Three Feet</i>) (0:09:35) Andadores (lit. <i>walkers</i>) (0:12:42)
Rootlet hairs	¿Qué es esta cepa en las raíces? (lit. <i>what is that protrusion in the roots?</i>) (0:08:03)
Venomous sting	Picadura de trífido (lit. <i>triffid sting</i>) (0:19:50)

Triffid farms	Granja de trífidos (lit. <i>triffid farm</i>) (0:10:32 / 0:19:54)
Self-propelled plant	Plantas monstruosas en marcha (lit. <i>monstruous marching plants</i>) (0:08:49)
Safely docked truffid	Es perfectamente seguro si lo atas con una cadena y le cortas el aguijón cada dos años (lit. <i>it is perfectly safe if you tie it with a chain and you cut its sting off every two years</i>) (0:13:00)
Triffid poison	Veneno (lit. <i>poison</i>) (0:09:27)
Anti-triffid gear	Ropa protectora (lit. <i>protective clothing</i>) (0:20:07)

It may be seen that the TV series is much more faithful to the novel than the previous movie in the fact that its science-fiction terminology and concepts, including *irrealia* and botanical terms, are featured and extensively detailed, opting for a slower pace in order to thoroughly explain the origin and nature of truffids before moving on with the plot. As a matter of fact, the analyzed 25-minutes long episode feature a far higher density of scientific and fictional terms than the full 1962 movie.

Firstly, truffids are explicitly said to be a human-crafted plant species meant to be exploited for financial purposes, being grown in farms for their valuable oil (0:04:17). Just as it can be read in the novel, the narrator states that “truffids were carnivores, they would sting their victims and then waited for the flesh to rot. They couldn’t use it as nourishment until then” (SPA Los trífidos eran carnívoros, picaban a sus víctimas y luego esperaban que la carne se pudriera. Hasta entonces no podían utilizarlo como alimento [0:09:52]).

Still in the same vein, a long scene set in a truffid farm serves the purpose of explaining that truffids are intelligent creatures (0:14:10), capable of communicating by clicking their branches against their stems in a complex pattern (0:13:29), even though they do not have a brain (0:14:15). This intelligence of sorts is proven by the way truffids always aim for the head when

they attack their victims (0:14:18). It is even stated that triffid stings can grow up to ten feet long (0:20:10).

The episode even quotes, almost literally, the dialogue carried out by the original characters in the John Wyndham novel, such as the following excerpt:

“A talking plant, that’s ridiculous!”

“Just like a walking plant, and triffids do walk”

(SPA - ¡Una planta que habla es ridículo!

Como una planta que anda, y los trífidos andan [0:14:00])

It can be reckoned that the TV series, being a six-episode show, can devote more time to providing an extensive, accurate background to its story than a fast-paced movie. It is indeed remarkable how close the terminology and dialogues present in the TV show are to the original work, featuring an abundance of the terminology that can be found in the novel.

As a conclusion, it must be wagered that analysing *The Day of the Triffids* in two similar, but still distinct audiovisual formats, does provide a highly valuable insight into how transmedial adaptations may face unique challenges that affect how the source text is portrayed. This includes technical or material limitations that may hinder the accurate portrayal of fantasy creatures or landscapes, as well as the fact that an audiovisual work is always constrained by time, since the original work must fit into a show that will usually run for two hours, at most, if it is a movie, whereas TV episodes are typically shorter, which typically leads to cropping out certain aspects of the source work which may hamper the understanding of the plot. It must also be borne in mind that an audiovisual adaptation might also cater for different audiences than the source text upon which it is based, leading to a change in the general tone or register of the story.

6. Results of the analysis – Use of translation techniques, by novel and semantic field

This chapter will serve as a means to portray the empirical data analyzed in the practical section of the dissertation in a visual, direct way, so that said data can then be used to draw the due conclusion that will either confirm or refute the main hypothesis of this essay, which is to prove that botanical terminology (as well as other lexical fields which are intrinsically related to it) play a pivotal role in the science-fiction literary genre, and that such items and markers can be successfully translated (in this particular case, from English into Spanish) without losing the nuances intended by their original authors. Thus, for each terminological category that has been previously tackled (i.e., botanical, fictional, medical, legal, maritime, slang, novel-specific and other items), including both translation proposals and already published renditions in Spanish (when applicable), pie charts will be provided showing the techniques used in each case and frequency of use for every one of them. Each chart will also be followed by an explanation of the depicted strategies, and conclusions will be drawn as to why certain translational approaches seem to be more or less common in particular semantic fields and contexts by means of a quantitative approach, as already pointed out earlier in this dissertation.

6.1. Seeders

6.1.1. Botanical terminology (total number of items: 87)

Translation technique	Number of items	Percentage
Literal translation	42	48.3 %
Semantic adaptation	6	6.9 %
Cultural adaptation	3	3.5 %
Calque	17	19.5 %

Explanation	2	2.3 %
Reduction	3	3.5 %
Semantic shift	1	1.1 %
Mixed	13	14.9%

Pie chart

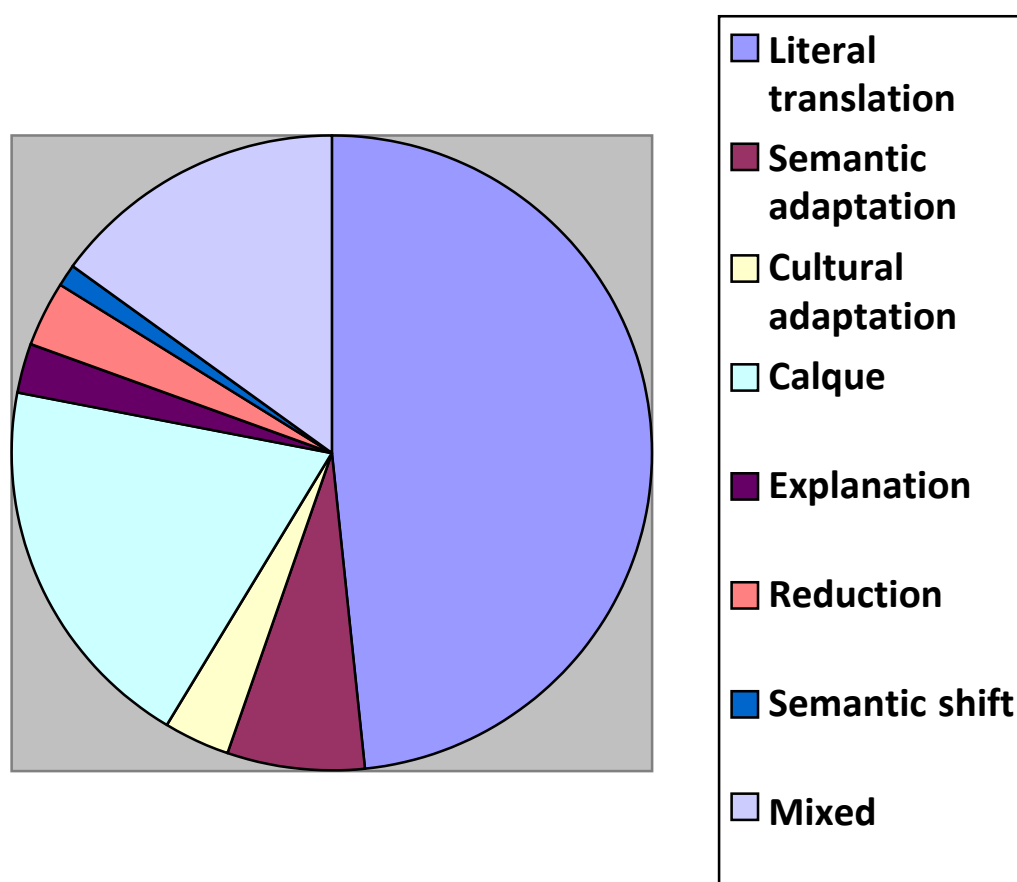


Chart 1. Botanical terminology in Seeders

Literal translation is the most commonly used strategy, albeit calques also account for a remarkable share of the items, followed distantly by diverse kinds of adaptation (semantic and cultural, as well as explanation and reduction). A noteworthy share of the items portrayed in

the preceding table are also handled by means of mixed approaches featuring elements for both literal translation and also more adaptative techniques.

6.1.2. Fictional terminology (total number of items: 16)

Translation technique	Number of items	Percentage
Literal translation	13	81.25 %
Semantic adaptation	3	18.75 %

Pie chart

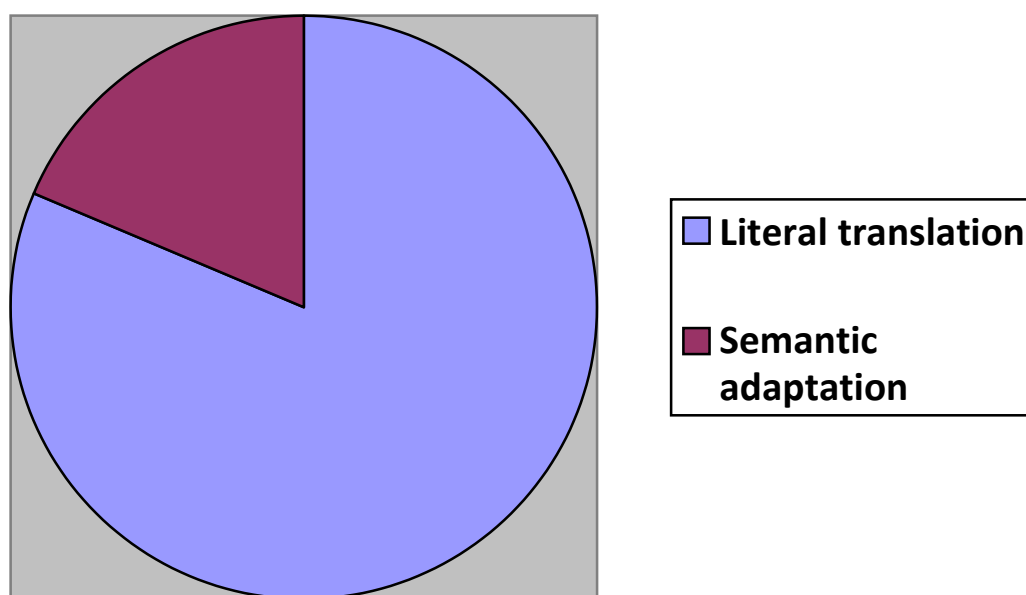


Chart 2. Fictional terminology in Seeders

Clear dominance of literal translation as the preferred technique to tackle items in this category, with only a few remaining cases of semantic adaptation.

6.1.3. Medical/scientific terminology (total number of items: 131)

Translation technique	Number of items	Percentage
Literal translation	96	73.3 %
Morphological adaptation	1	0.7 %
Semantic adaptation	11	8.4 %
Calque	20	15.3 %
Explanation	3	2.3 %

Pie chart

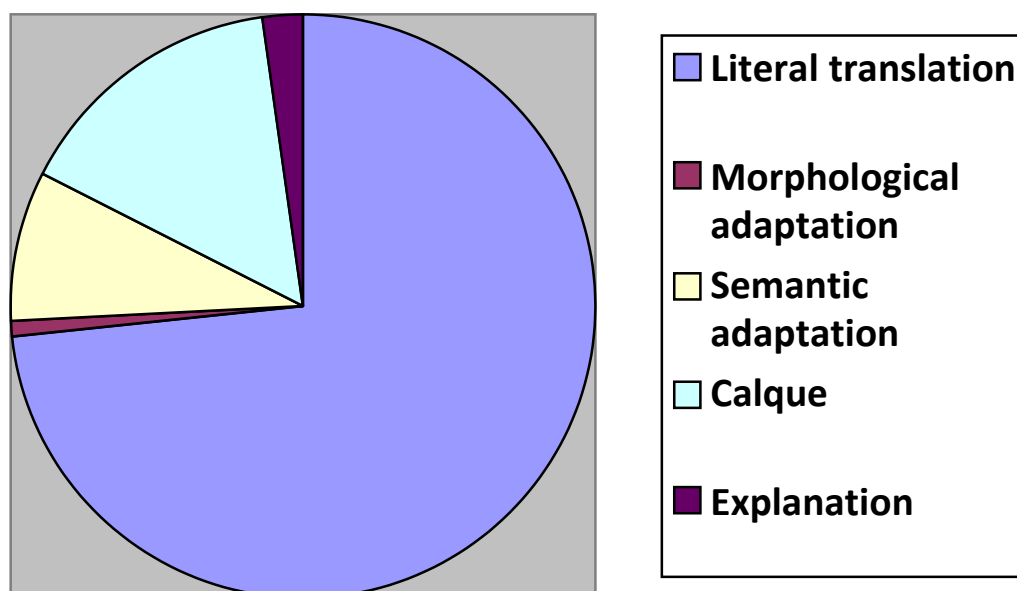


Chart 3. *Medical and scientific terminology in Seeders*

Clear dominance of literal translation, with only a few scattered cases of calque and semantic adaptation. There is also a negligible presence of explanation and morphological adaptation.

6.1.4. Novel-specific terminology (total number of items: 43)

Translation technique	Number of items	Percentage
Literal translation	23	53.5 %
Morphological adaptation	9	20.9 %
Semantic adaptation	6	13.9 %
Cultural adaptation	1	2.3 %
Explanation	4	9.4 %

Pie chart

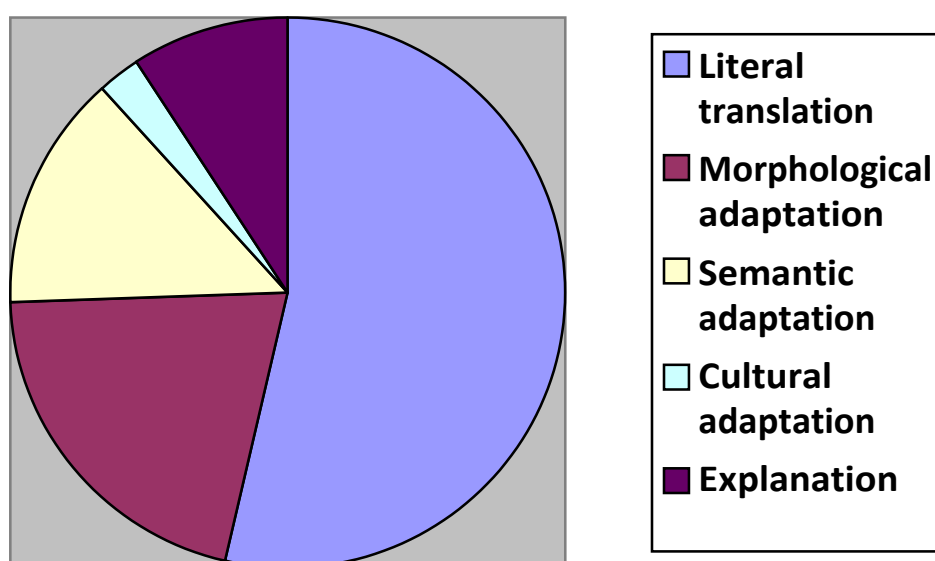


Chart 4. *Novel-specific terminology in Seeders*

Literal translation becomes, once more, the default translation technique, with morphological and semantic adaptation also playing a significant role in the background. Explanation also holds a significant, albeit smaller, share of the translated items and, finally, cultural adaptation is anecdotally used in one single case.

6.2. The Day of the Triffids

6.2.1. Botanical terminology (total number of items: 40)

Translation technique	Number of items	Percentage
Literal translation	25	62.5 %
Morphological adaptation	12	30 %
Cultural adaptation	1	2.5 %
Calque	1	2.5 %
Explanation	1	2.5 %

Pie chart

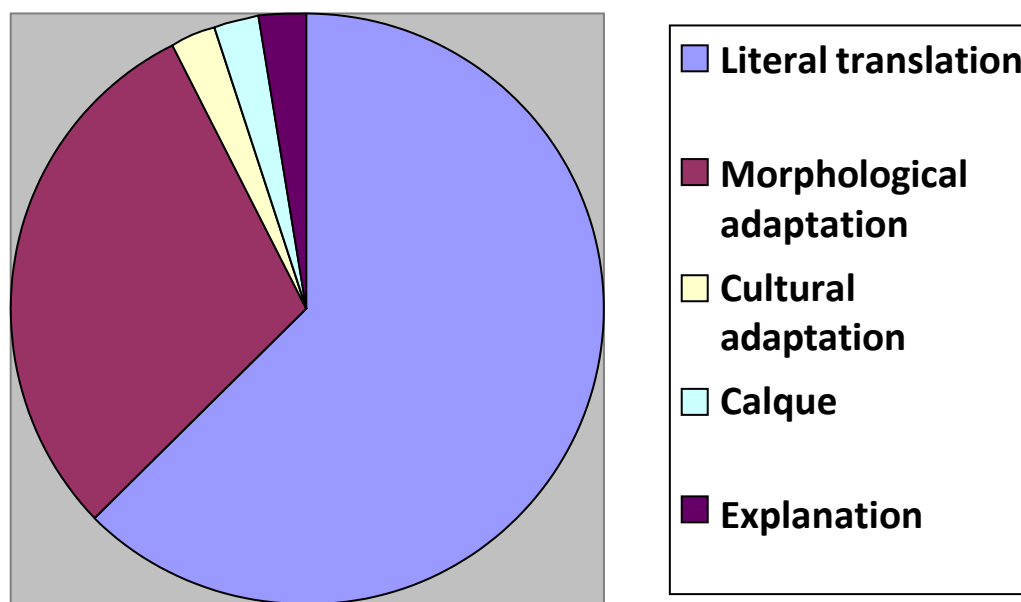


Chart 5. Botanical terminology in *The Day of The Triffids* (dissertation proposals)

Literal translation and morphological adaptation are used to tackle virtually all items in this category, while explanation, cultural adaptation and calques are also scarcely used throughout the corpus.

6.2.1.1. Published translation (total number of items: 30)

Translation technique	Number of items	Percentage
Literal translation	13	43.3 %
Morphological adaptation	4	13.3 %
Semantic adaptation	8	26.7 %

Calque	2	6.7 %
Addition	1	3.3 %
Explanation	1	3.3 %
Reduction	1	3.3 %

Pie chart

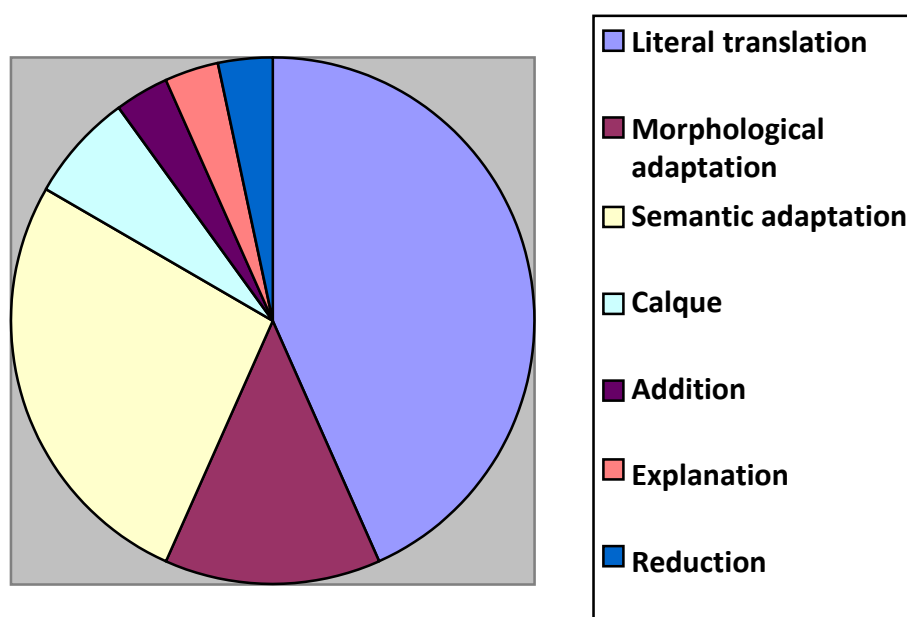


Chart 6. Botanical terminology in *The Day of The Triffids* (published translation)

Albeit literal translation is, as per usual, the most commonly used technique, semantic and morphological adaptation also hold a significant share of the items tackled here. However, an extensive gamut of translation techniques is put to use here, and addition, explanation, reduction and calques are also present.

6.2.2. Fictional terminology (total number of items: 1)

Translation technique	Number of items	Percentage
Cultural adaptation	1	100 %

Pie chart

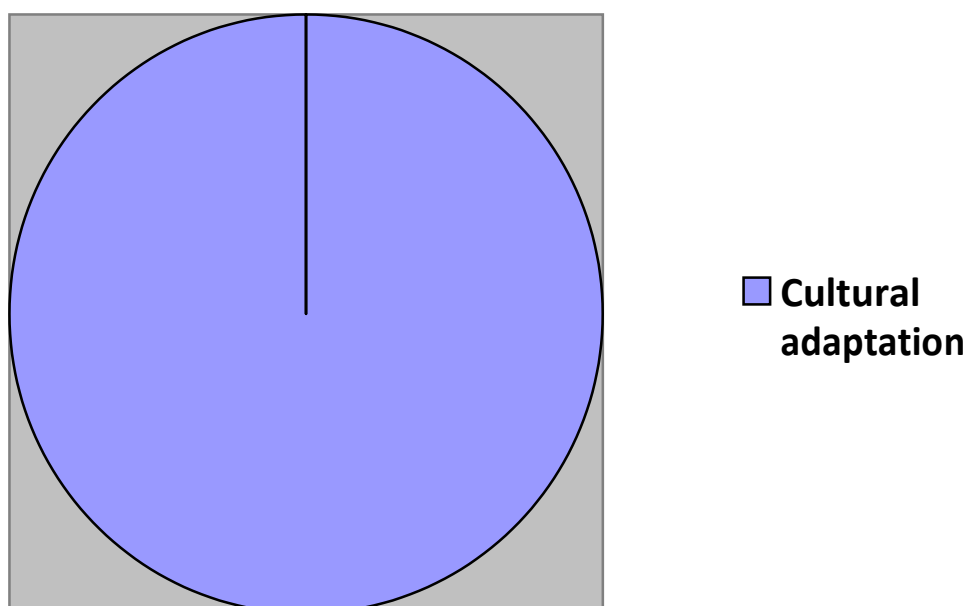


Chart 7. Fictional terminology in *The Day of The Triffids* (dissertation proposals)

The only single item in this chapter is tackled by means of cultural adaptation. This can be chalked up to the fact that inherently fictional items, *irrealia*, are unavoidably culture-bound, given how different authors will imagine different kinds of cosmogonies and fantasy worlds accordingly with the actual cultural, social and natural environment they have been raised in. Therefore, the translation of *irrealia* from one language into another will necessarily entail

adjusting and adapting culturally charged nuances so that they comply with the target readership.

6.2.2.1. Published translation (total number of items: 1)

Translation technique	Number of items	Percentage
Semantic adaptation	1	100 %

Pie chart

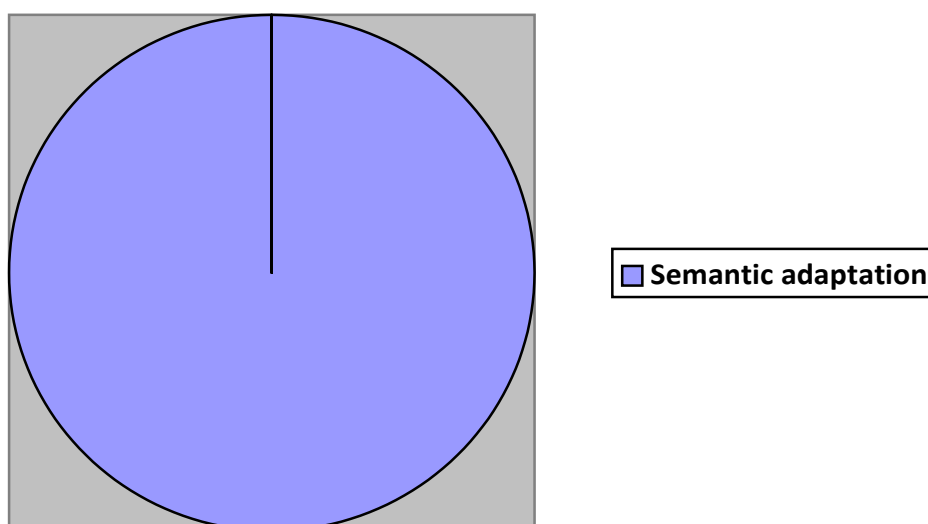


Chart 8. Fictional terminology in *The Day of The Triffids* (published translation)

The only item in this chapter is translated by means of semantic adaptation. Similarly to what happened in the preceding chart, the published translator understood that the translation of *irrealia* is inevitably adaptative, although, in this case, the adaptation is semantic, rather than cultural. This is also an alternative choice when faced with the translation of fictional items: instead of subtly adjusting the cultural nuances of the item,

it is possible to simply change the core meaning of the word in order to remove the cultural barrier.

6.2.3. Medical/scientific terminology (total number of items: 10)

Translation technique	Number of items	Percentage
Literal translation	7	70 %
Morphological adaptation	3	30 %

Pie chart

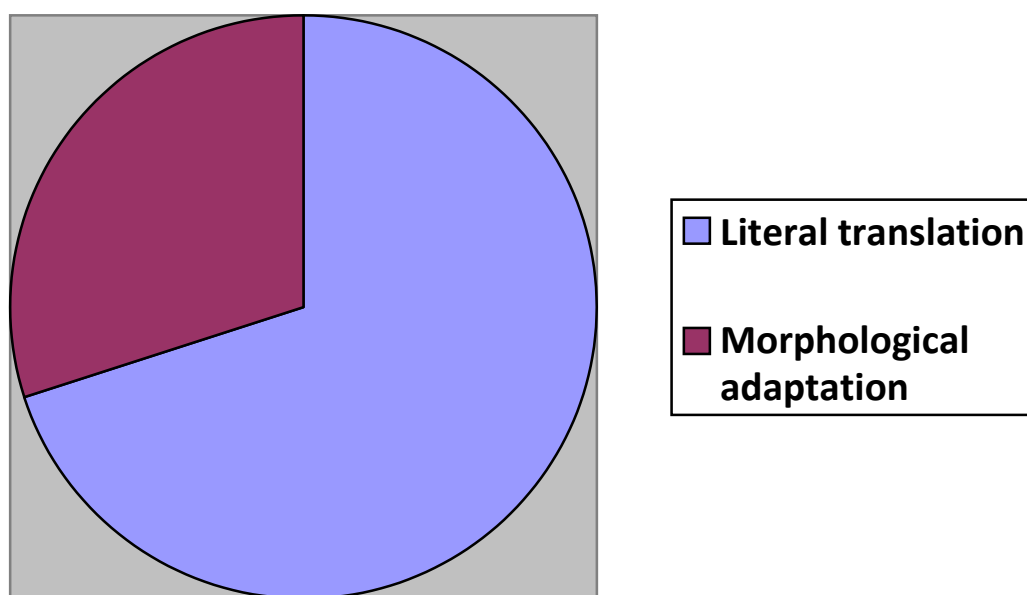


Chart 9. Medical and scientific terminology in *The Day of The Triffids* (dissertation proposals)

Literal translation takes the lead, with a few cases of morphological adaptation on the side.

6.2.3.1. Published translation (total number of items: 10)

Translation technique	Number of items	Percentage
Literal translation	4	40 %
Morphological adaptation	3	30 %
Semantic adaptation	3	30 %

Pie chart

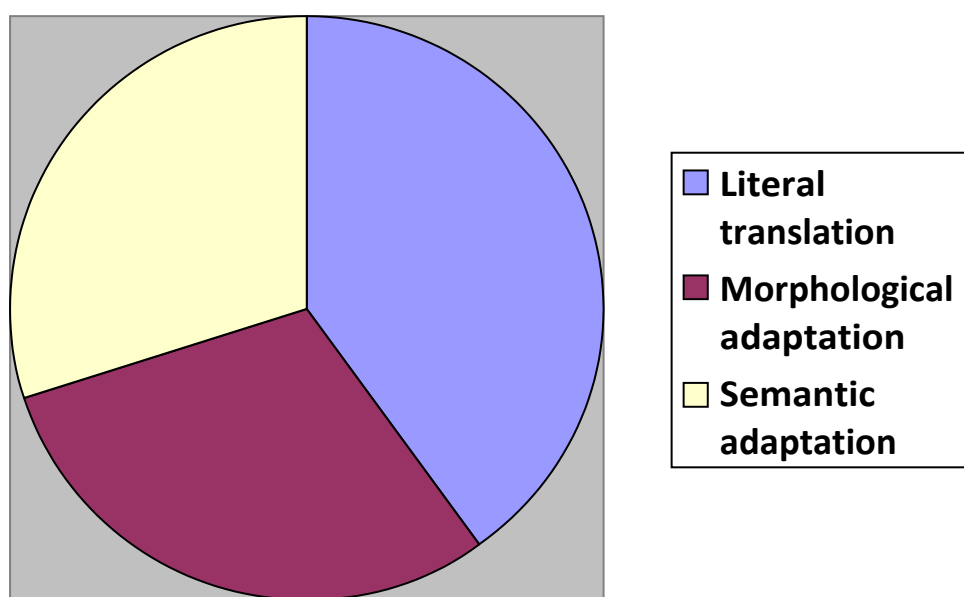


Chart 10. Medical and scientific terminology in *The Day of The Triffids* (published translation)

Here we can find a near-perfect split between literal translation, semantic and morphological adaptation, albeit with a slight preeminence of the former.

6.2.4. Novel-specific terminology (total number of items: 10)

Translation technique	Number of items	Percentage
Literal translation	3	30 %
Mixed	6	60 %
Creation	1	10 %

Pie chart

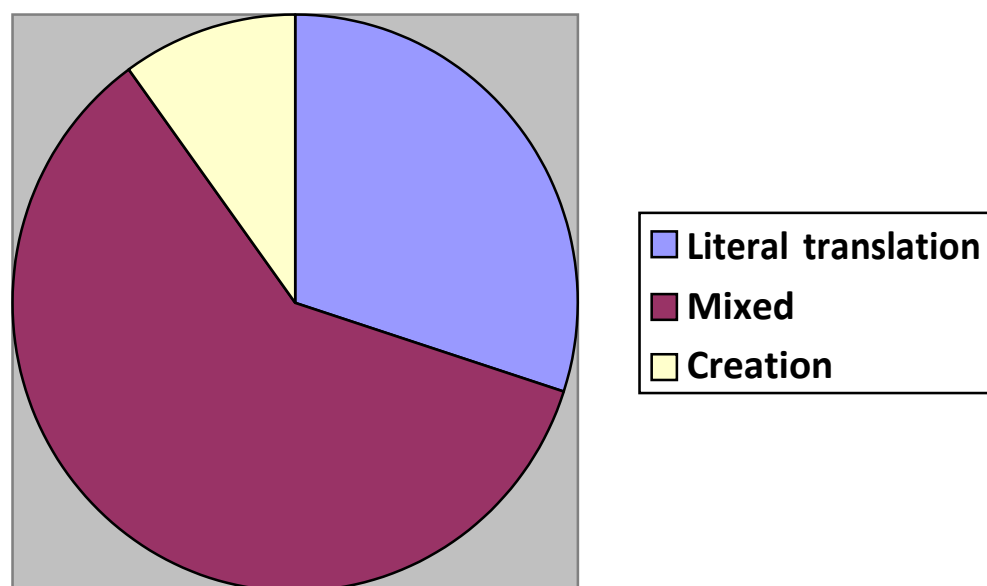


Chart 11. Novel-specific terminology in *The Day of The Triffids* (dissertation proposals)

A noticeable majority of the terms and expressions included in this chapter have been coped with through mixed translational approaches, which commonly features elements from literal translation, morphological adaptation, creation or calques, among others. Some of the remaining items have been translated by means of literal translation itself, whereas a single, outlying case of creation can be additionally found.

6.2.4.1. Published translation (total number of items: 10)

Translation technique	Number of items	Percentage
Literal translation	2	20 %
Semantic adaptation	3	30 %
Omission	1	10 %
Mixed	3	30 %
Creation	1	10 %

Pie chart

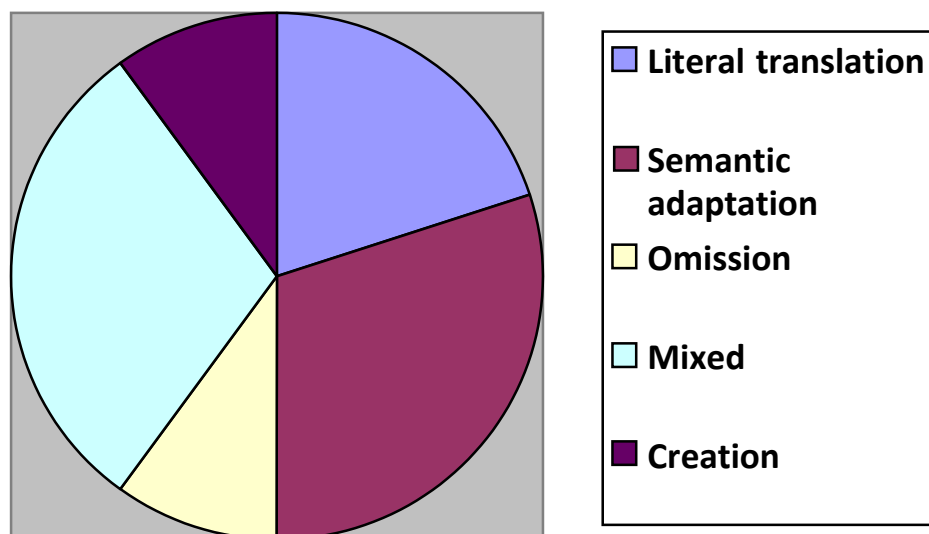


Chart 12. Novel-specific terminology in *The Day of The Triffids* (published translation)

Most of the items featured in this chart are split between semantic adaptation, mixed approaches, and literal translation, with the latter lagging slightly behind the other two techniques. Besides this, a single case of creation can be spotted, as well as another one tackled by means of omission.

6.3. The Crucible of Time

6.3.1. Botanical terminology (total number of items: 57)

Translation technique	Number of items	Percentage
Literal translation	23	40.4 %
Morphological adaptation	10	17.5 %
Semantic adaptation	2	3.5 %
Calque	2	3.5 %

Mixed	13	22.8 %
Creation	7	12.3 %

Pie chart

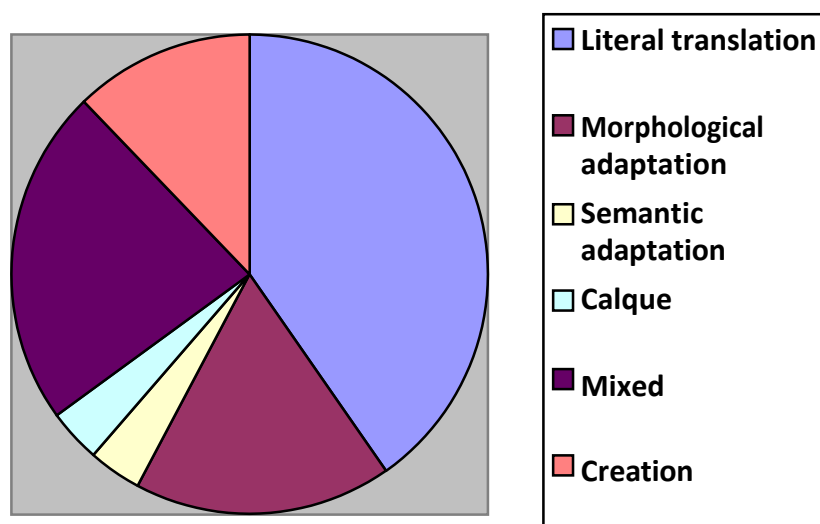


Chart 13. Botanical terminology in *The Crucible of Time* (dissertation proposals)

Literal translation remains the go-to strategy, there is a sizeable amount of mixed items, as well as a remarkable number of those translated by means of creation or morphological adaptation. Additionally, a hefty share of the comprised items is translated by means of mixed approaches, chiefly including traits and elements from the aforementioned techniques (literal translation, morphological adaptation, creation). Finally, cases of calques and semantic adaptation also hold a negligible presence in this chapter.

6.3.1.1. Published translation (total number of items: 58)

Translation technique	Number of items	Percentage
Literal translation	21	36.2 %
Morphological adaptation	3	5.2 %
Semantic adaptation	2	3.4 %
Omission	1	1.7 %
Explanation	2	3.5 %
Mixed	19	32.8 %
Creation	10	17.2 %

Pie chart

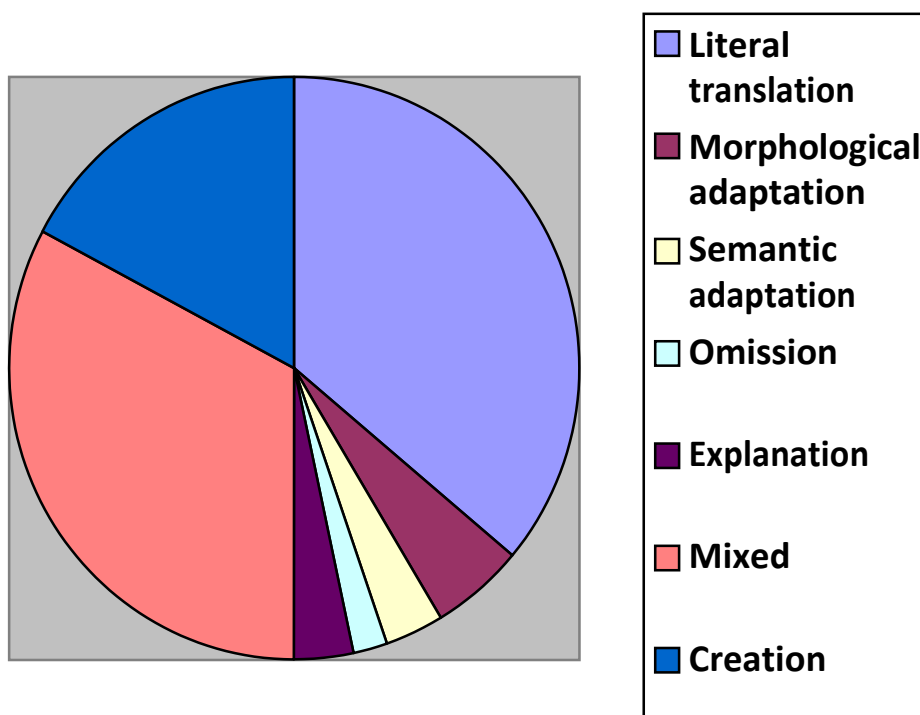


Chart 14. Botanical terminology in *The Crucible of Time* (published translation)

There is an almost equal split between items conveyed by means of literal translation, and those tackled with a mix of several strategies and approached. Creation also accounts for a relevant share of the translated items. Finally, a slim share of said items is translated by means of either explanation, omission, semantic adaptation, or also morphological adaptation.

6.3.2. Fictional terminology (total number of items: 6)

Translation technique	Number of items	Percentage
Literal translation	2	33.3 %
Mixed	4	66.6 %

Pie chart

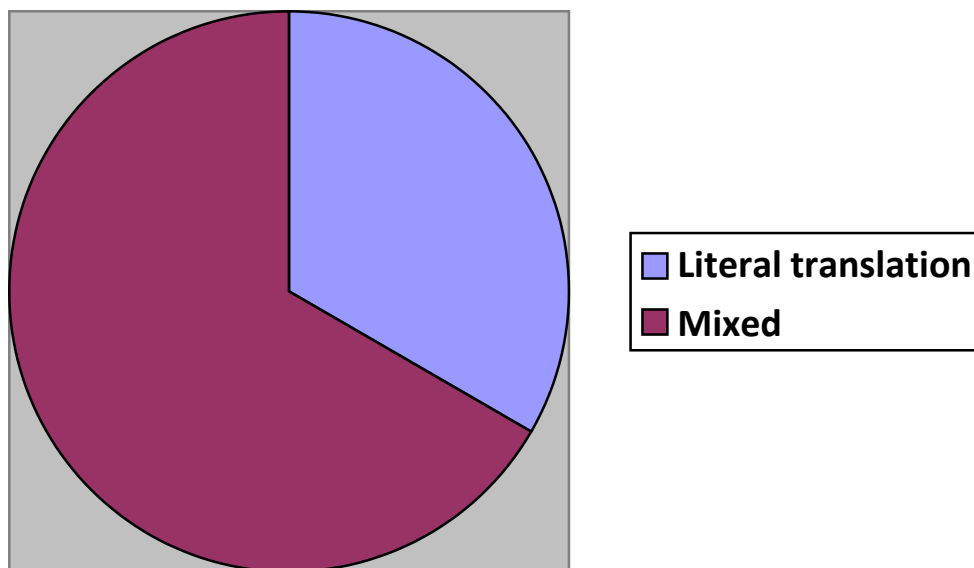


Chart 15. *Fictional terminology in The Crucible of Time (dissertation proposals)*

Most items in this category are tackled with a mixture of woven translational approaches including literal translation, creation, calque, or morphological adaptation. A few of them, however, have been conveyed into the target language by means of pure literal translation, as they can be converted into direct equivalents in their respective language.

6.3.2.1. Published translation (total number of items: 5)

Translation technique	Number of items	Percentage
Literal translation	1	20 %
Morphological adaptation	1	20 %
Mixed	3	60 %

Pie chart

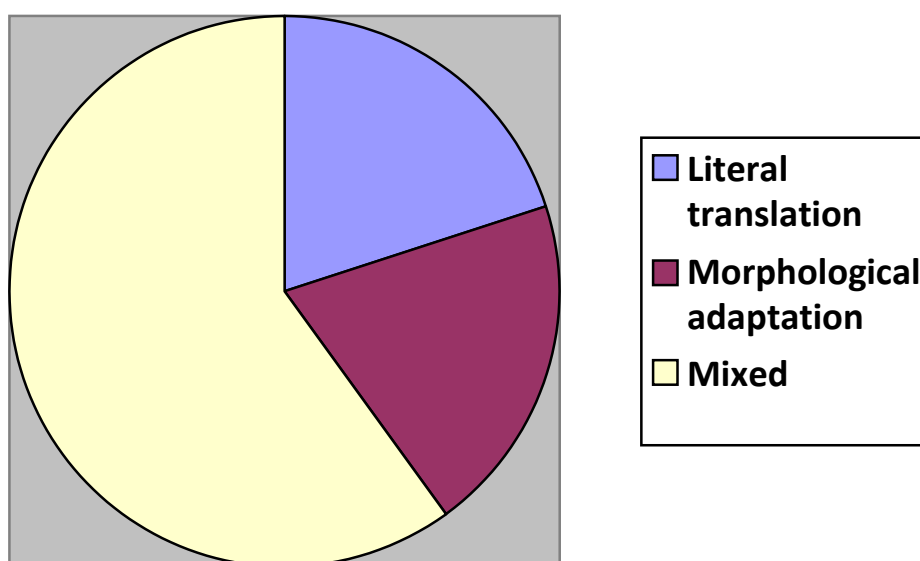


Chart 16. *Fictional terminology in The Crucible of Time (published translation)*

In this case, once again, a slim majority of the terms and items featured in this chapter are handled with mixed approaches which, as seen before, include elements from literal translation, calque, or creation. However, an outlying case of morphological adaptation can be found here, as well as the use of pure literal translation.

6.3.3. Medical/scientific terminology (total number of items: 16)

Translation technique	Number of items	Percentage
Literal translation	8	50 %
Morphological adaptation	2	12.5 %
Semantic adaptation	2	12.5 %
Mixed	2	12.5 %
Creation	2	12.5 %

Pie chart

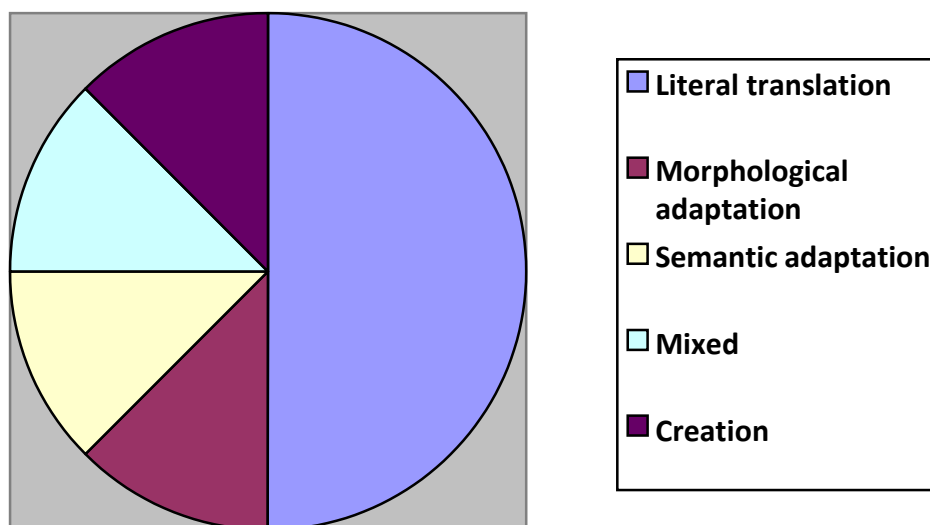


Chart 17. Medical and scientific terminology in *The Crucible of Time* (dissertation proposals)

Literal translation shows, once more, a clear preponderance over other translational approaches which, in this case, are evenly split into morphological and semantic adaptation, creation and mixed resources featuring traits from all aforementioned techniques. These latter four approaches account for half of the items included in this chapter, whilst the other half is tackled through literal translation.

6.3.3.1. Published translation (total number of items: 22)

Translation technique	Number of items	Percentage
Literal translation	12	54.5 %
Morphological adaptation	1	4.5 %
Mixed	8	36.5 %
Creation	1	4.5 %

Pie chart

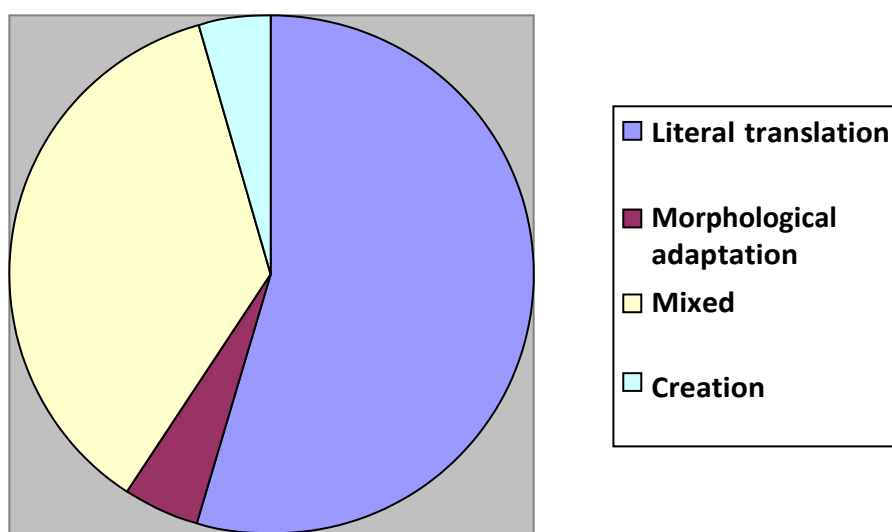


Chart 18. Medical and scientific terminology in *The Crucible of Time* (published translation)

An already recurring pattern can be witnessed in this chapter: that is, the split between literal translation and items translated with a mixture of different strategies, as well as the anecdotal use of creation and morphological adaptation, each of them taking place in one single case.

6.3.4. Novel-specific terminology (total number of items: 32)

Translation technique	Number of items	Percentage
Literal translation	10	31.25 %
Calque	7	21.9 %
Mixed	5	15.6 %
Creation	10	31.25 %

Pie chart

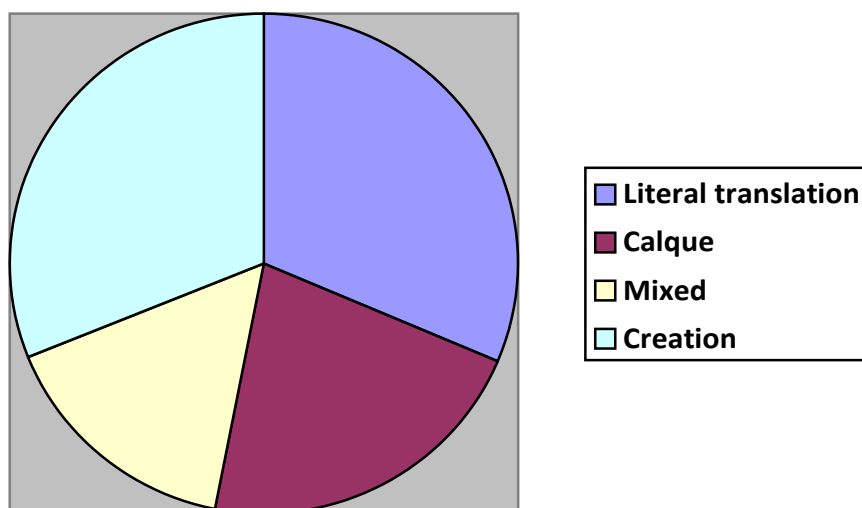


Chart 19. Novel-specific terminology in *The Crucible of Time* (dissertation proposals)

There is a nearly perfect split between cases handled through literal translation, creation, and calque, albeit the latter seems to be slightly less common. The use of mixed translational approaches is somewhat more uncommon, but still noteworthy.

6.3.4.1. Published translation (total number of items: 26)

Translation technique	Number of items	Percentage
Literal translation	8	30.8 %
Calque	7	26.9 %
Mixed	4	15.4 %
Creation	7	26.9 %

Pie chart

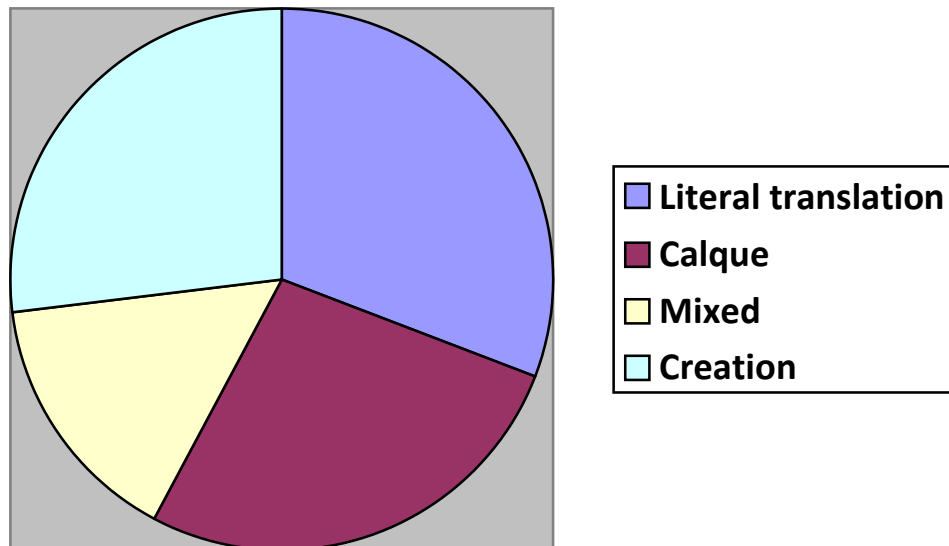


Chart 20. *Novel-specific terminology in The Crucible of Time (published translation)*

In this chart, it can be seen that the proposed items by means of three translation strategies (literal translation, calque, and creation), plus a few scattered examples in which either two or all three of them are combined at the same time. The use of these three approaches is almost evenly split, with only a very slight predominance of literal translation over the remaining two techniques.

6.4. Other highly relevant terminology in Seeders

6.4.1. Fictional or real statements about plants (total number of items: 7)

Translation technique	Number of items	Percentage
Literal translation	4	57.1 %
Morphological adaptation	2	28.6 %
Reduction	1	14.3 %

Pie chart

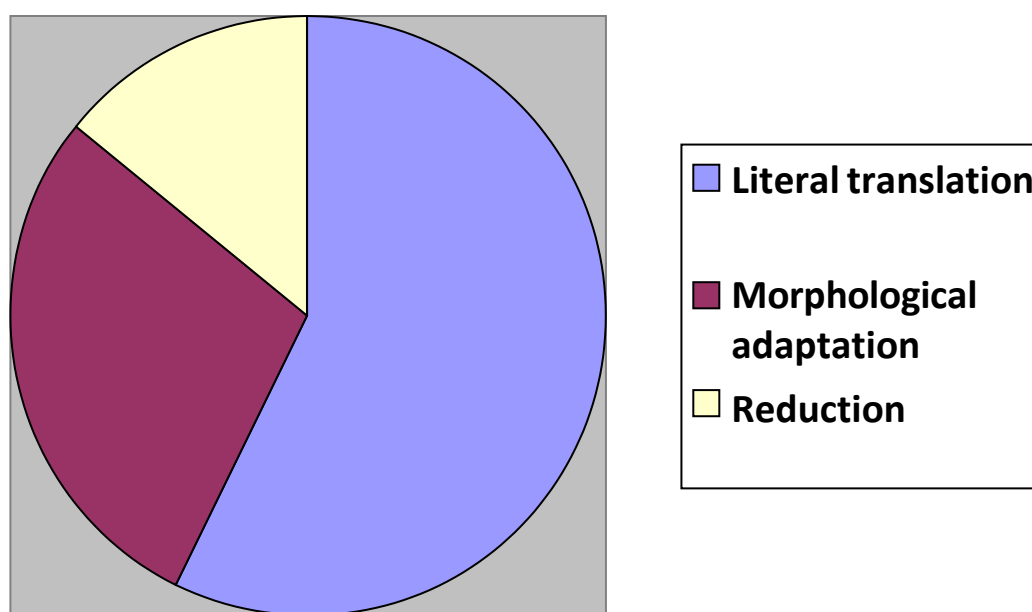


Chart 21. Fictional or real statements about plants in Seeders

Literal translation is still the most frequently used approach, even though there are a few additional cases of reduction (being a very rare technique) and morphological adaptation.

Having seen the percentages and frequency of use of all translation strategies in each novel and terminological category by means of visual charts, let us briefly compile the main takeaway from these results, which will later be used to draw the final conclusions of this dissertation:

- In *Seeders*, the most commonly used translational technique is, by a wide margin, literal translation. This cements the idea that translation universals do exist, and most terms in any given pair of languages (English and Spanish, in this case) are mutually equivalent owing to the fact that human reasoning follows the same processes regardless of the spoken language, and all speakers in all communities naturally reach the same broad conclusions when it comes to common communication. A fine example of literal translation in the novel would be the term *holly bush*, translated as *arbusto de acebo*, or many other plant species that have well-established denominations in both English and Spanish.

However, this does not mean at any rate that literal translation is the only strategy used in the analyzed segments from *Seeders*. Other frequently used approaches involve calque (as in the unrealis *Neurospora*, which remains unchanged) and semantic or morphological adaptation (*slime mold* conveyed as *moho mucilaginoso*). The former can be justified in two different contexts: either to convey seemingly untranslatable, typically culture-bound items from one language into another, or also as a way to present *irrealia* in the target text, as such made-up terms often have to be left untouched in order to preserve and respect the cosmogony created by the original author.

As for morphological and semantic adaptation, both have proven highly useful when an item has a roughly similar counterpart in the target language but needs a certain degree of adjustment in order to adapt it more closely to the sensibilities and cultural norms of its readership. It is important to bear in mind that morphological adaptation implies a lesser, more shallow degree of modification, whereas semantic adaptation entails a more radical change in the content and core meaning of the tampered item.

Finally, it is important to note that there is one single terminological category in which literal translation is not the preferred choice: slang and dialectal speech. In this case,

most included items are indeed translated by means of morphological adaptation, which seems logical upon considering that the hallmarks signaling diachrony, dialects, sociolects or idiolects vary wildly depending on the language, and thus they must be formally adapted so that the desired nuances can be kept in the target text.

As a final note, it is also relevant to underscore that *Seeders*, unlike the following two novels in the corpus, does not have an official, published translation in Spanish and, therefore, all of the considered excerpts in Spanish in its corresponding chapter are dissertation proposals.

- In *The Day of The Triffids*, we can see a roughly similar pattern as seen in the preceding novel, by and large, with literal translation comfortably in the lead in most semantic categories, followed by morphological and semantic adaptation, both of which are also present in most section, but considerably trailing behind. There are, however, a few noteworthy singularities that will now be commented; it is also interesting to analyze how they were sorted out by the published translation as opposed to the proposals provided in its respective section. Once again, some representative examples of literal translation in *The Day of The Triffids* would be those related to the field of common agriculture or botany, such as *cultivation lines* (conveyed as *líneas de cultivo*) or *regeneration schemes* (translated as *programas de regeneración*). As for morphological or semantic adaptation, that could be the case of *gossamer-slung triffid seeds* as *semillas de trífido flotando como gasas*.

Firstly, it is peculiar to see that fictional terminology is translated by means of cultural adaptation in the dissertation proposals, but the published translation opts for semantic adaptation instead.

Secondly, the translation of slang is carried out in a similar way as its counterpart in *Seeders*; that is, the use of morphological adaptation is overwhelming, followed very distantly by other strategies. However, when checking the translation provided in the published Spanish version, one can see that, although morphological adaptation is still the preferred choice (albeit almost tied with literal translation), omission is also all-present. This is due to the fact that the professional translator has seemingly decided to

neutralize the speech of all dialect-charged characters in the original story, perhaps in an attempt to dodge the linguistic and translational challenges that slang poses.

At last, novel-specific terminology is mostly tackled by means of mixed translational approaches in the dissertation proposals; while mixed techniques are also quite popular in the published translation, they are tied with semantic adaptation. A remarkable example of the use of mixed techniques in this novel could be *anti-triffid gear*, translated as *equipamiento anti-trífidos* (that is, the *realis* gear and the root *anti* are translated literally, but the *irrealis* triffid is adapted).

- Finally, in *The Crucible of Time*, the most frequent approach seems to be, once again, literal translation, followed by morphological adaptation, mixed strategies are, more distantly, also calques, thus the points made for the preceding two novels still hold true here. There is, however, a profusion of examples of creation that seems to be exclusive to this work, something that can be probably ascribed to its nature, as the story is set in a pure fantasy world that bears little to no resemblance to the real one and is therefore more prone to the appearance of *irrealia* and entirely fictional concepts. An enlightening example of creation in this work could be the translation of *glowplants* as *luminiplantas*.

In that vein, it is also relevant how fictional terminology in this novel has been mostly translated by means of mixed approaches both in the dissertation proposals and also in the published translation (for instance, the translation of *trencher-plant* as *planta zanjadora*). As mentioned before, this can be mostly attributed to the novel's wildly fictional nature, which brings about an abundance of *irrealia* which are to be tackled with a wide array of techniques depending on their context, nature and use. As for slang and dialectal terminology, just as it happened in both *Seeders* and *The Day of The Triffids*, both the proposals in this dissertation and the official translator have clearly opted for morphological translation, rather than literal translation, as their preferred choice to convey such items into the target language. The same point can still be made in this case to justify such a decision: different languages employ different markers to signal diachrony, dialects, sociolects and idiolects, so it is only logical to adapt said markers to the grammar rules and conventions of the target language in order to keep the same implications and nuances that were intended in the original text.

Finally, it is also worth mentioning that novel-specific terminology is conveyed with an equal split of literal translation and creation in the dissertation proposal, whereas the official translator seems to tilt more towards literal translation, albeit other techniques still play a significant role. An example of literal translation in this section could be convening the name *Rainbow* as *Arcoíris* in Spanish.

- As for the remaining items that cannot be categorized in the former sections, it can be noted that a similar pattern is found: that is, literal translation remains at the top as the preferred approach to tackle most of the proposed items, although morphological adaptation also plays a crucial role, especially in the translation of slurred, alcohol-affected speech, which shows very similar linguistic markers as the slang items previously analyzed, and hence calls for the same approach. Also importantly, the strategy of explanation plays a pivotal role when conveying Monica's statements in French. As a final remark, it must be borne in mind that all excerpts considered in this final section pertain to *Seeders*, and therefore they are only contrasted against dissertation proposals, not its published translation (since there is none as of yet).

Thus, it can be concluded that, even though literal translation generally holds the upper hand as the most common translational technique, many others also come into play and prove relevant to the task and purpose of this dissertation, chiefly including morphological and semantic adaptation, calques, explanation and omission, among others. It stands out how the translation of slang is always conveyed by means of morphological adaptation, without a fault. This proves the necessity for a diversified approach when tackling complex literary texts and conveying them from one language into another.

7. Conclusion

7.1. Are *irrealia* truly translatable?

Following this empirical analysis carried out in the previous chapters, it can be reckoned that *irrealia*, or fictional, made-up items envisaged by science-fiction author, be it pertaining to the field of botany (which plays a central role in this dissertation that now comes to an end) or to other semantic categories related or linked to such field, are, indeed translatable.

Throughout the theoretical framework that comprises the first half of thesis, a plethora of authors ascribed to different fields of knowledge, (including botany, translation, linguistics, and literature, among others) have provided us with a comprehensive range of tools and approaches to be employed when tackling the issue of botanical translation (or, more generally, specialized translation).

Later on, these tools and theories have been put to use in the practical and empirical chapter that constitutes the second half of this present dissertation, which consisted in actively translating a wide selection of semantic items (including both actual *irrealia* and also many *realia*, or terms with a tangible counterpart in the real world, that play a relevant role in each of the selected novels) by discerning which strategy of approach is better suited for each one of them.

Many parameters and circumstances have been taken into account throughout this translational process, starting with the choice of the three novels comprising the core of the dissertation corpus: they were selected with the aim of covering the widest possible array of different narrative styles, diachronic contexts, plots, and terminologies employed.

For each novel, the different terms found across the text were sorted into different semantic categories, starting with botany, to be followed by other niches playing a pivotal role in said story: this chiefly includes scientific, medical, maritime, or legal terminology.

In every given category, the provided items are firstly shown in data tables as they appear in their respective, original English texts, alongside the pages on which they can be found and the proposed translation into Spanish for each item. Thus, they are also arranged in accordance with

the translational technique applied as required. Each data table is additionally followed by a thorough explanation describing how and why a number of representative samples have been translated by means of each particular technique.

Once this has been done, the same process is repeated, this time comparing how the published Spanish translations included in this corpus have tackled such preceding items. As it happened before, the selected sentences are displayed in data tables, sorted out according to the approaches employed to convey each one of them into the target language, as well as signaling the pages in which they can all be found in their respective novels.

Following this process of comprehensive assessment, final conclusions are drawn and, to illustrate such take-away concepts visually, this chapter is now followed by a series of graphs and pie charts carefully depicting the results of the empirical research conducted throughout this dissertation from a quantitative perspective: once again, for every given category previously researched, a data table is provided depicting percentages showing with which frequency every translation technique is used in each case. Later on, these calculated percentages are shown as pie charts in an effort to clarify which approaches are more common and useful in order to translate each given set of items.

In conclusion, it can be reckoned how a clear majority of all items compiled in the empirical chapter of this dissertation can be feasibly translated by means of literal translation, which does not quite entail to translate each part of a given item literally (from a formal viewpoint), but rather to convey such term or expression into a fully equivalent one in the target language. That is, an item in the target text that means the same and fulfills the same scope and purpose as its counterpart in the original text.

As a matter of fact, there are only three specific categories in the preceding chapter in which literal translation is not the preferred technique to convey the proposed items:

- Slang terminology in *Seeders* (and, secondarily, also in *The Day of The Triffids* and *The Crucible of Time*), preferably translated by means of morphological adaptation, which appears to be much more common than literal translation, let alone other translational approaches. As already mentioned at the end of the preceding section, this comes down to the fact that slang (as well as other, more nuanced concepts, including the sheer

essence of colloquial-ness, or several instances of diachronic, sociolectal or idiolectal expression) are conveyed by means of wildly different linguistic markers and figures of speech depending on any given language.

Fictional terminology in *The Day of the Triffids*, translated by means of cultural adaptation (in the dissertation proposal) or, alternatively, semantic adaptation (in the published translation). This example also showcases how sometimes the proposals included in this PhD essay differ from the approach adopted by each respective, published translator. This makes for a highly interesting debate as to which option would be preferable in any given case and provides us with a further insight into the diverse standpoints that can be adopted when translating a text pertaining to this particular literary genre and previously laid out characteristics. Sometimes, though, there would be no need to choose between one or another, as both displayed options may also be perfectly correct, each one of them overcoming a given hurdle or challenge by different means, from different perspectives.

Alcohol-affected speech in *Seeders*, also conveyed by means of morphological adaptation. The case of alcohol-slurred speech is unique due to the fact that it only appears in the foremost novel comprising the dissertation corpus: neither in *The Day of the Triffids* nor in *The Crucible of Time* can the reader find any excerpt resembling such a use of the language. It can, however, be classified within the wider framework of slang, which has already been discussed, as the representation of drunkenness in a dialogue can certainly be classified as a manner of idiolect, and it is also translatable by applying similar (or the same) strategies that have already been analyzed and discussed when looking into slang and jargon terminology.

All of these aforementioned categories contain semantic or morphological items that bear no equivalent counterparts in the target language: for instance, the slurred, alcohol-affected speech in *Seeders* had to be morphologically adapted, since Spanish uses different linguistic markers than English to imply drunkenness in spoken conversation. The same also applies to the slang

present in that very same novel, since it features characteristic dialects and figures of speech that do not exist in Spanish-speaking countries; as it was already proposed earlier in this dissertation, a dialectal variation in a source language may not be translated into a different one in the target text, since this would be misleading and disrupting for the overall setting of the translated work. Therefore, it is preferable to choose a different set of linguistic markers that may enable the reader to identify a particular piece of speech as outlying or characteristic.

Lastly, the case of fictional terminology in *The Day of the Triffids* differs slightly, as the only item in said categories refers to a cultural concept (UFOs) that exists in both semiospheres, English and Spanish-speaking, but with an entirely different denomination in each case. Thus, it is necessary to modify the cultural reference and the term used in each language in order to preserve the underlying meaning of the original item.

Finally, it seems proven that science-fiction *irrealia*, with a particular focus on botanical terminology and other close-knit semantic fields, but also in other diverging cases (such as the translation of slang, which always poses significant challenges) can, indeed, be translated from English into Spanish in a faithful manner, and that such translation is feasible, more often than not, by applying a literal approach, since it has been proven that science-fiction literature is built upon universal concepts and stories that can be accurately conveyed from one language into another without thwarting the core meaning and implications that were originally devised by the authors of the source works.

Babalola, Kakpo or Maitre, among others, point out to a number of additional items that pose significant hurdles from a translational perspective, asserting the following:

Translation is often difficult or nearly impossible when translators are confronted with how to translate: proper names; figurative sentences; faithful and false friends; culture-bound terms; assessment is made of word for word translation's limits betwixt the two languages. (Babalola, Kakpo, Maitre, 2017,p.33)

This entails that the difficulties associated with culture bound phenomena can also appear on other terms and linguistic items. For instance, as mentioned before, proper names can often be steeped in subtle implications that might be easily lost if they are left untranslated, or if they are not conveyed adequately. This especially holds true when it comes to names including

defining traits or features describing the characters they designate, an occurrence that appears to be ubiquitous in the third novel included in this dissertation corpus, *The Crucible of Time*. In said novel, virtually all proper names are made up of actual adjectives depicting their respective characters in a particular light, hence shaping how the novel's potential readership will judge and perceive them (i.e., if a character in said novel is named *Skilluck*, this is already telling about both its abilities and also its surrounding context, thus adding highly valuable information to the unfolding of the story and pursuing a complex process of character-building. This just goes to show how subtle and intricate cultural nuances can be sometimes, and how they are to be treated and conveyed with utmost care at all times.

The point made about the translation of cognates is also highly relevant to our purpose, since these tricky items are present throughout all translatable texts and works, especially when the source and target languages are closely related, since similar languages often abound in idioms, terms and expressions that seem nearly identical on the surface, but there are distinct layers and connotations that set them apart in terms of content and meaning. Therefore, concerning the translation of these so-called *false friends* that have also been extensively dealt with throughout this essay, Eugene Nida claims the following:

[...] Contradictory usages can be the syntactical equivalents of lexical 'false friends'; just as we generally translate a lexical 'false friend' with a lexical equivalent rather than its cognate, we might expect contradictory syntactic usages to be translated with the equivalent syntactic pattern rather than word by word. Thus, contradictory usages make it clear that there are different levels of translation, ranging from the word at one extreme to the entire work as the unit of translation at the other (Nida 1964, p.25).

In this case, the author argues that the lexical and syntactic contradictions that sometimes result from the inaccurate translation of false friends, and the strategies that translators often adopt to convey such terms by means of lexical equivalence, rather than using the same, deceptively similar cognate, show that there are different layers and levels to translation. Sometimes, said task needs to be approached in a minute way, tackling just one word at a time, whereas in other situations it may be necessary to encompass a longer translation unit (for instance, when working on a well-established idiom or coined expression), ranging from a sentence or a paragraph to, in certain occasions, the whole work, conceived as a single, undividable unit.

Then again, there is also the impending issue of translating entirely fictional *irrealia*, a highly demanding challenge that requires a thorough understanding of the original work and the author's mindset, as well as a skillful command of creative and adaptative translational approaches. As it stands, many (if not most) of the *irrealia* terms found throughout the three selected novels in this dissertation corpus refer to completely made-up concepts that play a crucial role in the excruciating process of world-building and setting a fantasy cosmogony from scratch, and thus must be approached carefully by translators, as an inaccurate or half-hearted translation of these items will most likely result in irremediably tarnishing the lore and background envisaged by the original authors.

In many cases, as seen before in previous chapters, these *irrealia* (whether they pertain to the highlighted field of botany or not) result from the merging of already existing semantic items which are backed by an actual counterpart in real-life world, even if their meaning is unreal once their different elements are merged. Should that be the case, the approaching translator is then expected to convey such existing elements literally or faithfully into the target language, and later reassemble them in order to produce a new, fictional *irrealis* that makes reference to the same nonexistent concept as the original one, while still resulting from the union of existing items.

Some other *irrealia*, however, prove much more difficult to translate, as they are not compounds made up of real words, but rather the by-product of a figment of the author's imagination, both in content and also in form (for instance, when showcasing an alien language or culture, which commonly feature made-up phonetics). When faced with such a challenge, translators have two options: either leaving the original *irrealis* untouched and conveying it into the target language as a raw calque (which would be absolutely legitimate, since the original item is already intended to appear outlandish in the source text, so there is no apparent reason to adapt it in any way) or, quite the opposite, modify in its entirety by devising a brand-new *irrealis* that may play the same role and bear the same implications in the published translation as the original one did in the source text. This is also a valid, fascinating approach that opens a whole new gamut of possibilities and gives free rein to the translator's imagination and creative potential, but it is paramount to proceed with extreme care in order not to end up thwarting or unjustifiably altering the underlying meaning of the source *irrealis*.

Thus, in short, and to finally bring matters to a close, the main hypothesis of this dissertation has been proved, as the abundant *irrealia* present in contemporary science-fiction literature are indeed translatable from English into Spanish through different means, techniques, and approaches. Once this is set, the main purpose of the essay is to serve as guidance as to which of these approaches would be more appropriate, common, or useful in each of the proposed semantic fields.

As for botany, it has been chosen as the starting point and backbone of this work due to its standing as a largely unexplored niche in the field of translation studies which, at the same time, plays a vital role in many well-known science-fiction stories. The fact that botanical terminology is carefully classified and backed by centuries of comprehensive, scientific research made it all the more relevant and exciting to dive into. The study of botany also paves the way to get acquainted with other, closely related fields of knowledge in the wider framework of science-fiction literature, such as medical, fictional or maritime terminology, all of which have also been included in the empirical chapters of this work.

7.2. Future applicable lines of research

This dissertation has tackled the translation of botany and other related and relevant terminology categories in the context of science-fiction literature. This, in turn, also entails further research to determine what constitutes a science-fiction work and what translation techniques can be applied to convey such a text from English into Spanish. Bearing this in mind, there is still room for improvement and more thorough research concerning the following points and niche:

- The study of the **fandom**, its implications, and its leverage upon translating science-fiction. It is important to ponder how followers and admirers of a particular genre, saga or particular author can shape how such works are conveyed into a particular market and its respective foreign language. This becomes increasingly relevant as the rise and

constant evolution of social media allows for an unprecedented spread of literary works, and also brings about the advent of organized clubs and organizations that bring fans together, binding over shared interests and carrying out all kinds of themed activities. In the early stages of this dissertation, the concept and nature of fandoms has already been discussed, but there is much more to this thrilling world than meets the eye: the implications of fandom and the role that fans play in it run deep and can be analyzed from many different standpoints. Drewniak, diving deeper into the study of fandom as a socio-cultural phenomenon, distinguishes three distinct levels in which such niche can be considered within the larger frame of translation (especially concerning science-fiction literature, as seen in this essay):

[...] Fandom as a community united around shared values, and show how these values manifest themselves in translation understood in threefold fashion: 1) sociologically, as a process of cultural importation; 2) textually, as choices translators make; and 3) culturally, as transformations occurring thanks to the presence of a new content in a given space, sometimes resulting in the appearance of hybrid works in which a foreign genre's formula is employed to reimagine a community. (Drewniak, 2015, p.2)

The author, thus, explains how fan communities can be approached and understood from a sociological, textual and cultural perspective. As for the first one, it would be highly interesting to disclose how the very phenomenon of fandom spreads throughout the whole world over the course of merely a few years, revolutionizing how readers in a vast variety of countries, societies and personal contexts approached the field of fictional entertainment, firstly in the form of (conveniently translated, when due) stories and novels, and later as audio-visual products (including graphic novels, movies, TV series or, more recently, videogames, all of which also require a certain degree of adaptation in order to accommodate the tastes and canons of the target public). Drewniak points to fandoms as a hallmark of cultural importation that straddles different cultures and readerships. It could be fruitful to discern in further detail how such process of cultural importation came to be and then became widespread.

Regarding the textual aspect of fandom in the wider context of science-fiction translation, it is apparent that all source works will inevitably call for a higher or lesser degree of linguistic adaptation so that the resulting, translated text is intelligible to the target readership. As underlined by the quoted author, this requires the professional translator to make a series of choices with the aim of guaranteeing an adequate adaptation of the original work. Many different strategies, techniques and approaches have already been considered in this dissertation, analyzing how they may vary depending on the context of each particular case, but it would still be useful to look deeper into the decision-making process when it comes to the particular context of fandom translation.

Finally, concerning the study of fandom from a cultural point of view, Drewniak underscores the novelty of fandoms as phenomena with the potential to reimagine science-fiction literature and its surrounding community. Hence, in conclusion, there is room for further study on the nature of fandom from different viewpoints, which have been briefly laid out in this section.

- This dissertation has looked into the translation of science-fiction stories in the frame of literature, but what about translating **visual works**? What particular challenges are inherent to the task of translating **science-fiction movies, audiobooks, or graphic novels** from English into Spanish (or any other given language pair)? In these cases, the professional translators approaching such works will have to bear different circumstances and hurdles in mind. For instance, when translating the script for a movie, the dialogues will have to remain within a certain extension, since shortening or lengthening them too much would seem unnatural, tarnishing lip-sync upon watching the original actors talking in the film. Similarly, when tackling the translation of a graphic novel, the resulting text must still fit the speech bubbles drawn by the original author.

Providing further insight on how the translation of audiovisual science-fiction works can be tackled, Loponen reminds us that the translated text exists within the cosmogony created by the original author, just like its respective source text. This must be borne in

mind at all times when deciding how to convey a certain text into the selected target language:

This seems to imply that translations function within a hyperdiegesis much like the original texts. Moreover, it would seem that target renderings in audiovisual translations can be considered *irrealia* items on their own, evolving independently of the source language versions. Even if the visual signifiers, the source language terms, and their target language renditions are the same, the linguistic signifiers can deviate from the original ones through culture specific allusions and connotations. (Loponen, 2019, p.127)

Thus, in this quote, the author also comments on how audiovisual renditions of science-fiction stories elicit their very own kind of *irrealia*, given how visual means of artistic expression will necessarily use different markers and signifiers that would never be seen in a written text. As Loponen conveniently underlines, audiovisual *irrealia* can harbor cultural, linguistic and social implications unseen in their standard, literary counterparts. This provides food for thought and opens up a new research niche featuring a vast array of unexplored *irrealia* to be approached in novel ways, using digital and computational resources to understand how audiovisual arts convene literary and cultural nuances, and how this compares to traditional literary production.

- Finally, there is also the field of **botany**, which centered the better part of this dissertation. As an active, ever-evolving scientific discipline, it is overdue to keep an eye out on new papers and articles unveiling newly found species or breakthroughs concerning the nature of plants. It would be particularly interesting to look into recently established areas of research, such as **plant neurobiology**, which approach botanical studies from a novel perspective by using cutting-edge technology and the latest findings concerning said field.

This novel field of study, however, has also been met with criticism from a number of sectors and scholars due to its research methods and proposed hypothesis. It would also be interesting to ponder what motivates such critics, and how their points could be used

to improve the ever-growing development of plant neurobiology and its contributions to the larger science of botany and, in broader sense, biology itself:

Recently, the plant neurobiology initiative has been criticized for not fulfilling the simplicity required of a ‘true’ theory—that is, one which would allow it to escape the strictures of Ockham’s razor. However, we would argue that there is no problem, and that, if anything, the opposite is the case: plant neurobiology is a necessary proposition in the argument for the unity of life. This is a simpler view than the proposition of a dichotomy between plant and animal forms and may have been found passable by William of Ockham. Besides, as shown, plantneurobiology neatly closes the gap between animals/humans and plants. (Baluska, Barlow, Mancuso, Volkmann, 2009, p.1125)

Here, the quoted authors point out that plant neurobiology is sometimes berated for failing to provide a clearly discernable theory to prove its postulates and hypotheses. This can be ascribed to its novel and highly experimental nature, which means that many of its core points are still to be proven, and thus are open to experimentation, and conclusions are yet to be drawn. However, said authors also make a case for the continuity of this revolutionary branch of botany and neurobiology, defending its sheer purpose, which is no less than to bridge the existing gap between plants and animals from a neurological standpoint, discovering and analyzing physiological processes in plant species which are comparable, and have equivalent counterparts in the animal kingdom.

Still commenting on the principle of Ockham’s razor (that is, that the simplest solution for any given problem or situation tends to be the correct one) and how it intertwines with the postulates of plant neurobiology and its development as an incipient scientific niche, the aforementioned authors also wage the following:

[...] Sydney Brenner’s ‘Ockham’s Broom’ principle which is used to sweep under the carpet all inconvenient facts in the interests of saving a favored interpretation against unpalatable and messy reality. Ockham’s Broom explains the tendency to jealously retain longstanding dogmas in science past their expiry date, and perhaps it tells us something also about the fierce resistance to the current plant neurobiology initiative. (Baluska, Barlow, Mancuso, Volkmann, 2009, p.1125)

In this case, it is asserted that plant neurobiology, and the researchers and scientists contributing to its advancement, often face resistance from fellow scholars, as well as the general public, due to its groundbreaking nature, which capsizes and revolutionizes the conception of plants that has broadly been held throughout millennia, and how they relate to animals and their surrounding environment. As already seen in *Seeders*, the first and foremost novel included in this dissertation corpus, likening plants to animals (including humans) and the notion that the former are also capable of feeling and processing nervous-like impulses allowing them to perceive their surroundings and react accordingly, is often met with scorn or derision, as humankind is used to looking down on the vegetal kingdom as a collection of nearly-inanimate props that merely serve the purpose of feeding both cattle and populace in the form of crops, or also as a mere cover to embellish natural landscapes. This goes to prove that plant neurobiology, therefore, is absolutely needed in present-day society in order to shift and shape the way in which we understand the natural environment we live in, so complex and fragile, and further research is needed in order to clarify and explain the many mysteries about the realm of plants that remain in the dark to this day.

7.3. Didactical applications

Lastly, some aspects discussed in this essay that could be applied to didactical environments include the following:

- Regarding **botany**, the study of the groundbreaking Linnaean taxonomy, which paved the way for modern botanical studies, could be highly useful. It is also important to consider earlier botanists who also set a solid precedent in the study of the vegetal realm, such as Priscilla Wakefield or Ségur, as well as present-day researchers who keep fueling plant studies with new scientific papers, like Stefano Mancuso.

It is also paramount to consider how botanical terminology has been translated in the sample text presented in this dissertation, since it can be enlightening to see how different denominations can be translated from English into Spanish by means of diverging strategies and approaches, and the translated items can sometimes greatly differ from their counterparts in the source text.

- Concerning **translation strategies**, it is also highly relevant to ponder how different linguists and translation scholars can define the different ways in which a text can be conveyed from one language into another. In this dissertation, a mixture of several approaches has been used in order to tackle a vast array of terms and expressions pertaining to many semantic fields. This can also be used with the aim of illustrating how different translation techniques can be applied in an extensive gamut of situations.

- Finally, concerning **literary studies**, with a focus on **science-fiction**, it can be useful to illustrate how such a genre can be defined in many ways depending on the plot or literary features of a given story, and its origins can be traced back to much more remote times than initially expected.

In this regard, it must also be kept in mind how much the discipline of comparative literary studies dominates in the particular field of translation analysis. This can be easily explained owing to its very nature, in which a source text or excerpt is likened to its counterpart on a different, target work, thus highlighting all potential similarities and discordances, which make it ideal to ponder how a selected text has been translated into a selected target language. As Hermans pinpoints in the following quote:

[...] A renewed understanding of translation, both as an historical phenomenon and a cultural construct. That, even on those occasions when the focus is on Dutch-language texts, it is done from an essentially comparative perspective is not only inevitable, given the nature of the material, but also entirely appropriate in view of what George Steiner, speaking in Oxford just eighteen months or so ago, called the 'primacy of the matter of translation' in comparative literary studies. (Hermans, 1996, p.14)

In this case, the authors also underscore how translation, as a phenomenon, is also to be studied as both a historical and cultural phenomenon. Both aspects complement each other and underpin the need for a diachronic approach when looking into any literary genre (including science-fiction, by all means) and its implications.

8. Bibliography

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9. Appendixes

This final appendix includes other documents which are useful or have been tackled throughout the present work. They are arranged by alphabetical order and include all due bibliographical data. This comprises the bulk of the empirical work conducted throughout the creation of this dissertation, and serves the purpose of showcasing how the plethora of analyzed *irrealia* and *realia*, either pertaining directly to the realm of botany or related in one way or another to such field, have been translated from English into Spanish by means of different techniques, already stated and classified in the early stages of this doctoral essay.

Due to its sheer length, most of the examples are featured in this following appendix, while only a few, particularly representative samples are mentioned through the text itself. It is however important to underline that only a full perspective of the entire empirical corpus will provide the reader with an accurate insight on how the aforementioned items are translated into Spanish in the wider context of science-fiction literature over the course of the second half of the twentieth century as well as recent times. To this end, here follows a complete list of all translated terms in the three novels selected to be analysed in this PhD dissertation.

9.1. Botanical terminology

9.1.1. Seeders

Original item	Spanish translation	Page
Literal translation		
Sean plodded around the living room, watering all the floor plants and his favorite, a holly bush . It had stayed colorful all winter, but now it was spring and the red berries had fallen off.	Sean marchó pesadamente por el salón, regando todas las plantas del suelo y su favorita, un arbusto de acebo . Había conservado sus colores todo el invierno, pero ahora era primavera y había perdido sus bayas rojas .	8
She forced it from her mind and maneuvered around the stuffy living room, an obstacle course of potted ferns and rubber trees .	Lo borró de su mente y maniobró por el salón atestado, una carrera de obstáculos de macetas de helechos y arboles del caucho .	6
Isabelle tried not to look, listen, or even think about the streets below. Instead she drew her attention to the window box, where tiny green leaves were beginning to sprout , newly planted dill , basil , and parsley .	Isabelle intentó no mirar, ni escuchar, o siquiera pensar en las calles allí abajo. En lugar de eso, desvió su atención hacia el cajón junto a la ventana, donde estaban empezando a brotar diminutas hojas verdes; eneldo, albahaca y perejil recién plantados .	6
“Jesus, why don’t we just grow our own tobacco ? We’ve got every other plant . It’s like a jungle in here. Are you listening?”	- Dios, ¿por qué no cultivamos nuestro propio tabaco ? Tenemos todas las demás plantas , esto parece una jungla . ¿Me estás escuchando?	9

“Why, that looks wonderful. I see we have a change in menu. We’re having mincemeat and potato soup. Good job, Sean.” She tried a spoonful. “A bit of salt and pepper .”	- Vaya, qué buena pinta. Veo que hemos cambiado el menú. Vamos a tomar sopa de patata y carne picada. Buen trabajo, Sean. -Probó una cucharada- Un poco de sal y pimienta .	165
Jules speared a forkful of lettuce and made a show of chewing it with gusto.	Jules trinchó la lechuga con el tenedor y esbozó una mueca de delectación mientras la masticaba.	26
Did you know that humans and chimpanzees share ninety-six percent of the same genes ? Humans and cat share almost ninety percent. And nearly sixty percent of genes are shared between humans and asparagus .	¿Sabía que los genes de los humanos y los chimpancés son idénticos en un noventa y seis por ciento? Los humanos y los gatos comparten casi un noventa por ciento, y casi el sesenta por ciento de nuestros genes son los mismos que los de los espárragos .	29
He reached across the table to the centerpiece, a spray of flowers , and grasped a carnation between his fingers.	Se inclinó sobre la mesa hasta el centro, una composición floral , y asió un clavel entre sus dedos.	32
Luke wiped it with his hand, revealing a geometrical pattern of roses and vines .	Luke lo apartó con la mano, revelando un patrón geométrico de rosas y enredaderas .	32
Spikes of conifers and of spindly white trees twisted like skeletons.	Puntas de coníferas y nudosos árboles blancos que se retorcían como esqueletos.	38
“That’s it? Where’s the palm trees ? Those look like Christmas trees .”	- ¿Ya está? ¿Dónde están las palmeras ? Eso parecen árboles de Navidad .	38

Sean trailed behind his mother, gathering pinecones .	Sean iba detrás de su madre, recogiendo piñas .	41
White-skinned birch, mangled oaks, and towering pines with paltry needles .	Abedules de corteza blanquecina, robles mutilados y pinos gigantescos de agujas raquílicas.	41
He looked at his fingers, brushed with purple spores , and it reminded him of something. The rye ... the rye ...	Se miró los dedos, manchados de esporas púrpuras, y le recordó a algo. El centeno ... el centeno ...	111
There were three sets of glass doors with entrances to the laboratory, kitchen, and library, and in between were small rock gardens where her mother had grown different wildflowers and strawberries .	Había tres conjuntos de puertas de cristal con acceso al laboratorio, la cocina y la biblioteca, y entre medias había pequeños jardines de piedras donde su madre había cultivado distintas flores silvestres y fresas .	45
She browsed around the bright, fresh-looking vegetables and herbs that had been artfully sealed and frozen.	Inspeccionó las verduras y especias frescas y brillantes que se habían sellado y congelado con maestría.	61
Then the boy reached out a finger and stroked a vine of English ivy creeping along the cliff.	Entonces el chico extendió los dedos y acarició una parra de hiedra inglesa encaramada al acantilado.	71
“Such a strange texture. Not sure, but I’d say it’s a fungus of some kind.”	- Qué textura tan extraña. No estoy seguro, pero diría que es algún tipo de hongo .	71
He pointed to a six-foot display case made of mahogany and etched glass that didn’t match the blandness of the laboratory.	Señaló una vitrina de dos metros hecha de caoba y cristal esmerilado que no encajaba en aquel laboratorio tan barato.	82
The room on-screen was featureless except for a long table that held two identical	La habitación de la pantalla estaba vacía salvo por una mesa alargada	86

dwarf palms , about four feet tall, in heavy pots .	sobre la que reposaban dos palmeras enanas idénticas, de algo más de un metro de altura, en macetas pesadas.	
“I don’t know much about his early years, except that he was a bright boy who had an affinity for nature , specifically mushrooms .”	- No sé mucho acerca de sus primeros años, salvo que era un chico brillante que tenía afinidad por la naturaleza , en especial por los hongos .	93
For some reason, it bothered him to see the underside of the pine needles speckled with the same black spots as the ivy on the cliff.	Por algún motivo, le inquietó ver el anverso de las agujas de pino moteadas con los mismos puntos negros que había en la hiedra del acantilado.	107
Moving closer, he saw there was more fungus on the tree trunk , blotchy like a rash. It traveled along the bark to the ground, where it was growing like moss , and across a fat root sticking out of the dirt. It crept over a straggly berry bush and some pinecones .	Al acercarse, vio que había más hongos en el tronco del árbol , parcheándolo como un sarpullido. Recorría la corteza hasta el suelo, donde crecía como un musgo , y a lo largo de una gruesa raíz que sobresalía de la turba. Reptaba por un arbusto de bayas enmarañado y algunas piñas .	107
Most of the fungus was soft and fluid, but there were tiny shoots of a purplish growth protruding from the floral structure like minigrains of rice.	La mayor parte del hongo era suave y fluido, pero había pequeños brotes de un recrecimiento purpúreo que sobresalían de la estructura floral como diminutos granos de arroz.	111

Then she made a pot of oatmeal and a pitcher of orange juice for the kids, and poured a steaming mug of coffee .	Entonces preparó un cuenco de avena y una jarra de zumo de naranja para los niños, y sirvió una taza de café humeante.	132
“You mean that black fungus in the woods ?”	- ¿Te refieres a los hongos negros del bosque ?	185
She turned her head toward High Peak , where the sky was vivid blue and the hillside rocky, dotted with tufts of grass and springtime weeds starting to bloom .	Volvió la cabeza hacia Cumbre Alta , donde el cielo era de un azul vívido y las laderas eran rocosas, salpicadas de matojos y hierbas primaverales que empezaban a floreecer .	226
Gathering timber from the woods was out of question, but there were plenty of fallen sticks behind the house.	Era imposible recoger leña del bosque, pero había muchas ramas detrás de la casa.	232
Ergot , he thought and pressed the grass to his chest. This is ergot .	Cornezuelo , pensó, y se presionó la hierba contra el pecho. Esto es cornezuelo .	111
He was wearing pants but no shirt, and had stooped shoulders, a round white belly, and black hair that clung like seaweed to his head.	Llevaba pantalones, pero no camiseta, y tenía los hombros cargados, el vientre redondo y blanco y el pelo negro y adherido a la cabeza como algas marinas.	273
Mixed literal translation (+ Semantic/Cultural/Morphological adaptation, Reduction, Calque)		
“Another half hour,” Isabelle said and threw the minced vegetables in a hot skillet full of chopped meat. She added broth, tomatoes , and a bottle of Guinness to the	- Otra media hora. -Dijo Isabelle, y vertió las verduras picadas en una sartén llena de carne troceada. Añadió caldo,	164

meat and threw on some spices: parsley , paprika , rosemary and thyme .	tomates y una botella de Guinness a la carne, y la aderezó con algunas especias: perejil , pimentón , romero y tomillo .	
“ Rainforests are being flattened to grow palm oil for products, while the Amazon and ancient woods are being turned into grass for grazing animals , thanks to America’s obsession with hamburgers. In a hundred years, there won’t be a virgin forest on earth.”	- Se están arrasando selvas para producir aceite de palma con diversos fines, mientras el Amazonas y bosques primigenios se transforman en pastos para ganado, gracias a la obsesión de Estados Unidos por las hamburguesas. En cien años no habrá un solo bosque virgen en la tierra.	187
“I remember one drizzly morning I was digging up toadstools in the woods. You gave a haughty look from under your rain cap and said, ‘ Mushrooms only grow where it’s damp, and that’s why they look like umbrellas’.”	- Recuerdo que una mañana lluviosa estaba escarbando champiñones en el bosque. Me miraste con sorna por debajo del chubasquero y dijiste <i>las setas solo crecen donde hay humedad, por eso parecen paraguas.</i>	67
Winter creepers , juniper , and heather cling stubbornly low to the ground, pugnacious against the elements.	Husos de la fortuna , enebro y brezo que se aferran al suelo, testarudos y bajos, pugnando contra los elementos.	1
It seemed there was a pattern to the clicks among the tomato plants , while the corn and the string beans had their own unique pattern.	El repiqueteo de las tomateras parecía seguir un patrón, mientras que el maíz y las judías tenían su propio patrón único.	26

Remarkably, two hours later the other species of plants , the string beans and corn , began closing up the stomata in their leaf cells as well.	Curiosamente, dos horas más tarde que el resto de especies vegetales , las judías y el maíz , también empezaron a cerrar las estomas de las células de sus hojas .	26/27
“We’ve known for centuries that plants communicate with each other. Take the poplar tree , for instance. When attacked by hungry caterpillars, not only will it produce a chemical repulsive to the insect, it will cue the surrounding trees to do the same. Although, in the case of poplars it’s by chemicals released through the leaves . We see the same thing with most plants . That lovely smell of fresh-cut grass is actually your lawn screaming.”	- Hemos sabido desde hace siglos que las plantas se comunican entre ellas. Tomemos como ejemplo el álamo . Cuando se ve atacado por orugas hambrientas, no solo segrega un repelente químico , sino que también alerta a los árboles colindantes para que hagan lo mismo. Aunque en el caso de los álamos se trata de sustancias químicas liberadas a través de las hojas , podemos ver el mismo proceso en la mayor parte de las plantas . Ese olor tan agradable a hierba recién cortada es, en realidad, su césped chillando.	27
If a crow has intelligence, why not an amoeba , which can navigate a maze as well as a mouse? And then why not snakes, bacteria , or even lima bean plants ?	¿Si un cuervo tiene inteligencia, por qué no una ameba , que puede resolver un laberinto tan bien como un ratón? ¿Y por qué no las serpientes, las bacterias o incluso las plantas de judías de Lima ?	31

“Yes, the dark mass could be sclerotium, and those threadlike stalks most certainly resemble some kind of endophyte, but none I’ve ever seen. Its reproduction and life cycle are completely different from any ergot or any other kind of Claviceps, and the fact that it grows on everything; well, it could be some Neurospora mold mutation.”	- Sí, la masa oscura podría ser esclerocio, y esos tallos filosos se asemejan, con total seguridad, a alguna clase de endófito, pero ninguno que haya visto jamás. Su reproducción y ciclo vital son completamente distintos a los de cualquier otro tipo de cornezuelo o Claviceps, y el hecho de que crezca en todas partes; bueno, podría ser algún tipo de mutación de moho Neurospora.	134
If plants had the means to destroy humans, would they? Like the cowpea that releases peptides against the armyworm, or the tannins of a hemlock that kill attacking bacteria; would that Dianthus Caryophyllus you just decapitated want to chop off your head?	¿Si las plantas tuvieran la capacidad de destruir a los humanos, lo harían? Como el chícharo que exuda péptidos contra la procesionaria, o los taninos de la cicuta que matan atacando a las bacterias, ¿te querría arrancar la cabeza ese Dianthus Caryophyllus que acabas de decapitar?	32
“I spent quite a bit time with my father in the laboratory, watching him work and fussing over a terrarium. He filled it with motion plants, do you remember? Venus flytraps, bladderwort, telegraph.”	- Pasaba bastante tiempo con mi padre en el laboratorio, viendo cómo trabajaba y trasteaba con un terrario. ¿La llenó de plantas móviles, te acuerdas? Venus atrapamoscas, utricularias, plantas del telégrafo.	47

“For example, a dodder has no leaves to make its own food, so it has to get nutrients by attacking other plants , using its sense of smell to find its victims.”	- Por ejemplo, la cuscuta no tiene hojas para fabricar su propia comida, así que tiene que conseguir sus nutrientes atacando a otras plantas , usando su sentido del olfato para encontrar a sus víctimas.	97
Calques		
Isabelle Maguire looked up from a potted begonia with a tiny gasp.	Isabelle Maguire levantó la vista de una begonia en una maceta con un leve gemido.	6
“So let me get this straight: You’re saying humans are on the same level as a petunia ?”	- Deje que me aclare: ¿está diciendo que los humanos están al mismo nivel que una petunia ?	29
“One day, on a whim, he decided to attach his polygraph to the leaf of a Dracaena plant and see how long it took for water to reach the leaf .”	- Un día, por capricho, decidió conectar su polígrafo a la hoja de una planta Dracaena y observar cuánto tiempo tardaba el agua en alcanzar la hoja .	85
“Of course, he had to prove this through an experiment, so what he did was introduce a rhododendron to the purified scent of his own body, while at the same time tearing off one of its leaves .”	- Por supuesto, tenía que probarlo mediante un experimento, así que lo que hizo fue presentarle a un rododendro el aroma purificado de su propio cuerpo mientras, al mismo tiempo, le arrancaba una de sus hojas .	94

There could be ten different species nearby and it will always smell out the most succulent.	Podría haber diez especies diferentes en los alrededores y siempre olerá la más succulenta.	97
“Do you know what is happening to trees all over the world, how they’re disappearing?” “You mean like sequoias?”	- ¿Sabes qué le está ocurriendo a los árboles de todo el mundo, cómo están desapareciendo? - ¿Quieres decir como las secuoyas?	186
He grasped a countertop covered in algae that felt mushy and cold.	Palpó una encimera cubierta de algas que resultaba musgosa y fría al tacto.	203
It was clear from inspection: the house had not been cared for. Everything was coated in water stains and mildew .	La inspección no dejaba lugar a dudas: la casa no se había cuidado. Todo estaba cubierto de marcas de agua y mildiu .	46
Cultural adaptation		
Jules swept through the ryegrass that reached his waist and grabbed a fistful of stalks , examining them close.	Jules apartó la cizaña que le llegaba hasta la cintura y asió un puñado de tallos para examinarlos más de cerca.	44
“In this study, George hooked up a red cedar with probes to a voltmeter and spectrum analyzer.”	- En este estudio, George conectó una sabina colorada de Virginia a un voltímetro y un analizador de espectro con sondas.	81
Semantic adaptation		
Neglect had narrowed the path with rotting logs and fallen branches , hanging vines and pricker bushes desperate to scratch.	El abandono había estrechado el sendero con troncos pútridos , ramas caídas , hiedras colgantes y arbustos espinosos desesperados por rasgar.	41

Tears streamed down her face, as her legs gave out and she slid to her knees, choking on a walnut-sized lump in her throat that wouldn't dislodge.	Las lágrimas resbalaban por su rostro, sus piernas se rindieron y se escurrió hasta quedar de rodillas, mientras se atragantaba con un bulto en la garganta del tamaño de una nuez que no conseguía tragar.	318
Reduction		
Isabelle returned to the kitchen and scooped the string beans into a bowl and wondered, as always, how she had missed all the warning signs.	Isabelle volvió a la cocina, vertió las judías en un cuenco y se preguntó, como de costumbre, cómo podía haber ignorado todas las señales.	9
The black spots weren't visible if you weren't looking for them. Blotches fell into patterns of bark and inside crevices as if it were camouflaging itself. Even against the white birch it seemed like nothing more than cracks and shadows.	Los puntos negros no eran visibles si no se los buscaba. Los parches se fundían con patrones de la corteza y entre los recovecos, como si se estuvieran camuflando. Incluso en contraste con los abedules no parecían más que arrugas y sombras.	108
He sat up on his knees and noticed right in front of him a thick vine wrapped around the trunk of an old maple tree .	Se arrodilló y se percató de que, frente a él, una gruesa parra envolvía el tronco de un arce viejo .	140
Explanation		
It was the green frond of kelp . He tugged his foot hard, and the flipper came off, floating into the kelp bed .	Era una espesura verde de algas marinas . Forcejeó bruscamente con el pie y la aleta cayó, flotando en el lecho de algas .	202
He squatted in front of the fire. It was nearly out, and he threw a piece of driftwood on	Se acuclilló en frente del fuego. Estaba casi extinto, así que arrojó un madero	213

the embers, watching the flames burst to life.	sobre las ascuas, y observó cómo resurgían las llamas.	
Semantic shift		
“It could be anything, really. Slime mold or gall , perhaps. A new type of neoplasm that we’ve never seen before.”	- En realidad, podría ser cualquier cosa. Moho mucilaginoso o hiel , quizás. Un tipo nuevo de neoplasma que nunca habíamos visto antes.	134

8.1.1.1. Highly specific terminology

Original item	Spanish translation	Page
Literal translation		
George stumbled across the patio, past a cooling skeleton of ash remains, where flames had devoured layers of plant specimens he’d collected over a year, along with all his personal files and notes.	George atravesó el patio con torpeza, pasando un esqueleto humeante de restos de cenizas, donde las llamas habían devorado capas de especímenes de plantas que había coleccionado durante un año, junto con todos sus documentos y anotaciones personales.	5
Her education in botany stopped at common species identification .	Su educación en botánica se detuvo en la identificación de especies comunes .	12
However, the last ten years had revealed some astonishing facts about plant signaling abilities	Sin embargo, en la última década se han revelado algunos datos increíbles	24

	sobre las capacidades de señalización de las plantas.	
In response to the wound, the plant immediately sent alarm signals from leaf to root, accelerating its production of ethylene and protease inhibitors against herbivores.	En respuesta a la herida, la planta envía señales de alarma inmediatamente de la hoja a la raíz, acelerando su producción de etileno e inhibidores de la proteasa contra herbívoros.	94
Not far away there were sprouts of grass , also speckled black, as well as the bark of trees.	No lejos de allí había brotos de hierba , también moteados de negro, al igual que la corteza de los árboles.	107
Usually, the fungi enter the plant tissue and cells at the roots and create a web of hyphae that branch out for miles, providing the plants with better absorption of water and nutrients, protection from predators and pathogens , as well as information about the environment.	Habitualmente, el hongo se introduce en el tejido vegetal y en las células a través de las raíces y crea una red de hifas que se ramifica durante kilómetros, proveyendo a las plantas de una mejor absorción del agua y los nutrientes, protección de los depredadores y patógenos , así como información sobre el entorno.	160
He reached out and gently pinched the stem , sliding his fingers along the stalk , smooth as spaghetti and spotted black. It was a pine sapling , only six inches tall.	Extendió la mano y pellizcó el tallo con suavidad, deslizando los dedos por su superficie, lisa como un espagueti y salpicada de motas negras. Era una plántula de pino, de solo quince centímetros de altura.	161
Rainforests are being flattened to grow palm oil for products, while the Amazon and ancient woods are being turned into grass for grazing animals,	Se están arrasando las selvas para cultivar aceite de palma con fines comerciales, mientras el Amazonas y bosques primigenios se transforman	187

thanks to America's obsession with hamburgers.	en pastos para ganado, gracias a la obsesión de los Estados Unidos por las hamburguesas.	
She turned her head toward High Peak, where the sky was vivid blue and the hillside rocky, dotted with tufts of grass and springtime weeds starting to bloom .	Volvió la cabeza hacia Cumbre Alta, donde el cielo era de un azul intenso y las laderas eran rocosas, sembradas de matas de hierba y de plantas primaverales que comenzaban a floreecer .	226
What you saw as Dr. Beecher's own behavior was actually a fungal genome expressing the plant's instructions through the body of its host.	Lo que viste como el propio comportamiento del Dr. Beecher era, en realidad, un genoma fúngico expresando las instrucciones de la planta a través del cuerpo de su anfitrión.	314
Mixed literal translation (+ calque, cultural adaptation, semantic adaptation)		
"Like the cowpea that releases peptides against the armyworm, or the tannins of a hemlock that kill attacking bacteria; would that <i>Dianthus Caryophyllus</i> you just decapitated want to chop off your head?"	- Como el chícharo que emite péptidos contra el cogollero del maíz, o los taninos de la cicuta que matan a las bacterias atacantes; ¿te querría arrancar la cabeza ese <i>Dianthus Caryophyllus</i> al que acabas de decapitar?	32
Calque		

“Another time you told me that a flower’s pistil must be its best protection against insects.”	- En otra ocasión me contaste que el pistilo de la flor debe de ser su mejor protección contra los insectos.	67
Some of the books were old and worn with dull fabric covers and titles concerning plant physiology and phytohormonal regulations , early subjects George had studied. Others had more contemporary titles on plant genomics , molecular neurophysiology , and electrophysiology .	Algunos de los libros eran antiguos, estaban gastados y tenían portadas insulsas y títulos relativos a la fitofisiología y las regulaciones fitohormonales , los primeros campos que estudió George. Otros tenían títulos más contemporáneos sobre genómica vegetal , neurofisiología molecular y electrofisiología .	75/76
He was a student at Cambridge, headed for a career in mycology , and by the time he was eighteen he’d discovered a dozen new species of fungi all over England. It seems he wrote a breakthrough scientific paper on mycorrhiza , the relationship between plants and fungi .	Fue estudiante en Cambridge, tenía por delante un futuro en la micología y, a los dieciocho años, ya había descubierto una docena de especies nuevas de hongos por toda Inglaterra. Al parecer escribió un artículo científico revolucionario sobre la micorriza , la relación entre las plantas y los hongos .	93
“You’re not a mycologist , or even a botanist .”	- No eres micólogo/a , ni siquiera botánico .	134
But Grace was constantly bedridden with migraines, E. Coli , lupus , toxic shock syndrome .	Pero Grace estaba postrada en la cama constantemente con migrañas , E. Coli , lupus o síndrome de choque tóxico .	100
Slivers of sunlight peeked through the branches overhead and his ears buzzed	Resquicios de rayos de sol se filtraban entre las ramas más altas y los oídos	106

with chatter, incoherent whispers that came from the foliage .	le zumbaban con una cháchara de susurros incoherentes que provenían del follaje .	
“The harmony is gone. Mutualism . Gone.”	- La armonía ha desaparecido. El mutualismo ya no está’.	182
Semantic adaptation		
By the age of seven his collection contained half the native plant species found in New York City.	A los siete años su colección ya contenía la mitad de las especies de plantas autóctonas que se encuentran en la ciudad Nueva York.	7
Perhaps even too big for the Institute of Plant Neurobiology .	Quizás demasiado grande, incluso, para el Instituto de Fitoneurobiología .	24
However, if you bother to actually read the papers that have been written on this subject over the last decade, you will find that plant intelligence is an indisputable fact.	Sin embargo, si se molesta en leer de verdad los ensayos que se han escrito sobre este tema durante la última década, descubrirá que la inteligencia vegetal es un hecho incontestable.	31
“He went on to become a distinguished professor of plant biology at Oxford, and the work he did on long-distance signaling became the foundation of how plant biology is studies today.”	- Con el tiempo se convirtió en un profesor distinguido de fitobiología en Oxford, y sus trabajos sobre la señalización a larga distancia acabaron siendo los cimientos de cómo se estudia la fitobiología hoy en día.	93

9.1.2. Botanical terminology (*The Day of the Triffids*)

Original item	Page	Spanish translation
Literal translation		
New fields were growing quick crops on what had historically been simply tundra or barren land .	14	En los nuevos campos se cultivaban cosechas de crecimiento rápido en lo que antes no era más que tundra o tierra yerma .
Every season, too, stretches of desert both old and recent were reclaimed and made to grow grass or food.	14	Además, cada estación, extensiones de desierto tanto antiguo como reciente se reclamaban para cultivar hierba o alimento.
For food was then our most pressing problem, and the progress of regeneration schemes , and the advance of cultivation lines on the maps, was followed with almost as much attention as an earlier generation had paid to battle fronts.	14	Ya que la comida era, por aquel entonces, nuestro problema más acuciante, y el progreso de los programas de regeneración , así como el avance de las líneas de cultivo en los mapas, se seguían con casi tanta atención como la que la generación anterior había prestado a los frentes bélicos.
Such a swerve of interest from swords to plowshares was undoubtedly a social improvement [...]	14	Tal cambio de intereses de la espada al arado era, sin duda, una mejora social [...]
I remember the first time he lifted me up to look inside that conical cup and see the tightly wrapped whorl within .	16	Recuerdo la primera vez que me levantó para que vislumbrara el interior de la corola cónica y viera el verticilo estrechamente enrollado .
Monster plants on the march!	17	¡ Plantas monstruosas en marcha!

There was our mysterious rubbish-heap plant grown to a height of seven feet or more. There was no mistaking it and it was “walking”!	17	Allí estaba nuestra misteriosa planta de montón de basura , que había alcanzado una altura de dos metros o incluso más. ¡No había lugar a error, y estaba <i>caminando</i> !
The bole , which I now saw for the first time, was shaggy with little rootlet hairs , it would have been almost spherical but for three bluntly tapered projections extending from the lower part.	17	El tronco , que ahora veía por primera vez, era velludo, con pequeños filamentos enraizados , y habría sido completamente esférico de no haber sido por tres adminículos burdamente adheridos que se extendían desde la parte inferior.
Already there were botanists wallowing, after their custom, in polysyllabic dog Latin and Greek to produce variants on ambulans and pseudopodia [...]	18	Los botánicos ya estaban inmersos, según su costumbre, en sus invenciones polisilábicas en latín y griego macarrónico para producir variantes de articulaciones y pseudópodos [...]
People were surprised, and a little disgusted, to learn that the species was carnivorous , and that the flies and other insects caught in the cups were actually digested by the sticky substance there. We in temperate zones were not ignorant of insectivorous plants , but we were unaccustomed to finding them outside special hothouses , and apt to consider them as in some ways slightly indecent, or at least improper. But actually alarming was the discovery that the whorl topping a truffid's	19	La gente descubrió con sorpresa (y un algo de repulsión) que la especie era carnívora , y que las moscas y otros insectos que quedaban atrapados en la corola se veían digeridos por la sustancia pegajosa que allí se encontraba. Los habitantes de las zonas templadas no éramos ajenos a la existencia de plantas insectívoras , pero no estábamos habituados a encontrarlas fuera de invernaderos especiales, y solíamos considerar que, en cierto modo, eran algo indecentes, o al menos inapropiadas. Pero lo verdaderamente

stem could lash out as a slender stinging weapon ten feet long, capable of discharging enough poison to kill a man if it struck squarely on his unprotected skin.		alarmante fue el descubrimiento de que el verticilo que coronaba el tallo del trífido podía fustigar como si fuera una esbelta arma punzante de tres metros de largo, capaz de emanar suficiente veneno como para matar a una persona si la golpeaba de lleno sobre su piel desnuda.
As soon as this danger was appreciated there followed a nervous smashing and chopping of truffids everywhere [...]	19	Tan pronto como el peligro se hizo aparente, sobrevino una histeria de aplastar y talar trífidos por todas partes [...]
But actually alarming was the discovery that the whorl topping a truffid's stem could lash out as a slender stinging weapon ten feet long, capable of discharging enough poison to kill a man if it struck squarely on his unprotected skin.	19	Pero lo verdaderamente alarmante fue el descubrimiento de que el verticilo que coronaba los tallos de los trífidos podía desplegarse como una delgada arma punzante de tres metros de longitud, capaz de inyectar el suficiente veneno como para matar a un hombre si le golpeaba de lleno sobre la piel desnuda.
The traveler very easily failed to notice one among the normal bushes and undergrowth, and the moment he was in range the venomous sting would slash out.	19	Era muy fácil que cualquier viajero pasara uno por alto entre los arbustos y la maleza habituales y, nada más entrar en su rango de alcance, el aguijón venenoso lo abatiría.
The stinging tendril did not have the muscular power to tear firm flesh, but it had strength enough to pull shreds from a decomposing body and lift them to the cup on its stem.	20	El zarcillo punzante no tenía la suficiente fuerza muscular para desgarrar carne firme, pero sí era lo bastante fuerte como para desgajar tiras

		de un cuerpo en descomposición y elevarlas hasta el cáliz sobre su tallo.
The public learned that it and similar companies in other countries were about to farm truffids on a large scale , in order to extract valuable oils and juices and to press highly nutritious oil cake for stock feeding.	20	El público descubrió que tanto ellos como otras empresas similares de otros países iban a empezar a cultivar trífidos a gran escala para extraer aceites y jugos de valor, y a producir tortas de aceite muy nutritivas como forraje.
We had knocked off for the day and were looking with a sense of satisfaction at three new fields of nearly fully grown truffids.	21	Habíamos terminado por aquel día y contemplábamos, con una punzada de satisfacción, los tres nuevos campos de trífidos casi adultos.
The evening was peaceful; almost the only sounds that broke it were the occasional rattlings of the truffids' little sticks against their stems.	21	La noche estaba en calma; el golpeteo de las ramitas de los trífidos contra sus tallos era prácticamente el único sonido que rompía el silencio.
"But it's absurd. Plants talking! " "So much more absurd than plants walking? " he asked.	21	- Pero eso es absurdo. ¡Plantas que hablan! - ¿Tan absurdo como que haya plantas que anden? -Le pregunté.
"But even if that were so, they can't do things. They can't handle things. There's very little muscular strength in that sting lash, " I pointed out.	22	- Pero, incluso si así fuera, no pueden hacer cosas, no pueden manipular cosas. El latigazo de su aguijón tiene muy poca fuerza muscular. - señalé.
Morphological adaptation		

Millions of gossamer-slung triffid seeds , free now to drift wherever the winds of the world should take them.	15	Millones de semillas de trífido flotando como gasas , ahora libres para vagar a donde quiera que los vientos de todo el mundo las llevaran.
He smoothed the short sprays of leathery green leaves between his finger and thumb as if the texture might tell him something.	16	Acarició las hebras de hojas verdes coriáceas entre los dedos, como si la textura pudiera decirle algo.
My father leaned over, peering at it through his horn-rimmed glasses, fingering its stalk , and blowing gently through his gingery moustache, as was his habit when thoughtful.	16	Mi padre se inclinó, observándolo a través de sus gafas de montura de cuerno, toqueteando su tallo y resoplando suavemente tras su bigote cobrizo, como era habitual cuando estaba pensativo.
Then he peered into the curious, funnel-like formation at the top of the stem , still puffing reflectively, but inconclusively, through his moustache.	16	Entonces escudriñó la extraña formación con apariencia de embudo en el extremo superior del tallo , aún resoplando pensativo, pero sin respuesta, tras su bigote.
It looked not unlike the new, close-rolled frond of a fern , emerging a couple of inches from a sticky mess in the base of the cup .	16	Se asemejaba a la fronda nueva y muy enrollada de un helecho , sobresalía unos cinco centímetros de la base pegajosa de la corola .
[...] for if the biological or botanical experts were excited over them, no news of their interest percolated to the general public.	16	[...] si los expertos en biología o botánica estaban emocionados con ellos, ninguna noticia de su interés trascendió al público general.
It was some little time later that the first one picked up its roots and walked .	16	Fue poco después cuando el primero tomó sus raíces y echó a andar .

Within a few weeks reports of walking plants were pouring in from Sumatra, Borneo, Belgian Congo, Colombia, Brazil, and most places in the neighborhood of the equator.	17	En unas pocas semanas empezaron a sucederse informes de plantas ambulantes en Borneo, el Congo Belga, Colombia, Brasil y la mayor parte de regiones próximas al ecuador.
Unfortunately, there was an aspect of this self-propelled plant discovery which the newsreel people either had not experienced or had chosen for some reason of their own not to reveal.	18	Desgraciadamente, había un aspecto acerca del descubrimiento de esta planta autopropulsada que la gente de las rotativas no había experimentado, o había escogido no revelar por algún motivo.
A little later it began to be a fashion to have a safely docked triffid or two about one's garden.	19	Algún tiempo después empezó a ponerse de moda tener uno o dos trífidos podado por seguridad en el jardín.
We reckoned that in another month or so we'd be able to start tapping them for juice .	21	Estimábamos que en alrededor de un mes podríamos empezar a extraerles el jugo .
They can get their nourishment direct from the soil , or from insects and bits of raw meat.	22	Pueden nutrirse directamente del suelo , o de insectos o pedazos de carne cruda.
Calque		
It was the appearance of the triffids which really decided the matter for us.	13	Fue la aparición de los trífidos lo que hizo que nos decidiéramos de verdad.
Explanation		
Triffid-seed time was quite a sight. The dark green pod just below the cup was glistening and distended, about half as big again as large apple- When it burst, it did it with a pop that was	23	La época de polinización de los trífidos era algo digno de verse. La vaina de color verde oscuro que había justo debajo de la corola pendía brillante, del tamaño de la mitad de una manzana

audible twenty yards away. The white seeds shot into the air like steam and began drifting away on the lightest of breezes. Looking down on a field of triffids late in August, you could well get the idea that some kind of desultory bombardment was going on.		grande y, cuando eclosionaba, lo hacía con un estallido que era audible a casi veinte metros de distancia. Las semillas blancas se proyectaban al aire como vapor y empezaban a desvanecerse en una suave brisa. Al contemplar un campo de trífidos a finales de agosto, daba la impresión de que se estaba llevando a cabo alguna clase de bombardeo errático.

8.1.2.1. Botanical terminology (*The Day of the Triffids* – Published translation)

Spanish translation	Page
Literal translation	
En el curso de unas pocas semanas comenzaron a llegar rumores de unas plantas ambulantes desde Sumatra, Borneo, el Congo Belga, Colombia, Brasil, y otras regiones ecuatoriales.	26
¡ Plantas monstruosas en marcha!	27
El tronco , algo nuevo para mí, estaba cubierto de raicillas . Sin aquellas delgadas protuberancias que crecían en la parte baja, hubiese sido casi redondo. Sostenido por esas protuberancias, se elevaba a unos treinta centímetros del suelo.	27
Se descubrió que pasaban por lo menos dos años antes que el perdido aguijón volviese a crecer: una poda anual les quitaba, pues, todo peligro, y servían así de motivo de diversión para los niños de la casa.	29

En las partes más estrechas teníamos que abrírnos paso entre matorrales y arbustos que arañaban los costados de nuestro vehículo, como si quisieran retenernos.	153
El venenoso aguijón no tenía bastante fuerza como para desgarrar un cuerpo de carnes firmes, pero si para arrancar trozos de carne descompuesta y llevarlos hasta el cáliz .	30
Nadie se interesó mucho, por otra parte, en las tres ramitas sin hojas que nacían en la parte alta del tronco.	30
Pronto corrió la noticia de que esta compañía, y otras similares de distintos países iban a cosechar trífidos en gran escala para extraerles valiosos aceites y jugos , y para proporcionar al ganado un muy nutritivo y oleoso forraje .	30
Pueden recibir su alimento directamente del suelo , o de los insectos, o de la carne cruda.	32
Tan pronto como se comprendió la gravedad de esta amenaza, todos se lanzaron a arrancar y destrozar nerviosamente trífidos , hasta que a alguien se le ocurrió que bastaba quitarles el aguijón . El asalto, ligeramente histérico, a las plantas disminuyó entonces, pero el número de los trífidos había descendido ya de un modo considerable. Poco después se difundió la moda de tener uno o dos trífidos, cuidadosamente mutilados , en el jardín.	29
Semantic adaptation	
Pero no era vapor. Era una nube de semillas que flotaban (pues eran tan infinitamente livianas) aun en ese aire enrarecido. Millones de sutiles semillas , que podían ser arrastradas por los vientos del mundo a cualquier parte...	25
Palpó las hojas verdes y correosas con el pulgar y el índice, como si su aspereza pudiera decirle algo. Luego espío el interior de aquella curiosa formación en forma de embudo que crecía en lo alto del tallo y bufó reflexivamente, pero indeciso, por entre sus bigotes. Recuerdo la primera vez que me alzó en sus brazos para que mirara el interior del cáliz y su enroscado	25/26

verticilo. Era algo similar a la hoja nueva y enrollada de un helecho y sobresalía unos veinticinco centímetros de la masa pegajosa que llenaba el fondo.	
Otros muchos estaban creciendo en distintos sitios, tranquila e inofensivamente, sin que nadie les prestara particular atención; al menos así parecía, pues de la posible excitación de los biólogos y los botánicos nada llegó a la generalidad del público. Poco tiempo después uno de los trífidos recogió sus raíces, y caminó.	26
Y gran número de otras misteriosas denominaciones, que no siempre comenzaban con «trí», pero que se basaban, en su mayoría, en aquella raíz tridentada.	28
Muy posiblemente eran trífidos ornamentales, prudentemente podados ; pero quizá también no lo eran.	106
Pero en los trópicos, particularmente en las regiones selváticas , pronto se convirtieron en un verdadero azote.	29
Allí estaban, como un macizo verde oscuro más allá de los alambres.	180
Calque	
Fue la aparición de los trífidos lo que terminó por decidir el asunto.	18
Los botánicos ya estaban revolvándose, según su costumbre, en vocablos polisílabos, latinos y griegos, en busca de variantes de ambulans y pseudopodia [...]	28
Morphological adaptation	
Infortunadamente esta planta autopropulsada tenía una característica que los hombres de los noticieros no habían experimentado, o que por alguna razón personal habían decidido no revelar.	27
Había terminado la hora de trabajo y observábamos con cierta satisfacción tres nuevos campos de trífidos maduros.	31

Sólo rompía el silencio el ocasional repiqueteo de las ramitas de algún trífido .	31
—Pero es absurdo, ¡ plantas que hablan!	31
Reduction	
Durante el corto tiempo que duró la escena, yo miré fascinado. Ahí estaba la misteriosa planta de nuestro jardín , y con un tamaño de más de dos metros. No había duda, ¡y caminaba!	27
Explanation	
Un mes más y podríamos hacer las primeras incisiones para recoger el jugo .	31
Addition	
Un largo látigo verde restalló sobre ellos alcanzando a uno de los hombres.	100

9.1.3. Botanical terminology (*The Crucible of Time*)

Original item	Page	Spanish translation
Literal translation		
Each of the adults carried an enormous haodah beset with edible funqi and other useful secondary plants [...]	435	Cada adulto llevaba consigo un enorme haodah colmado de funqi comestible y otras plantas secundarias útiles [...]
“I believe well!” Jing exclaimed. “Plainly did I see villages with land enough and many high barns!” “Except that on the land trencher-plants are failing,” Twig said, still softly. “Take one of these and transplant it outside, and it turns rotten-yellow. But save your	41/42	- ¡Ya lo creo! -Exclamó Jing- ¡a simple vista he visto aldeas con tierras suficientes y muchos graneros altos! - Pero, en la tierra, las plantas zanjadoras nos están fallando -dijo Rama, aún con suavidad-

questions until you've fed, or you'll spend a dreams-haunted night. Come this way."		Toma una de estas y trasplántala fuera, se vuelve de un amarillo marchito . Pero guarda tus preguntas para cuando te hayas alimentado, o pasarás la noche acosado por sueños. Ven por aquí.
Yet the heat and humidity reminded Jing's weather-sense of home, and inside there were adequate glowplants and twining creepers to cling to when the going became treacherous.	65	Pero el calor y la humedad le recordaron al clima-sentido de Jing a su hogar, y dentro había brilloplantas adecuadas y hiedras entrelazadas a las que aferrarse cuando la travesía se volviera traicionera.
Plants which swelled at noon and shrank at midnight [...]	108	Plantas que se hinchán al mediodía y se encogen a medianoche [...]
Food must come first, and more water. Were there edible plants on this strange shore? Was there any chance of trapping a game-animal ?	208	La comida debe ir primero, y más agua. ¿Habría plantas comestibles en aquella extraña orilla? ¿Habría alguna posibilidad de atrapar alguna pieza de caza ?
Their mission was to trade hides for food-plant seeds in the hope of cross-breeding hybrids which would grow very quickly during the ever-shortening northern summer.	213	Su misión era intercambiar pieles por semillas de plantas comestibles con la esperanza de conseguir híbridos interracial es que crecieran muy rápido en el menguante verano norteno.
Those among us who have never experienced ice and snow may doubt what I say, but I have felt how cold can numb the	267	Aquellos entre nosotros que nunca hayan experimentado el hielo y la nieve quizás duden de lo que digo, pero yo he sentido cómo el frío puede

pads, seen how it affects the plants we here take for granted!		entumecerte las almohadillas, ¡he visto cómo afecta a las plantas que aquí damos por sentado!
“They have rooted out our medicinal plants. If I stay, the stars alone know what use I could be to our folk.”	381	- Han arrancado nuestras plantas medicinales. Si me quedo, solo las estrellas saben de qué utilidad podré serle a nuestra gente.
Little organic material resisted the erosion of salt water; tides and currents had scattered what did endure, like blades, lenses and the burnt-clay formers used to compel houseplants to grow into the desired shape.	594/595	Pocos materiales orgánicos resistieron la erosión del agua salada; las mareas y corrientes habían esparcido cuando perduró, como las hojas, las lentes y los moldes de arcilla quemada que se usaban para guiar a las plantas domésticas de modo que crecieran con la forma deseada.
I speak with uttermost reluctance; like Barratong, who forged the Greatest Fleet in the years before the Thaw, and created the foundations of the modern world, I have hankered all my life after the chance plant a bud...and always failed.	682	Hablo con la mayor reticencia; como Barratong, que forjó la Gran Flota en los años previos al Deshielo, y creó los cimientos del mundo moderno, he ansiado toda mi vida la oportunidad de plantar un capullo... y siempre he fracasado.
“We hypothesize that in the early stages it was approximately an even chance whether implantation of a bud resulted in offspring for the ‘male’ version, the implanter, or the recipient, whose hormones were provoked into reproductive mode by impregnation and sometimes	647/648	- Sostenemos la hipótesis de que, en las fases iniciales, la posibilidad de que la implantación de un capullo resultara en un vástago de la versión <i>masculina</i> estaba más o menos equilibrada, pero el implantador, o el recipiente,

outdid the invader, thereby budding a female.”		cuyas hormonas adoptaban un modo reproductivo provocadas por la impregnación, a veces propasaba al invasor, lo que resultaba en la eclosión de una hembra.
“We’ll go back to wild plants like our ancestors!”	699	- ¡Regresaremos a las plantas silvestres , como nuestros ancestros!
He could picture how it must have been: one faction, the more rational, counselling that life go on as normal, with enough food eaten and enough new crops planted for the next year [...]	715	Podía imaginarse cómo había ocurrido: una facción, la más racional, sugiriendo que la vida continúe con normalidad, comiendo suficiente comida y plantando suficientes cultivos nuevos para el año siguiente [...]
Wherever there was habitable ground there were people, and even more than food-crops the folk cultivated plants which, after sundown, either glowed of their own accord or gave back the light they had basked in earlier.	761	Donde quiera que hubiese tierra habitable había gente e, incluso con más frecuencia que los alimentos , cultivaban plantas que, tras la puesta de sol, brillaban a voluntad o reflejaban la luz en la que se habían bañado antes.
After the extent of the damage had been assessed, so a report could be sent back to Chisp, an expedition must cross the watershed and test the plants there for infective organisms , even though none had been found over here.	797	Una vez se haya evaluado el alcance del daño, y podamos enviar un informe a Chisp, una expedición debe cruzar la cuenca y analizar las plantas para detectar organismos infecciosos , aunque aquí no hayamos encontrado ninguno.

There were automatic spillways to cope with the rise due to a spring thaw: a dense mat of small but coarse-stemmed plants along the top of the dam, designed to float upward and lift their root-masses just enough for the surplus to spill over without letting the dam erode.	860	Había sumideros automáticos para lidiar con la crecida debido al deshielo primaveral: una densa mata de plantas pequeñas con tallos recios a lo largo de la cima de la presa, diseñadas para flotar hacia la superficie y alzar la masa de sus raíces justo lo suficiente como para que el excedente de agua se derramara sin erosionar la presa.
Every coast that fringed the ocean shattered under the rock-hard water-hammer; Voosla herself was carried screaming far inland in a catastrophic shambles of plants and people, which for a crazy instant made Thilling think of what it must be like to fly...	944	Todas las costas que bordeaban el océano se hicieron añicos bajo la embestida impetuosa del agua; la propia Voosla se vio arrastrada tierra adentro en una maraña catastrófica de plantas y personas, lo que hizo que Thilling pensara, durante un instante de locura, cómo debía de ser volar...
There was a stench of ancient rot . What light reached her came from phosphorescent molds , not decent luminants .	1077	Había un hedor a podredumbre antigua . La luz que le llegaba era de mohos fosforescentes , no de luminarias decentes.
“The changes weren’t just brought about by the plant’s new environment ,” Wam put in.	1007/1008	- El nuevo entorno de la planta no fue lo único que provocó los cambios -añadió Wam.
As for escaping into space, out there either radiation or the lack of gravity was sure to kill any creature more advanced than a lowly plant [...]	1161	Por lo que respectaba al espacio, allí afuera era seguro que la radiación o la ausencia de gravedad aniquilarían a cualquier criatura más avanzada que una planta inferior [...]

Mixed literal translation (+ Creation)		
It was true; with the return of warm weather, the blight which had affected last year's crop was spreading again, and trencher-plant was their staple diet.	169	Era cierto; con el regreso del calor, la plaga que había afectado a la cosecha del año pasado se estaba propagando de nuevo, y las plantas zanjadoras constituían su dieta principal.
"Who knows? All I can say is, I've seen a lot of it at sea when our trencher-plants got salt-poisoned and our vines were blown away, same as now. Most people think it comes of trying to live off stale pickles ."	210	- ¿Quién sabe? Lo único que puedo decir es que lo he visto muchas veces en el mar cuando nuestras plantas zanjadoras se envenenaron con agua salada y el viento se llevó nuestras parras , igual que ahora. La mayoría de la gente cree que lo que lo causa es intentar vivir a base de conservas pasadas .
The nuts were hollow, and contained a bitter liquid of which he managed a few gulps. "If we could only plant such nut-trees on a briq! " he muttered. "It's not their natural juice," said the curer who had given him the drink.	234	Las nueces estaban huecas y contenían un líquido amargo del que tomó algunos sorbos. - ¡Si tan solo pudiéramos plantar semejantes arboles nuez en un briq! -masculló. - No es su jugo natural, -dijo el curandero que le había dado la bebida.
Despite the dense clusters of glowplants which draped the walls, Jing could discern how the ever-swelling boles of its	39/40	A pesar de las frondosas enredaderas de brilloplantas que tapizaban los muros, Jing pudo discernir cómo los

constituent bravetrees had lifted many huge rocks to four or five times his own height.		troncos crecientes de los bravárboles que los conformaban habían levantado muchas piedras enormes hasta una altura cuatro o cinco veces superior a la suya.
Beyond, a desolation as complete as though a hurricane had laid the vegetation low for a day's walk or more, which was being systematically replanted with oilsap trees that grew quickly and burned hotter than even the best charcoal .	254/255	Más allá, una desolación tan enorme como si un huracán hubiese arrasado la vegetación durante un día de camino o más, y lo estaban repoblando de forma sistemática con árboles de saviaceite que crecían rápidamente y ardían con incluso más calor que el mejor carbón .
...In a fine house overlooking the sea, an elderly couple possessed of tiny miracles in the shape of roundels of glass no larger than a raindrop, but perfectly shaped, through which they showed him the secret structure of plant-stems, funqi , his own skin, immensely magnified, as though a telescope were to look down to the small instead of upward to the large!	255	... En una hermosa casa con vistas al mar, una pareja de ancianos poseía unas diminutas lentes con forma de rodela de cristal, no más grandes que una gota de lluvia, pero perfectamente formadas, a través de las cuales le enseñaron la estructura secreta de los tallos de plantas , de los funqi , de su propia piel, inmensamente agrandados, ¡como si un telescopio mirara hacia abajo para ver lo pequeño en lugar de hacia arriba para ver lo grande!
Accordingly, the seeds and spawn from Hearthome , all of secondary and parasitic or symbiotic plants , had been carefully planted in crevices of pumptree bark , not because that was the species most resembling their usual hosts but because	321/322	Por ello, las semillas y la prole de Casacorazón , todas ellas plantas secundarias y parasitarias o simbióticas , se habían plantado en grietas de la corteza de los árboles bombeadores , no porque fueran la

they were the only trees likely to remain sapswollen .		especie que más se asemejara a sus anfitriones habituales, sino porque eran los únicos árboles cuya savia podía seguir fluyendo .
Heavier-laden than ever before, yet seeming utterly tireless, and with her back sprouting trencher-plants and vines as luxuriant as though this were an ordinary summer voyage, Tempestamer, beat steadily southward on the trail which only a briq could follow through the currents of the ocean.	343	Más cargada que nunca, pero con la impresión de ser completamente incansable, y con el lomo germinado de viñas y plantas zanjadoras tan frondosas como si se tratara de una travesía estival ordinaria, Domatormentas puso rumbo firme hacia el sur, hacia una ruta que solo un briq podría seguir por las corrientes del océano.
For everywhere he saw symptoms of decline: parasitic weeds hanging about the eaves of the houses, blocking the sap-run on which depending edible plants and funqi; mold spoiling swathes of good fruit ; clamps and corpses abandoned in the surrounding countryside as all the folks converged on ports where the latest news was to be expected.	699/700	Veía por doquier indicios de la decadencia: hierbas parasitarias que pendían de los aleros de las casas, obstruyendo el flujo de savia del que dependían las plantas comestibles y el funqi ; el moho había arruinado grandes extensiones de buena fruta ; había cadáveres y bornes abandonados en la campiña colindante, ya que todo el mundo se había congregado en los puertos donde se aguardaban las últimas novedades.
On the way he learned about the invention of musculators and nervographs - a web of the latter, connected to various sensitive plants , reported results from outlying pens and plots and pools- and about the	658	Por el camino aprendió acerca de la invención de los musculadores y los nervógrafos (una red de estos últimos, conectada a varias plantas sensibles , comunicaba los resultados de jaulas,

buoyancy of cloudcrawlers , whose gas-distended bladders had furnished earliest proof that air was not one substance, but a mixture, and about a score of other matters he had previously felt no interest in.		terrenos y piscinas externas), y de la abundancia de reptanubes , cuyas vejigas gaseosas distendidas supusieron la primera prueba de que el aire no es una sustancia, sino una mezcla, y alrededor de una veintena de otros asuntos que no le habían suscitado ningún interés previamente.
That vast mound of shattered rock blocking the canal; that dismal garland of carefully tended plants now dangling over the precipice so high above; those tangled cables which only yesterday had guided massive loads up and down Fangsharp Peak...	784	Aquel vasto montículo de rocas quebradas que bloqueaba el canal; aquella guirnalda ominosa de plantas cuidadas con esmero que ahora pendían sobre el precipicio a gran altura; aquellos cables enmarañados que tan solo ayer habían portado cargas enormes arriba y abajo de la Cumbre Faucecortante...
The roots of the toughtrees which would eventually form a foundation for the large telescopes needed more nutrient than they could extract from bare rock, at least if they were to grow to usable size in less than a score of years.	780/781	Las raíces de los reciarboles , que llegarían a formar los cimientos de los grandes telescopios, necesitaban más nutrientes de los que podían extraer de la roca desnuda, al menos si debían crecer hasta ser utilizables en menos de una docena de años.
She was sent to fetch samples of the dead plants from the top of the dam, while Byra set up a microscope to examine them with, and Awb followed Thilling to the best points of vantage for general images, before	866	La enviaron a recoger muestras de las plantas muertas de la parte superior de la presa, mientras Byra armaba un microscopio para examinarlas y Awb seguía a Thilling hasta los mejores miradores para las panorámicas generales, antes de descender al lago

descending to the lake for close-ups of the bare mud and ruined cutinates .		para obtener primeros planos del barro desierto, y los cutinatos arruinados .
Creation		
Looking at the glowplants that draped the walls of his rented home, Jing prompted him to more revelations.	29	Viendo las luminiplantas que tapizaban las paredes de su casa de alquiler, Jing le concedió más revelaciones.
She glanced at Awb, laboring along behind her under the burden of her spare image-fixer and a spare lens-plant , and realized that he too appeared uneasy.	839/840	Le echó un vistazo a Awb, que trabajaba detrás de ella bajo la carga de su arregla-imágenes de repuesto y una planta-lente extra, y se dio cuenta de que él también parecía inquieto.
We got to that principle by studying the seeds emitted by certain rock-plants .	1022	Descubrimos ese principio estudiando las semillas emitidas por ciertas plantas-roca .
Pithed ichormals lay sluggish with up to a score of tendrils grafted on their fat bodies; paired piqs and doqs stirred uneasily as each tried to accept signals from the other [...]	1208/1209	Icormales descabellados yacían inermes con hasta una veintena de zarcillos ceñidos a sus gruesos cuerpos; parejas de piqs y doqs se retorcían incómodos mientras cada uno de ellos intentaba aceptar señales del otro [...]
“Now I’ve got a question,” Preshtin went on, peering through the forward window, on which snow was settling faster than the warmplants could melt it.	1185	- Tengo una pregunta, -continuó Preshtin, observando por la ventana delantera, sobre la que se posaba la nieve más rápido de lo que las cálidoplantas podían derretir.
Morphological adaptation		

One rumor had it that they were spreading blight on the trencher-plants , but surely no one could descend that far! Although some of the lords of Forb...	61	Corre el rumor de que estaban esparciendo la plaga por las plantas zanjadoras , pero nadie podría caer tan bajo, ¿¡verdad?! Aunque algunos señores de Forb...
They met with Chimple and Verayze at Iddromane's bower on the south side of the city, where the plashing of waves mingled with music from a flower-decked arbor . It was blessed with the most luscious-scented food-plants Yockerbow had ever encountered, many being carefully nurtured imports . Even the chowtrees had an unfamiliar flavor.	450/451	Se encontraron con Chimple y Verayze en la plaza de Iddromane, en la zona sur de la ciudad, donde el romper de las olas se entremezclaba con la música de una glorieta engalanada con flores . Estaba ornamentada con plantas comestibles de los aromas más suculentos que Yockerbow hubiese sentido jamás, muchas de las cuales eran importaciones criadas con sumo cuidado . Incluso los masticarboles tenían un sabor extraño.
They were seeking the source of the flying seeds , and shortly found it: an ice-free patch was exposed to sunlight on the side of the adjacent rock, and a small, tough, low-growing plant was exerting its utmost effort to reproduce itself , though this time its main arsenal had been expended and only a few weak flutterings resulted.	516/517	Estaban buscando el origen de las semillas voladoras , y en breve lo encontraron: un parche desprovisto de hielo y expuesto a la luz del sol en un lateral de una roca adyacente, y una planta de escasa altura, pequeña y recia que se esforzaba denodadamente por reproducirse , aunque ahora había agotado su arsenal principal y solo conseguía emitir unos débiles soplos.
There, quaking with excitement, Arranth broke the wax and removed a stopper made of spongy plant-pith . Tilting the tube, she shook from it a tightly rolled bundle of	520	Allí, temblando de emoción, Arranth rompió el sello y retiró un tapón hecho de médula vegetal esponjosa . Incluyó el vial, y al sacudirlo cayó un fardo de

documents, inscribed on an unfamiliar off-white bark .		documentos muy enrollados, inscritos en una corteza blanquecina y extraña.
For everywhere he saw symptoms of decline: parasitic weeds hanging about the eaves of the houses, blocking the sap-run on which depended edible plants and funqi ; mold spoiling swathes of good fruit ; clamps and copses abandoned in the surrounding countryside as all the folk converged on ports where the latest news was to be expected.	699/700	Veía por doquier los indicios de la decadencia: hierbas parasitarias pendiendo de los aleros de las casas, bloqueando el reguero de savia del que dependían las plantas comestibles y el funqi ; el moho arruinando extensiones de buena fruta ; bornes y arboledas abandonadas en la campiña colindante, ya que todo el mundo se había reunido en los puertos, donde aguardaban las últimas nuevas.
Becoming more and more alarmed, he plodded along familiar tracks- how often had he come this way with Fifthorch, to swim from the gentle beach and sometimes dive for relics? -noting with dismay how well-tended clusters of food plants had been let to run wild.	705	Cada vez más alarmado, marchó por senderos conocidos: ¿cuántas veces había ido por allí con Quintantorcha a nadar en la playa apacible y, en ocasiones, bucear en busca de reliquias? Contemplaba consternado cómo racimos bien cuidados de plantas comestibles se habían descuidado y asilvestrado.
Wasn't it bad enough to have brought these scores of passengers all this way? -that was their cry, and they took no account of the fact that Voosla had been specially replanted with new high-yielding secondary growths developed at the University of Chisp, which would continue	828	¿No bastaba con haber traído aquellas veintenas de pasajeros hasta allí? -aquello era lo que gritaban, y no les importaba el hecho de que Voosla se hubiera reforestado a propósito con nuevos cultivos secundarios muy productivos , desarrollados en la Universidad de Chisp, que

paying her back long after the return voyage.		continuarían reportándole beneficios mucho después del viaje de vuelta.
She kept saying I must learn something useful, like plant improvement .	987	No dejaba de decirme que estudiara algo útil, como la mejora vegetal .
The reality was the corpses of its inhabitants that had rotted to fertilize evolving plants .	1047	La realidad eran los cadáveres de sus habitantes que se habían descompuesto para fertilizar plantas en desarrollo .
She started to say something, but it was drowned out by the racket of a klaxonplant , warning everybody on the site to prepare for launch.	1303	Comenzó a decir algo, pero se ahogó entre el repiqueteo de una planta claxon que avisaba a todo el mundo en el lugar de que se prepararan para el despegue.
Semantic adaptation		
Suppose it was a matter of speed; suppose the slowness of plant-growth , and of the outer planets, meant <i>cool</i> , and the rapidity of the flame meant <i>hot</i> : what did that imply about the stars?	133	Supón que fuera una cuestión de velocidad; supón que la lentitud del crecimiento vegetal y de los planetas exteriores significara <i>frío</i> , y la rapidez de la llama significara <i>caliente</i> : ¿qué querría decir eso sobre las estrellas?
What I'd really like to find, though, is a thriving root-mass of the spillway plants .	890	Lo que realmente querría encontrar, no obstante, son las raíces en crecimiento de las plantas de desagüe .

8.1.3.1. Botanical terminology (*The Crucible of Time* – Published translation)

Spanish translation	Page
Literal translation	
¿Había alguna relación? Suponiendo que fuera cuestión de velocidad; suponiendo que la lentitud del crecimiento vegetal y de los planetas exteriores significara frescura y la rapidez de la llama calor [...]	33
Estaban dispuestos a actos tan bajos como propagar enfermedades en las cosechas de sus rivales, algo tan rastrero que sólo podía ser superado por un incendio intencionado.	10
Aquellos que nunca han estado en contacto con el hielo ni con la nieve tal vez lo duden, pero yo he sentido el frío paralizándome las zarpas , he visto cómo afecta nuestras plantas.	62
Arrancaron las plantas medicinales . Si me quedo, las estrellas saben qué podría usar para curar a los nuestros.	86
Buscaban la fuente de las semillas voladoras y pronto la encontraron: había un pedazo de tierra sin hielo junto a una piedra y en ese lugar expuesto al sol se esforzaba en crecer y reproducirse una plantita seca, achaparrada . Había lanzado ya el grueso de su arsenal y sólo le quedaban unos cuantos proyectiles.	114
Cada vez más alarmado, caminó por los lugares familiares —¿cuántas veces había ido allí con Cincorch para nadar desde la arena suave y a veces sumergirse a buscar restos? — notando con espanto el abandono que presentaban las grandes plantas comestibles .	152
La montaña de rocas que bloqueaba el canal, todas aquellas plantas atendidas con tanto esmero , precipitadas desde las alturas, cables que hasta el día antes habían llevado enormes pesos arriba y abajo por la ladera del pico Colmilloagudo...	169
¿No era suficiente el haber traído a aquella veintena de viajeros hasta allí?, decía la gente, sin tener en cuenta el hecho de que aquellos viajeros habían reequipado	177

Voosla con nuevos crecimientos secundarios de gran rendimiento desarrollados en la universidad de Chisp, una aportación que seguiría pagando por el viaje mucho después del regreso.	
Thilling miró a Awb, que caminaba penosamente tras ella bajo el peso del fija- imágenes de repuesto y algunos paquetes de lentes de recambio , y se dio cuenta de que también él parecía inquieto. En cambio, ni Lesh ni Drotninch parecían preocupadas.	180
Pero, en realidad, las plantas se estaban muriendo como todo lo demás y el barro de las orillas estaba desnudo cuando hubiera debido tener las marcas de la invasión de raíces de la vegetación que bordeaba el río .	184
Voosla terminó tierra adentro convertida en un amasijo de plantas y personas que por un enloquecedor instante sugirió a Thilling lo que sería volar.	200
Decía que tenía que aprender algo útil como mejora de cultivos .	209
Olía a vieja podredumbre. La poca luz que le llegaba procedía de musgos fosforescentes y no de iluminadores decentes.	227
—Pero los cambios no se dieron sólo por el medio ambiente —interrumpió Wam—.	213
La realidad era los cadáveres podridos de sus habitantes que habían hecho crecer las plantas que la rodeaban.	221
Y en cuanto a huir al espacio, la radiación y la falta de gravedad del exterior matarían a cualquier criatura más compleja que una planta inferior y el sueño de construir un enorme globo hueco topaba con cálculos que demostraban lo mucho que costaría construir incluso una nave pequeña en tiempo, esfuerzo y materiales.	245
Mixed literal translation (+ Creation)	
A pesar de los grupos densos de brilloplantas que cubrían las paredes, Jing podía ver sin dificultad que los troncos siempre gruesos de los bravoárboles que lo	14

constituían habían levantado varias rocas enormes hasta una altura cuatro o cinco veces mayor que la suya propia.	
Cada una de las adultas llevaba un enorme haodah con honguis comestibles y otras plantas secundarias muy útiles [...]	98
—Sí, pero las plantas-plato se están muriendo en esas tierras —dijo Varilla, con suavidad todavía—. Si os lleváis una de éstas y la trasplantáis fuera, se pone amarilla y se pudre .	14/15
Se decía de ellos que eran los responsables de la plaga que atacaba las plantas-plato , pero no, no era posible que nadie llegara a cometer semejante infamia. Aunque algunos de los señores de Forb...	18
Y sin embargo, el calor y la humedad recordaban a Jing el clima-sentido , de su hogar. Dentro había las brilloplantas adecuadas así como enredaderas nudosas a las que aferrarse cuando el camino se volvía traicionero.	19
[...] sabían que aquel regalo del cielo terminaría en una explosión de honguis y otras plantas comestibles .	142
Las vejigaguas de Domatormentas se habían roto en su mayoría, las plantas-plato estaban tan empapadas de agua salada que era poco probable que se recuperaran, las parras se habían desarraigado dejando heridas abiertas en la piel de la briq y —como él ya sabía— las reservas de pescado y semillas en salmuera hacía mucho que se habían terminado.	50
La misión de la briq era cambiar pieles por semillas de plantas-comida con el fin de conseguir híbridos de crecimiento acelerado para los veranos cada vez más cortos del norte.	51
A pesar de los grupos densos de brilloplantas que cubrían las paredes, Jing podía ver sin dificultad que los troncos siempre gruesos de los bravoárboles que lo constituían habían levantado varias rocas enormes hasta una altura cuatro o cinco veces mayor que la suya propia.	14

Más allá, la desolación era tan completa que parecía como si un huracán hubiese destrozado la vegetación de una zona que requería más de un día de camino para ser recorrida, zona que se estaba reforestando sistemáticamente con árboles aceitesavia que crecían rápidamente y quemaban todavía más rápido proporcionando más calor que el mismo carbón.	59
Así pues, se plantaron cuidadosamente las semillas y esporas de Casadelcorazón , todas ellas de plantas simbióticas o parasitarias , en grietas de la corteza de los árbolbombeadores , no porque ésa fuera la especie más semejante a las plantas anfitrionas de origen, sino porque los bombeadores eran los únicos árboles que seguían teniendo savia durante el invierno .	73
El hecho de que Suertehábil y sus compañeros —que sobrevivían con lo que habían almacenado durante la estación de buena comida , pero que no estaban en mejores condiciones que los demás, excepto mentalmente— hicieran el esfuerzo de arrastrarse por las ramacalles congeladas para llevar dosis de creshbal a todo el mundo, y algunas frutas, hojas o pulpa de honguis que daban las plantaciones exóticas en los árbolbombeadores , pesó mucho a su favor y, en esos tiempos, los capellanes, que se habían desacreditado con el espectáculo del muelle, perdieron terreno.	74
Más cargada de lo que nunca había ido en su vida, pero incansable como siempre, con el dorso lleno de plantas-plato y enredaderas tan lujosas como si aquel fuera el viaje de un verano cualquiera, Domatormentas se dirigía directamente al sur sobre el rastro que sólo una briq podía seguir a través de las corrientes del océano.	78
Hablo con la mayor de las decepciones: como Pleitong , que reunió la Gran Flota antes del Deshielo y creó las bases del mundo moderno, he esperado toda mi vida la oportunidad de plantar un brote... y siempre fracasé.	148
Porque veía los síntomas de la decadencia en todas partes: enredaderas parásitas colgando de las ramas de las casas y bloqueando la corriente-savia de la que dependían las plantas y los honguis comestibles ; moscas sobre racimos de fruta ;	151

montes y sotos abandonados rodeando puertos donde la gente se hacinaba esperando las últimas noticias.	
Dondequiera que fuese habitable, independientemente del tamaño, había gente, y más que cosecha-comidas cultivaba plantas que, después de la puesta del sol, brillaban con luz propia o devolvían la que habían almacenado durante el día.	165
—¡Mmm! ¡Muy bien! Si hay algo que decir a tu favor, chico, es que tienes buen ojo. Ayer ese alado mutante y ahora esto. Pero lo que realmente quiero es una masa-raíz viva de esas plantas del sumidero . Necesitamos saber algo sobre la resistencia a este veneno. Sin eso, no sé qué vamos a hacer.	189
Había ichormales operados, indolentes, con más de una veintena de zarcillos unidos a cuerpos muy gordos; había pares de piqs y doqs que se movían, inquietos, mientras trataban de enviar y recibir señales [...]	254
E, inevitablemente, la vía hacia esa sensación de seguridad pasaba por el hambre. ¿Para qué preocuparse por atender las plantas-comida entonces? ¿Para qué ponerse nervioso si se taponaban los lluvia-canales ? ¿Para qué sufrir si empezaba a crecer una mancha de musgo en el manto de un amigo o en el propio? Todo aquello despertaba sueños valiosos que podían contarse a innumerables oyentes ansiosos.	220
Creation	
El material orgánico resistía raramente la acción del agua salada; corrientes y mareas habían esparcido lo perdurable, hojas de cuchillos, lentes y formadores de arcillaquemada de los que se usaban para obligar a las plantacasas a crecer de la manera deseada.	130
—¡Ah, si pudiéramos plantar esos árboles-nueces en una briq! —murmuró.	55
Para medir el tiempo cuando el cielo estaba nublado y el clima-sentido embotado , los ntaheses usaban plantas que se hinchaban al mediodía y se encogían a medianoche .	28

Las raíces de los fuerteárboles que formarían una base para los grandes telescopios necesitaban más nutrientes de los que podían sacar de la roca desnuda si se quería que crecieran hasta alcanzar un tamaño útil en menos de una veintena de años.	168
Descubrimos ese principio estudiando las semillas lanzadas por ciertas roca-plantas .	216
De pronto, alguien que ella nunca había oído nombrar dijo que agregando esto y aquello a la dieta de una relamplanta y modificándola de tal o cual manera, sus resultados podían multiplicarse hasta el punto de poder competir con el mejor generador tirapiédras.	267
—Ahora, una pregunta —continuó Presthin, espiando por la ventana frontal, donde la nieve se depositaba con tanta rapidez que las plantibias no alcanzaban a derretirla por completo—.	249
Empezó a decir algo pero el sonido de una bocinaplanta cubrió su voz.	272
Morphological adaptation	
Se encontraron con Chimple y Verayze en el emparrado de Iddromane, al sur de la ciudad, donde el ruido de las olas se mezclaba con la música de una glorieta-árbol muy florecida . El lugar estaba invadido por el perfume más tentador de plantas-comida que Dominiugo hubiera percibido en su vida: muchas eran cultivos de importación . Hasta los masticárboles tenían un sabor diferente.	101
Bueno, si una planta sin inteligencia sabe encontrar el camino para ir más allá, ¿por qué no nosotros?	120
Y el terreno donde debían plantarse las nuevas cosechas seguía duro como la piedra.	77
Semantic adaptation	

El lugar estaba invadido por el perfume más tentador de plantas-comida que Dominiugo hubiera percibido en su vida: muchas eran cultivos de importación . Hasta los masticárboles tenían un sabor diferente.	101
Había sumideros que se abrían automáticamente en caso de crecidas provocadas por el deshielo de primavera: una densa mata de pequeñas plantas con muchos brotes crecía sobre el dique, diseñada para flotar y levantar las masas de raíces lo suficiente como para que el excedente pasara por encima sin erosionar el dique.	184
Explanation	
Describió el clima subtropical de Ntah y luego siguió con una visión general del Lago y sus alrededores: los puentes de enredadera que cruzaban de isla en isla; el palacio del Señor en el centro, un gran árbol de tres veintenas de años, cuyos flancos estaban cubiertos de flores cerosas que perfumaban el aire en kilómetros a la redonda, la catarata del oeste, que un gran río formaba al caer por un acantilado y que impedía que el Lago se estancara, la exquisita pulpa de la nuez llamada hoblaq , cubierta por una cáscara tan dura que nadie podía partirla, y que la gente buscaba en las laderas de las colinas y echaban al río para que las cataratas las partieran por ellos y el agua llevara las semillas a la deriva a fin de que todos pudieran disfrutarlas; los animales, grandes y pequeños, que vagaban por los matorrales, los bajíos y las praderas de agua ; los insectos venenosos y las bayas perniciosas que avisaban no obstante de su condición con colores muy vivos, y tanto era así que hasta los niños las evitaban con facilidad; y claro está, su preciado observatorio, con los instrumentos de medición y los niveles y los gnomons y su gran tubo de visión de pliocorteza en forma de trompeta, que tapaba la luz desde abajo y permitía que el ojo se adaptara completamente a su tarea de estudiar las estrellas.	25/26
Pero, en realidad, las plantas se estaban muriendo como todo lo demás y el barro de las orillas estaba desnudo cuando hubiera debido tener las marcas de la invasión de raíces de la vegetación que bordeaba el río .	184
Omission	

Era como si las plantas de los alrededores, todas, tanto las gveestianas como las naturales, se hubieran alejado de él todo lo posible.	178

9.2. Fictional terminology

9.2.1. Seeders

Original item	Spanish translation	Page
Literal translation		
George was claiming that he'd found a way to entangle the thought waves of plants and humans.	George afirmaba que había encontrado una forma de entrelazar las ondas de pensamiento de las plantas y los humanos.	77
It went on to describe something called V-waves , oscillations made by trees to communicate with each other.	Continuaba describiendo algo llamado Ondas V , oscilaciones que hacían los árboles para comunicarse unos con otros.	81
She gazed down at the book. " Eden . That's an odd word for George. Perhaps he found religion."	Bajó la vista hacia el libro. - Edén . Qué palabra tan extraña para ser George. Quizás tuvo una revelación religiosa.	133
Luke was lying in bed reading The Human Delusion by Dr. Julian Beecher.	Luke estaba tumbado en la cama, leyendo El engaño humano , del Dr. Julian Beecher.	220
"If you go back to the first writings of the Sumerians all the way to the present, historians have recorded about forty-six	- Si consideramos todo lo que se ha escrito desde los primeros registros de los	146

hundred supernatural beings, of which there are about twenty-nine hundred true deities. From those, about fourteen hundred fall into the category of ‘goddess’, but that’s not including Hindus, who believe there’s a god for every Hindu, so that’s like half a billion right there.”	sumerios hasta el presente, los historiadores han clasificado unos cuatro mil seiscientos seres sobrenaturales, de los que alrededor de dos mil novecientos son verdaderas deidades. De esos, unos mil cuatrocientos se ajustan a la categoría de diosa, pero eso es sin incluir a los hindúes, que creen que hay un dios por cada hindú, con lo cual sería unos quinientos millones más.	
When he looked up, he noticed the pine trees looked more vibrant than before, vivid green like traffic lights, while the woods were bathed in golden sunlight, the sky an unnatural violet.	Cuando levantó la vista se dio cuenta de que los pinos parecían más vívidos que antes, de un verde intenso como el de un semáforo, mientras que el bosque estaba bañado en una luz dorada, y el cielo de un púrpura antinatural.	301
Isabelle shook her head in disbelief. “I’m sorry, but human mind control seems too great a task for a fungus.”	Isabelle negó con la cabeza, incrédula. - Lo siento, pero controlar la mente humana parece una empresa demasiado grande para un hongo.	313
“That Eden book. Your father wrote about giving the plants an ability to hear our thoughts, communicate on a cognitive level with humans. Suppose he	- Ese libro del Edén. Tu padre escribió acerca de conferirle a las plantas la habilidad de escuchar nuestros	85

was right? What if they could read our minds ?”	pensamientos , de comunicarse con los humanos a nivel cognitivo. ¿Y si estuvieran en lo cierto? ¿Y si pudieran leer nuestras mentes ?	
“Please don’t, Luke. He doesn’t sound rational. He thinks the plants in the woods are, I don’t know, controlling his mind .”	- Luke, por favor, no lo hagas. No está en sus cabales. Cree que las plantas del bosque le están, yo qué sé, controlando la mente .	174
“I would have agreed with you last week. But it seems your grandfather has found a way to merge the thoughts of plants and humans, synchronizing the two frequencies. It has something to do with a fungus .”	- Habría estado de acuerdo contigo la semana pasada, pero parece que tu abuelo ha encontrado una forma de fusionar los pensamientos de las plantas y los humanos, sincronizando las dos frecuencias. Tiene algo que ver con un hongo .	185
Semantic adaptation		
“He believed that plant waves and human brain waves are naturally detected by each other, but only slightly because they’re on different frequencies. According to his notes, he found a way to synchronize the frequencies, entangling the thought waves of plants and humans.”	- Creía que las fito-ondas y las ondas cerebrales humanas se detectan unas a otras de forma natural, pero solo ligeramente, dado que se encuentran en diferentes frecuencias. De acuerdo con sus anotaciones, había encontrado una forma de sincronizar las frecuencias	80

	y entrelazar las ondas de pensamiento de plantas y humanos.	
“What’s this?” Monica held up a tape. “ Plant telepathy. ”	- ¿Qué es esto? Mónica sostenía una cinta. <i>Fitotelepatía.</i>	85

9.2.2. The Crucible of Time

Original item	Page	Spanish translation
Mixed (Literal translation + Calque + Creation + Morphological adaptation)		
There was a moment of dead silence, save for the slap-and-hush of waves against the junq ’s broad flank and the <i>meep-meep</i> of a flighter and its young which were following the Fleet in hope of scavenging carrion or floating dung.	492	Hubo un momento de silencio sepulcral, salvo por el murmullo de las olas que rompían contra el ancho dorso del junq y el pitido de un volador y su cría, que seguían a la Flota con la esperanza de rapiñar algún desperdicio o resto flotante.
You’d have missed the chance to scorn my friends who’ve invented intercontinental nervographs and freight-pitchens and recordimals and now are set to outdo floaters by attaining controlled atmospheric flight , a first pad-mark on the road to space!	938 / 939	Habrías perdido la oportunidad de vilipendiar a mis amigos, que inventaron los nervógrafos intercontinentales . los subecargas , los grabanimales y ahora van camino de dejar obsoletos los flotadores al alcanzar los vuelos controlados en atmósfera , ¡el primer paso en la carrera espacial!

“You mean the idea that our ancestors were on the verge of spaceflight , so alien creatures hurled the Greatest Meteorite at them?”	995	- ¿Te refieres a la idea de que nuestros ancestros estaban a punto de alcanzar el espacio , así que criaturas alienígenas les arrojaron el Gran Meteoro ?

8.2.2.1. *The Crucible of Time* – Published translation

Spanish translation	Page
Mixed (Calque + Literal translation + Creation)	
El grupo dedicó la primera parte de la luz a la elaboración de un informe sobre los daños causados por el corrimiento de tierras y Awb siguió a Thilling de un lado a otro con incómodos paquetes protegidos de la luz, que contenían las láminas sensibles que ella llamaba «hojas» en recuerdo de una tecnología más primitiva .	173
Hubo un momento de absoluto silencio, turbado solamente por el ruidito de las olas contra el ancho flanco de la junq y por el canto agudo de un viajero y su cría que volaban siguiendo a la Flota con la esperanza de que alguien tirara algo comestible al agua.	109

9.3. Medical terminology

9.3.1. Seeders

Original item	Spanish translation	Page
Literal translation		
“We’ve known for a hundred years, since the work of Jagadish Chandra Bose, that plants can feel fatigue , empathy , irritability , and even pain .”	- Sabemos desde hace un siglo, desde la obra de Jagadish Chandra Bose, que las plantas pueden sentir cansancio , empatía , irritabilidad e incluso dolor .	30
“Did you know that a plant treated with chloroform will become anesthetized , just like animals? They can become intoxicated from a shot of whiskey, swaying like a drunk , even passing out and becoming revived with signs of hangover . Why, simply cutting one leaf of a plant will produce signs of acute shock to the entire organism , and the other leaves can remain depressed and hyper-responsive for hours.”	- ¿Sabía que una planta tratada con cloroformo se queda anestesiada , igual que un animal? Pueden embriagarse con un chupito de whisky, zarandeándose como si estuvieran borrachas , e incluso perder la consciencia y volver en sí con síntomas de resaca . Es más, tan solo con cortar una hoja de una planta se producen señales de shock agudo en todo su organismo , y el resto de las hojas pueden seguir deprimidas e hipersensibles durante horas.	30

“However, two years ago, when I came for a visit, he was showing signs of mental illness; rage and confusion. ”	- Sin embargo, hace dos años, cuando fui de visita, mostraba síntomas de enfermedad mental; ira y confusión.	56/57
“My experiments prove that plants can learn, remember, and respond as well as any creatures with a nervous system. ”	- Mis experimentos prueban que las plantas pueden aprender, recordar y responder tan bien como cualquier criatura con sistema nervioso.	75
“Where would such a system be found? Which tissues would it involve? What would be the cell-to-cell connections ? What would be firing system ? Would there be a network with specialized cells and tissues to direct processing?”	- ¿Dónde se podría encontrar semejante sistema? ¿Qué tejidos involucraría? ¿Cuáles serían las conexiones intercelulares ? ¿Cuál sería el sistema de combustión ? ¿Habría una red con células y tejidos especializados para dirigir el proceso?	75
There is no doubt that he discovered a type of electromagnetic wave produced by plants, which seems very similar to the waves given off by a thinking brain.	No cabe duda de que descubrió un tipo de ondas electromagnéticas producidas por plantas, que resultan muy similares a las que emite un cerebro pensante.	81
“Interesting. But those are physiological reactions. It doesn’t prove trees have conscious thought. It certainly doesn’t prove they could talk to George.”	- Interesante. Pero eso son reacciones fisiológicas. No prueba que los árboles piensen de forma consciente. Y, por descontado, no prueba	81

	que pudieran hablar con George.	
“Actually his polygraph test showed that plants react to external stimulation just like humans. When exposed to pain or pleasure , they exhibited the same excitement reaction .”	- De hecho, su prueba con polígrafo mostró que las plantas reaccionan a los estímulos externos igual que los humanos. Cuando experimentan dolor o placer , desencadenan la misma reacción emocional .	85/86
He believed that plants had memory and could learn.	Creía que las plantas tenían memoria y podían aprender.	86
Seeing himself attack a plant made him feel physically ill , but he resisted the implications.	Verse a sí mismo atacando una planta le hizo sentirse físicamente enfermo , pero se resistió a las conclusiones.	92
During these studies he made the observation that the root network of a plant had similarities to the neural network of the brain .	Durante estos estudios aseveró que la red de raíces de las plantas guarda parecido con la red neuronal del cerebro .	93
“George focused all his research on the parallels between the signaling systems of a plant and animal cells .”	- George centró su investigación en los paralelismos entre los sistemas de señalización de las plantas y las células animales .	93
“He went on to become a distinguished professor of plant biology at Oxford, and the work he did on long-distance	- Con el tiempo se convirtió en un distinguido profesor de fitobiología en Oxford, y su trabajo sobre la señalización	74

signaling became the foundation for how plant biology is studied today.”	a larga distancia se convirtió en los cimientos de cómo se estudia la fitobiología en la actualidad.	
“Intelligence requires a complex nervous system that’s only found in animals. I mean, without neurons, axons, and neurotransmitters for signaling and a brain to process everything, plants can’t think.”	- La inteligencia requiere de un sistema nervioso complejo que solo se encuentra en los animales. O sea, sin neuronas, axones ni neurotransmisores de señalización ni un cerebro para procesarlo todo, las plantas no pueden pensar.	95
“Usually only seniors take neurobiology but I’m taking it next year.”	- Generalmente, solo los estudiantes de último curso estudian neurobiología, pero yo la tengo el año que viene.	95
Plants and humans are nothing more than living machines and our actions are merely electrical signs going off at specific times and places in our bodies.	- Las plantas y los humanos no somos más que máquinas vivas y nuestras acciones son meras señales eléctricas que se desencadenan en determinados momentos y lugares de nuestros cuerpos.	96
“Why, I can actually hook you up to an fMRI that reads your mind by tracking blood flow to various parts of your brain. By matching the neural correlates, I can tell if you’re thinking about a car or a banana, if you are	- De hecho, puedo enchufarte a una IRMf que te lea la mente rastreando el flujo sanguíneo a diversas partes de tu cerebro. Al compatibilizar los correlatos	96

looking at a picture of a house or a photograph of your mother.”	neuronales , puedo discernir si estás pensando en un coche o en plátano, si estás mirando una imagen de una casa o una fotografía de tu madre.	
He drew a crude brain across the back of an envelope.	Dibujó un cerebro rudimentario en el reverso de un sobre.	96
There are over a billion neural connections in a square millimeter of brain matter , which allows trillions and trillions of possible combinations.	- Hay más de mil millones de conexiones neuronales en un milímetro cuadrado de masa encefálica , lo que permite billones y billones de combinaciones posibles.	96
“A plant is made up of living tissue with a messaging system of electrical signals that allow it to communicate with itself and other creatures in the environment.”	- Una planta se compone de tejido vivo con un sistema de mensajes mediante señales eléctricas que le permite comunicarse consigo misma y con otras criaturas de su entorno.	97
“For example, a dodder has no leaves to make its own food, so it has to get nutrients by attacking other plants, using its sense of smell to find its victims.”	- Por ejemplo, la cuscuta no tiene hojas para producir su propio alimento, así que tiene que conseguir nutrientes atacando a otras plantas, usando su sentido del olfato para encontrar a sus víctimas.	97

Perhaps, Isabelle thought, she was already feeling the nonexistent pain of so many false illnesses .	Quizás, pensó Isabelle, ya sentía el dolor inexistente de tantas enfermedades falsas .	99
Grace seemed to be deathly ill all the time, but never once was admitted to a hospital.	Grace siempre parecía estar moribunda , pero jamás ingresó en ningún hospital.	99
By sixteen, Isabelle had barely seen the light of day, spending long hours cooking and cleaning, researching homeopathic remedies , providing physical therapy .	A los dieciséis años, Isabelle a duras penas había visto la luz del día, pasaba largas horas cocinando y limpiando, investigando remedios homeopáticos y realizando terapias físicas .	100
She wanted to see the whole world. But Grace was constantly bedridden with migraines, E. Coli, lupus, toxic shock syndrome . She had three types of cancer and a bout with meningitis .	Quería ver el mundo entero. Pero Grace siempre estaba postrada en la cama con migrañas, E. Coli, lupus o síndrome de choque tóxico . Tenía tres tipos de cáncer y problemas de meningitis .	100
It was frustrating because no one could explain his lack of speech. One specialist called it conversion disorder . Another called it hysteria . His mother called it temporary. His father called it crazy .	Era frustrante porque nadie podía explicar su mudez. Un especialista dijo que era un trastorno de conversión . Otro, que era histeria . Su madre dijo que era temporal. Su padre, que estaba loco .	100
He knew that brain entrainment , also called brain synchronization , was supposed to be a way to achieve various states of consciousness .	Sabía que se pensaba que el arrastre de ondas cerebrales , también conocido como sincronización cerebral , era una forma de alcanzar varios estados de conciencia .	109

He couldn't stand the idea of his mentor ending his brilliant career as a bad joke, a charlatan, a drug addict .	No podía soportar la idea de que su mentor acabara su brillante carrera como una broma de mal gusto, un farsante, un drogadicto .	110
He walked farther down the path, his eyes shifting over the endless infestation of the trees. It was on ferns and bushes, vines and weeds.	Continuó por el sendero, siguiendo la infestación infinita de los árboles con la vista. Estaba en los helechos y los arbustos, en las hiedras y en la hierba.	111
He tried to act cool but adrenaline was surging through his veins at an incredible speed. He was sweating and taking irregular breaths .	Intentaba mantener la calma, pero la adrenalina bullía por sus venas a una velocidad increíble. Estaba sudando y respiraba de forma irregular .	113
He walked closer to the pit where the decomposed corpse had sunk in the mud.	Se acercó a la fosa donde el cadáver descompuesto se había hundido en el barro.	115
He drew certain conclusions about the death, based on the amount of decomposition , the collapsed abdomen , and the number of maggots feasting .	Concluyó algunos hechos acerca de la muerte, basándose en el estado de descomposición , el abdomen desmoronado y el número de gusanos que lo infestaban .	116
The headache began to subside, and so did the nausea .	El dolor de cabeza comenzó a remitir, así como las náuseas .	122
"We cannot rule out the possibility that George killed Hodges in a drug-induced state ."	- No podemos descartar la posibilidad de que George matara a Hodges en un trance inducido por drogas .	124

“You’re saying this fungus could produce a psychedelic drug .”	- Dices que este hongo puede producir una droga psicodélica .	125
“It seems to have infected every plant on this island.”	- Parece haber infectado todas las plantas de la isla.	125
He was standing in front of a large bay window, staring toward the woods in a trancelike state .	Estaba de pie frente a una amplia galería, mirando fijamente hacia el bosque en un estado de trance .	132
His eyes were dark and bloodshot .	Tenía los ojos oscuros e inyectados en sangre .	132
“The cellular structure of the leaf looks normal, except for these hideous microbes shooting out from the leaf. They look like blackish purple tubes . I’d say it’s a fungus .”	- La estructura celular de la hoja parece normal, salvo por estos microbios desagradables que sobresalen. Parecen tubos de un púrpura negruzco . Diría que es un hongo .	134
“The action-potential propagation in all of these plants is comparable to the speed of action potentials in mammals, specifically one hundred and five meters per second, which is the same velocity as a neuron . The amplitude, duration, relative and absolute refractory periods, depolarization peaks are the same as you’d find in the cognitive regions of the human nervous system .”	- La propagación del potencial de acción en todas estas plantas es comparable a la velocidad de potenciales de acción en los mamíferos, en concreto de ciento cinco metros por segundo, lo que equivale a la velocidad de una neurona . La amplitud, duración, los periodos refractarios relativos y absolutos, los picos de despolarización son los	135

	mismos que encontrarías en las regiones cognitivas del sistema nervioso humano .	
The painted face of a clown with his mouth open in a maniacal laugh, staring from the corners of his eyes in an expression of utter madness .	La cara pintada de un payaso con la boca abierta, riendo de forma maniaca , mirando fijamente por el rabillo del ojo con una expresión de locura absoluta .	139
Jules had felt their cold fingers probing his brain , spider-walking over his frontal cortex and touching certain memories.	Jules había sentido sus dedos fríos sondando su cerebro , correteando como arañas por su córtex frontal y tocando ciertos recuerdos.	146
It was almost as if the decision created a chemical shift in his body.	Fue casi como si la decisión hubiera provocado un desplazamiento químico en su cuerpo.	147
But he knew from the body chills and muscle aches , this wasn't just stress . It was some kind of infection, viral or bacterial , possibly a strain of some island flu .	Pero sabía por los escalofríos y los dolores musculares que no solo se trataba de estrés , sino de algún tipo de infección, vírica o bacteriana , quizás una cepa de alguna gripe insular.	149
He pondered the idea that the island had become a single living organism . Perhaps it was like an extensive neural network with a single consciousness that gathered information about the entire island and sent it back to the campsite as a central location to be processed.	Sopesó la idea de que la isla se hubiera convertido en un único organismo vivo . Quizás funcionara como una extensa red neuronal con una sola conciencia que recopila información de toda la isla y la manda de vuelta al campamento como ubicación central para procesarla.	160

One minute he would be excited about an idea to the point of mania , sweating and having heart palpitations , only to realize later it was ridiculous and the excitement unwarranted.	En un instante se emocionaba con una idea hasta el punto de la obsesión maniaca , con sudores y palpitaciones cardíacas , solo para darse cuenta más tarde de que aquello era ridículo, y la emoción injustificada.	160
He was still having dizzy spells , unable to fully concentrate.	Seguía experimentando episodios de mareo , y era incapaz de concentrarse por completo.	160
Jules figured the device was supposed to produce sounds to alter the brain's electrical oscillations .	Jules descubrió que la función del dispositivo era producir sonidos que alteraran las oscilaciones eléctricas del cerebro .	160
It was the same sensation of torn muscles and cracked bones . Billions of nerve endings burned like fire. He could almost feel the blood flowing out of an enormous slit under his rib cage beneath his fingers, yards of loose intestines pouring onto the ground.	Era la misma sensación de músculos desgarrados y huesos rotos . Miles de millones de terminaciones nerviosas que quemaban como un fuego. Casi podía sentir cómo se desangraba por un enorme corte debajo de su caja torácica , bajo los dedos, y metros de intestinos sueltos se desparramaban por el suelo.	169
The shower would hopefully revive his senses and put an end to the hallucinations .	Confiaba en que la ducha reviviría sus sentidos y pondría fin a las alucinaciones .	171/172
Besides, she already had one son who was damaged , as his father so often reminded them.	Además, ya tenía un hijo que estaba dañado , como su padre les recordaba a menudo.	172

She considered telling him about the biscuits, that they were probably drugged , but reconsidered.	Sopesó contarle lo de las galletas, que probablemente estaban drogadas , pero se contuvo.	181
Across his forehead was a rash of small bumps that followed his hairline down the left side of his temple.	Le recorría la frente un sarpullido de bultos pequeños que seguía la línea de crecimiento del cabello hasta su sien izquierda.	188
Sometimes it was so loud he would move to the beach, sitting with his knees curled up to his chest while his muscles shivered uncontrollably .	A veces había tanto ruido que tenía que marcharse a la playa, donde se sentaba en posición fetal mientras los músculos le temblaban de forma incontrolable .	188
As he dozed, they would enter his mind, a physical force connecting to his frontal lobe .	Cuando se dormía entraban en su mente, una fuerza física que se conectaba a su lóbulo frontal .	190
He could feel data streaming into his brain , sound and flashes of colored lights on a ticker tape that twisted through gray matter and gave him chills , as if they were downloading a long, complicated program.	Podía sentir cómo los datos fluían hacia su cerebro , sonidos y destellos de luces coloridas en una cinta perforada que se retorció a través de su materia gris y le daba escalofríos , como si estuvieran descargando un programa extenso y complejo.	190
His face was a mosaic of dirt, beard, and purple bumps .	Su cara era un mosaico de suciedad, barba y bultos púrpuras .	195
“Jules, listen to me. You’re sick , something is making you sick .”	- Jules, escúchame. Estás enfermo , algo te está enfermando .	195

For best results, only healthy specimens should be used.	Para un mejor resultado, solo deberían emplearse especímenes saludables .	198
Color started returning to his cheeks. It took another moment for his heart to beat steady .	Sus mejillas recobraron el color. Pasó otro momento hasta que su corazón volviera a latir de forma regular .	206
She had felt something on his forehead. Smooth bumps , soft as moss but cold as stone.	Le había notado algo en la frente. Unos bultos suaves , tan suaves como el musgo, pero fríos como la piedra.	210
The cadavers were gaunt and deflated in the center, as if their organs had collapsed .	Los cadáveres estaban demacrados y tenían el torso hundido , como si los órganos se hubieran desmoronado .	215
Monica opened her bloodshot eyes to a bright glow outside the window that made her squint and added pain to her already throbbing head .	Mónica abrió los ojos inyectados en sangre a un resplandor brillante más allá de la ventana, que la obligó a entrecerrar los ojos y exacerbó su dolor de cabeza, que ya le palpitaba .	215/216
Its droopy skin hung from sharp cheekbones and his expression was set in a snarl.	La piel flácida le colgaba de los pómulos afilados, y tenía la expresión fija en una mueca desencajada.	218
A gentle sea breeze drifted over the cliffs and her stringent muscles relaxed .	Una suave brisa marina sopló sobre los acantilados y sus músculos rígidos se relajaron .	227
A rush of nausea kept her from screaming and her body was too weak to fight against their grip.	Una oleada de náuseas impidió que gritara, y tenía el cuerpo demasiado débil como para luchar contra su presa.	228

Drug-laced biscuits would have explained so much, from George's suicide and Hodge's murder to Luke's hallucinations and Jules's psychotic behaviour .	Las galletas repletas de droga habrían explicado muchas cosas, desde el suicidio de George y el asesinato de Hodges, hasta las alucinaciones de Luke y el comportamiento psicótico de Jules.	230
She threw the silk art onto the heap and then ran to the sea wall, eyes burning from the toxic cloud .	Arrojó la pieza de seda a la pira y corrió hacia la costa con los ojos enrojecidos por la nube tóxica .	233
Shallow breathing , a slight moan , but no movement.	Respiración superficial , un leve gemido , pero ningún movimiento.	253
The black bumps had spread down his temple.	Los bultos negros se habían extendido por la sien.	262
The storm continued in waves of torrent and languor . Monica awoke naked and shivering, caught somewhere between a drunken stupor and a hangover .	La tormenta prosiguió en oleadas de torrente y languidez . Mónica despertó desnuda y tiritando, atrapada a medio camino entre el estupor ebrio y la resaca .	273
His hair was soaking wet and he looked like a corpse with snow-white skin, blue lips , and pupils full and black.	Tenía el pelo empapado y parecía un cadáver , con la piel pálida como la nieve, los labios amoratados y las pupilas dilatadas y negras.	274
Blood had formed a dark clot from the deep puncture in her throat, where tiny pink bubbles gathered and popped.	La sangre había formado un coágulo oscuro alrededor de la hendidura profunda de la garganta, donde surgían y reventaban pequeñas burbujas rosadas.	278
Luke allowed Isabelle to lead him into the hallway, where she held his	Luke permitió que Isabelle lo condujera hasta el recibidor, donde	279

convulsing body and let him cry until there was nothing left but dazed shock , and they walked down the stairs together.	sostuvo su cuerpo convulsionante y dejó que llorara hasta que solo quedó un estupor asombrado , y descendieron juntos las escaleras.	
His body shook so feverishly Isabelle could barely keep the blanket wrapped around him.	Su cuerpo se convulsionaba tan febrilmente que Isabelle a duras penas podía mantenerlo arropado con la manta.	279
The heads were turned sideways and Isabelle could see their taut skin pulled back in a smile over protruding yellow teeth .	Tenían las cabezas giradas e Isabelle podía ver su piel tirante retraída en una sonrisa sobre sus dientes protuberantes y amarillos .	281
She pondered the webbing across the back and extremities and realized there was a familiar pattern. It was as if the fungus were following the circulatory system . “Do you see the branching? It looks to be following their veins and arteries .”	Contempló la red que se extendía por sus espaldas y extremidades y se dio cuenta de que había un patrón familiar. Era como si el hongo estuviera siguiendo el sistema circulatorio . - ¿Ves cómo se ramifica? Parece que siguen las venas y arterias .	282
He’d been filleted down the middle by a knife, with two horizontal cuts that exposed a pink pile of loosely packed intestines that spilled from the cavity onto the deck in an enormous puddle of blood .	Lo habían rajado en dos con un cuchillo, con dos cortes horizontales que revelaban una pila rosada de intestinos sueltos que se derramaban desde la cavidad por la cubierta sobre un enorme charco de sangre .	287
Arm muscles growing stiff and weak .	Los músculos de los brazos se le volvían rígidos y débiles .	291

Two days later, Isabelle sat in the library drunk with fatigue , rifle in hand, staring out the shattered window to the patio.	Dos días más tarde, Isabelle estaba sentada en la biblioteca ebria de cansancio , rifle en mano, vigilando la ventana hecha añicos que daba al patio.	292
Her mind drifted in and out, between moments of haze and clarity . Sometimes the world was a kaleidoscope of colors and shapes as if she'd never seen it clearly before, and Isabelle would experience inner peace of great magnitude, followed by severe headaches that felt as if something were suctioning out her brain , and she would wake up on the floor of the laboratory covered in sweat and pine needles.	Su mente divagaba de aquí para allá, entre momentos de ofuscación y claridad . A veces el mundo era un caleidoscopio de colores y formas, como si nunca antes lo hubiera visto con claridad, e Isabelle experimentaba una paz interior de gran magnitud, seguida por dolores de cabeza intensos , como si algo le estuviera succionando el cerebro , y se despertaba en el suelo del laboratorio cubierta de sudor y agujas de pino.	293
Sean too had cleaned up, but like Jules the velutinous bumps had spread quickly down his left cheek.	Sean también se había aseado pero, al igual que Jules, los bultos aterciopelados se habían expandido rápidamente por su mejilla izquierda.	295
She trailed him with indifference and a driving curiosity as to what would happen to him, and the nauseating feeling that she would somehow be involved.	Lo siguió con indiferencia y la curiosidad punzante de descubrir qué le pasaría, así como la sensación nauseabunda de que se vería involucrada de algún modo.	297
Up close, the fleshy tubes that covered his face seemed to wiggle and squirm on their own.	De cerca, los túbulos carnosos que le cubrían la cara parecían retorcerse y reptar con vida propia.	301

Luke knelt down to his mother as she winced from the pain in her thigh. The swelling ballooned inside her trouser leg.	Luke se arrodilló ante su madre, postrada con una mueca de dolor por la herida del muslo. La hinchazón se inflamaba dentro del pantalón.	302
Luke's eyes bulged and his head jerked sideways. He fell to the ground, blood pooling fast around his head.	Luke abrió los ojos de par en par y la cabeza se le ladeó. Cayó al suelo, y la sangre empezó a encharcarse alrededor de su cabeza.	304
She felt a cold swoosh of emotion leaving her body, slipping through a dark tunnel, as soothing numbness took over.	Sintió un frío ramalazo de emoción que abandonaba su cuerpo, que se escurría por un túnel oscuro mientras se sumergía en una insensibilidad apacible .	304
"There was no sign of airborne contamination ."	- No había señales de contaminación aérea .	307
"I can arrange for you to have a sedative ."	- Puedo hacer que le administren un sedante .	312
"It seems thirty years ago your father began engineering the DNA of fungi to create a more potent form of ergotamine for LSD synthesis ."	- Al parecer, hace treinta años su padre empezó a modificar ADN fúngico para crear una forma más potente de ergotamina para la síntesis de LSD .	313
He used a process called protoplast fusion to create a new genetic hybrid with powerful psychoactive alkaloids .	Empleó un proceso conocido como fusión de protoplastos para crear un híbrido genético con alcaloides psicoactivos potentes.	313

At precisely noon, when the sun is the highest in the sky, it commands the ant to bite into the vascular vein of a leaf.	Exactamente al mediodía, cuando el sol está en su punto álgido en el cielo, le ordena a la hormiga que muerda la vena vascular de una hoja.	314
“You see, the plants on the island are sending genetic instructions to their fungal partners, which are able to send very specific instructions to the human brain.”	- Ya lo ve, las plantas de la isla mandan instrucciones genéticas a sus compañeros fúngicos, que a su vez envían instrucciones muy específicas al cerebro humano.	314
There was a feeding tube in his arms connected to a plastic bag hanging on the wall. Oxygen tubes were inserted in both nostrils.	Tenía una sonda de alimentación en los brazos, conectada a una bolsa de plástico que colgaba de la pared, y tubos oxígenos insertados en ambas fosas nasales.	318
Semantic adaptation		
“Well. How lucky you’re your gene pool .”	- Vaya, qué suerte para tu patrimonio genético .	49
Isabelle explained that George had been a well-respected scientist for many years, until he began experimenting with illegal drugs, mind-altering substances that eventually affected his work and reputation.	Isabelle explicó que George había sido un científico de renombre durante muchos años, hasta que empezó a experimentar con drogas ilegales, sustancias psicotrópicas que acabaron por afectar a su trabajo y su reputación.	90/91
Sean hastily got to his feet, but wooziness pulled him back on his knees like a burst of gravity and the world around him began to spin.	Sean se apresuró en reincorporarse, pero la náusea lo puso de rodillas de nuevo, como un estallido de	140

	gravedad, y el mundo a su alrededor empezó a dar vueltas.	
“It’s not the same thing. I’m perfectly sane and I know what I saw.”	- No es lo mismo. Estoy totalmente cuerdo y sé lo que he visto.	158
He’d had some kind of seizure or muscle spasm at the same moment he picked the sapling.	Sufrió algún tipo de ataque o espasmo muscular en el mismo momento en el que recogió la plántula.	162
From watching the video, anyone would think he was insane .	Viendo el vídeo, todo el mundo pensaría que estaba loco .	170
Although Jules’s appearance implied insanity , his grin and jauntiness made him seem fairly harmless.	Aunque la apariencia de Jules dejaba entrever locura , su mueca y compostura lo hacían parecer más o menos inofensivo.	249
“He fucking scalped me!” She screamed with clenched teeth , eyes black with rage.	- ¡El cabrón me ha pelado ! - gritó con los dientes apretados y la mirada negra de ira.	257
She turned on feeble knees and took a step before doubling over. Nothing came up but dry, painful heaves .	Se volvió con las rodillas temblorosas y dio un paso antes de encorvarse. Nada surgió salvo arcadas espasmódicas y dolorosas .	278
“That’s what they like, cold and wet. This island is the perfect climate for an outbreak .”	- Eso es lo que les gusta, el frío y la humedad. Esta isla tiene el clima perfecto para un brote .	308

His face was emaciated , but every feature was distinguishable from his nose to the shape of his chin.	Tenía el rostro demacrado , pero todos sus rasgos eran distinguibles, desde la nariz hasta la forma del mentón.	317
Calque		
“ Brain waves can be seen as loops and jags between the cortex and the thalamus , which bind together various regions.”	- Las ondas cerebrales pueden verse como ondulaciones y picos entre el córtex y el tálamo , que une varias regiones.	96
He wondered if it was contagious , like when Luke got the flu and passed it to everyone in the family.	Se preguntó si sería contagioso , como cuando Luke tuvo la gripe y se la pegó a toda la familia.	108
A wave of nausea and dizziness buckled him over.	Una oleada de náusea y mareo lo rindió.	121/122
“Usually he fungi enter the plant tissue and cells at the roots and create a web of hyphae that branch out for miles, providing the plants with better absorption of water and nutrients , protection from predators and pathogens , as well as information about the environment.”	- Habitualmente los hongos se introducen en el tejido vegetal y las células por las raíces y crean una red de hifas que se ramifican durante kilómetros, otorgando a las plantas una mejor absorción del agua y los nutrientes , protección de depredadores y patógenos , así como información sobre el entorno.	160
He fell into a depression and violent images swirled through his mind .	Se sumió en una depresión e imágenes violentas se arremolinaban en su mente.	191

Visions of his childhood and vegetal slaughter .	Visiones de su infancia y de holocaustos vegetales .	
“This came off the wood. I’ll probably get tetanus .”	- Esto salió de la madera. Seguramente pille el tétanos .	206
She pressed a hand to her gut and burped, looking slightly bilious .	Se presionó el estómago con la mano y eructó, con un aspecto ligeramente bilioso .	210
Jules couldn’t sleep. He lay for hours, facedown on top of a sleeping bag, but couldn’t drift off . Finally, he got up and paced the campsite, pondering his insomnia .	Jules no podía dormir. Yació durante horas, boca abajo sobre un saco de dormir, pero era incapaz de conciliar el sueño . Finalmente, se levantó y recorrió el campamento, contemplando su insomnio .	211
She couldn’t even keep a child from falling out of a tree, let alone protect him from a psychopath .	Ni siquiera pudo evitar que un niño se cayera de un árbol, cuanto menos protegerlo de un psicópata .	231
He’s out there with that maniac .	Está allí fuera con ese maniac .	247
She squirmed side to side, not wanting to lose either the diamond or the flashlight, but the pain of arthritis caught up to her.	Se retorció de lado a lado, sin querer perder ni el diamante ni la linterna, pero el dolor de la artritis la acució.	272
Sean fled the room, his legs flailing spastically , and Isabelle ran to Luke.	Sean huyó de la habitación, con las piernas temblándole espasmódicamente , e Isabelle corrió hacia Luke.	283
Luke ambled across the floor in a semi-stupor .	Luke se tambaleó por el suelo en un estado de semiestupor .	293

He felt paralyzed , and even more frightening was his pleasure that the man was dead.	Se sintió paralizado , y le asustó aún más el placer que sintió al verlo muerto.	297
She looked at Jules, swaying with a hazy far-off gaze , as if hypnotized by its rays.	Miró a Jules, que se cimbreaaba con una mirada perdida en la distancia , como si estuviera hipnotizado por sus rayos.	302
This time his body was lax and unguarded, and he fell to the edge of the cliff.	Esta vez tenía el cuerpo laxo y con la guardia baja, y cayó al borde del precipicio.	302
“There were high levels of ergotamine in the spores .”	- Había niveles elevados de ergotamina en las esporas .	307
“Usually ergot grows on grasses and has to be ingested for a long time to cause ergotism .”	- Habitualmente, el cornezuelo crece en la hierba y tiene que ingerirse durante mucho tiempo para causar el ergotismo .	307
“ Ergot ’s been linked to plagues all over Europe since the Middle Ages.”	- El cornezuelo se ha vinculado a plagas de toda Europa desde la Edad Media.	308
Morphological adaptation		
“You see, the Venus flytrap has four sensor hairs that an insect must trip twice, within twenty seconds, in order for the trap to close.”	- Mira, la venus atrapamoscas tiene cuatro folículos sensoriales con los que un insecto debe tropezar dos veces en un lapso de veinte segundos para que la trampa se cierre.	97

Explanation		
He picked up Achieving Brain Entrainment Through Isochronic Tones and flipped through the text, much of it highlighted in yellow marker.	Escogió Arrastre de Ondas Cerebrales Mediante Tonos Isocrónicos y ojeó el texto, gran parte del cual estaba marcado con rotulador amarilla.	109
Perhaps low blood sugar , he thought, and reached into his pocket for a biscuit he'd taken that morning.	Pensó que quizás estaba bajo de azúcar , y se tanteó el bolsillo en busca de una galleta que se había llevado aquella mañana.	122
"It's concentrated at the brain and spine , but scarce at the heart and lungs . I'd say it's following the nervous system ."	- Se concentra en el cerebro y columna vertebral , pero escasea en el corazón y los pulmones . Diría que sigue el sistema nervioso .	282

9.3.2. The Day of the Triffids

Original item	Page	Spanish translation
Literal translation		
The traveller very easily failed to notice one among the normal bushes and undergrowth, and the moment he was in range the venomous sting would slash out.	19	Era muy fácil que un viajero pasara por alto uno de ellos entre los arbustos y la maleza habituales y, nada más entrar en su rango de alcance, el aguijón venenoso se desataría.
But this one came with such force that some of the little poison sacs were burst	23	Pero esta golpeó con tanta fuerza que algunas de las pequeñas glándulas de

open, and a few drops from them went into my eyes.		veneno reventaron, y algunas gotas me cayeron en los ojos.
I had built up a considerable resistance to triffid poison since my first sting in the garden.	23	Había desarrollado una considerable resistencia al veneno de trífido desde mi primera picadura en el jardín.
I had that, and my acquired resistance to the poison , to thank.	36	Tenía que darle las gracias a aquello, y a mi resistencia adquirida al veneno .
From time to time there would be a panicky flare-up of expostulation when reports circulated that as well as satellites with atomic heads there were others with such things as crop diseases, cattle diseases , radioactive dusts, viruses , and infections not only of familiar kinds but brand-new sorts recently thought up in laboratories, all floating around up there.	14	De vez en cuando había un episodio de pánico generalizado cuando circulaban noticias de que, además de satélites con misiles nucleares, había otros con cosas como enfermedades agrícolas, del ganado , polvo radiactivo, virus e infecciones , no solo conocidas sino también variantes nuevas creadas recientemente en laboratorios, todo aquello flotando allí arriba.
Morphological adaptation		
I was aching all over, and, as I later discovered, one side of my face was decorated with a blotchy red raised weal .	18	Tenía todo el cuerpo dolorido y, tal y como descubrí después, tenía un lado de la cara decorado con una desagradable herida, enrojecida e inflamada .

8.3.2.1. *The Day of the Triffids* – Published translation

Spanish translation	Page
Literal translation	
El viajero no advertía la presencia de un trífido entre los espesos matorrales y era golpeado al acercarse por el venenoso aguijón .	29
A eso, y a mi adquirida resistencia al veneno , debía la vida.	51
Morphological adaptation	
Pero el golpe fue tan fuerte que uno de los saquitos de veneno estalló contra el alambre y algunas gotas me entraron en los ojos.	34
Desde que aquel aguijón me golpeó en el jardín mi cuerpo había desarrollado una considerable resistencia al veneno de los trífidos .	34
Semantic adaptation	
Por otra parte Joyce, a pesar de su alta temperatura, parecía estar recobrándose de los efectos del veneno , de modo que la situación no era tan apremiante.	155
De cuando en cuando había un aterrorizado florecimiento de debates ante el rumor de que, además de satélites con cargas atómicas, había otros con enfermedades vegetales, enfermedades del ganado , polvos radiactivos, virus , e infecciones ; no sólo las ya conocidas, sino también otras nuevas, desarrolladas recientemente en los laboratorios. Y todos estaban girando arriba.	19
Enseguida noté la brillante mancha roja en la mejilla.	50

9.3.3. The Crucible of Time

Original item	Page	Spanish translation
Literal translation		
The Count's illness was withdrawing one psychological prop from the minds of the people of the valley [...]	173	La enfermedad del Conde desprovoyó de apoyo psicológico a las mentes de la gente del valle [...]
When the world settled back to an even keel, explorers set forth once more who employed techniques that once had been the private property of jealous cities; means to signal across vast distances, means to preserve knowledge by multiplying it in countless copies; medicines to cure common illnesses , others to master strange rare disorders [...]	569	Cuando el mundo se estabilizó, los exploradores volvieron a partir empleando técnicas que, antaño, habían sido propiedad privada de ciudades celosas; formas de orientarse en distancias vastas, formas de conservar el conocimiento multiplicándolo en forma de copias incontables; medicinas para curar enfermedades comunes , y otras para dominar trastornos extraños y poco comunes [...]
He spoke freely enough about his illness and recovery [...]	914	Hablaba con sobrada libertad de su enfermedad y recuperación [...]
And it had happened, and it had ceased, and everyone was grievously disturbed, for blight and plague had followed what should have been a sign of unprecedented good fortune...	17	Y así ocurrió, y así concluyó, y todo el mundo estaba profundamente consternado, ya que la plaga y pestilencia sucedieron a lo que debería haber sido una señal de dicha inaudita...

“The plain truth! Some filthy plague spawned of the far south is rife in Forb, and a murrain is abroad among the livestock, and the very brave-trees are wilting! ”	169	- ¡Es la pura verdad! Alguna plaga inmunda surgida muy al sur está arrasando Forb, y una pestilencia está devastando al ganado, ¡y hasta los bravárboles se están marchitando!
Mixed literal translation (+ Creation)		
Their cleanlickers were said to be unique, capable of ridding any wound of its poison within days and making a swift recovery .	256	Se decía que sus limpialamedores eran únicos, que podían purgar cualquier herida de su ponzoña en cuestión de días y facilitar una pronta recuperación .
Weather-sense and a familiar, reassuring noise lured Skilluck back from the dreamness whither he had been driven by exposure, privation and sheer terror.	203	Su clima-sentido y un sonido familiar y reconfortante sacaron a Suertehábil de la ensoñación en la que se había sumido al haber estado expuesto, hambriento y aterrado.
Semantic adaptation		
He would have been dead but that Jing’s treelord - a Shreeban, well accustomed to being shunned by his Forbish neighbours and mocked by their children when he went abroad- had called a doctor, said to breed the best cleanlickers in the city.	26/27	Habría resultado muerto de no haber sido porque el señorárbol de Jing (un Shreeban, muy acostumbrado a que sus vecinos de Forb lo evitaran, y a que sus hijos se mofaran de él cuando viajaba al extranjero) había llamado a un médico, del que se decía que criaba los mejores purificadores de la ciudad.

But our world -I should say our continent- is constantly in flux; when it's not a drought it's a plague , when it's not a murrain it's a population shift...	63	Pero nuestro mundo (o quizás debería decir nuestro continente) fluye de manera constante; cuando no hay una sequía hay una plaga , cuando no hay una pestilencia hay un cambio demográfico...
Morphological adaptation		
Grief at being shorn of his last Ntahish companion might have driven him to dreamness and made him reject Twig-friend because of Twig-physician .	77/78	Es posible que el dolor de haberse visto privado de su último compañero de Ntah lo hubiera conducido a la ensoñación, y le hubiera hecho rechazar a Rama-amigo a causa de Rama-médico .
Still, you're of good stock, and maybe cross-breeds are what's been lacking in our lines.	159	A pesar de ello, eres de buena crianza, y quizás sean mestizos lo que le falta a nuestra estirpe.

8.3.3.1. *The Crucible of Time* – Published translation

Spanish translation		Page
Literal translation		
Y así había sucedido y también dejado de suceder, y todo el mundo estaba turbado y apenado porque la enfermedad y el infortunio habían seguido lo que debiera haber sido una señal de buena fortuna sin precedentes.		9
Todos ellos mostraban las cicatrices de la plaga .		39
La enfermedad del Conde estaba minando un puntal psicológico para la gente del valle [...]		41

[...] remedios para curar las enfermedades comunes , otros para dominar extraños desórdenes [...]		124
Y así había sucedido y también dejado de suceder, y todo el mundo estaba turbado y apenado porque la enfermedad y el infortunio habían seguido lo que debiera haber sido una señal de buena fortuna sin precedentes.		9
Pero nuestro mundo, y debería decir nuestro continente, está en constante flujo; cuando no es una sequía, entonces se trata de una plaga , o de una mortandad de animales, o de un cambio demográfico.		19
Durante la primera parte de la luz, las bestias habían tenido el sentido común de no comer el follaje que las rodeaba, descolorido y marchito .		179
Por su parte, los sacerdotes sostenían que ninguna plaga podía diezmar a quienes la afrontaran con energía, así que...		41
Mixed translation Creation)	literal (+	
Habría muerto a no ser porque el señorárbol de Jing —un Shreeban, acostumbrado a que sus vecinos de Forb lo evitaran y los niños de esos vecinos se burlaran de él cuando se iba a otras tierras- había llamado a un médico que, según él, tenía el criadero de los mejores limpialamedores de la ciudad.		11
El mejor de los limpialamedores de Varilla había fracasado al igual que el resto: incluso a él le había sido imposible desinfectar la herida .		22
El clima-sentido y un ruido familiar, tranquilizador, sacaron a Suertehábil de la ensoñación en que lo habían sumido las privaciones , la exposición a los elementos y el simple y puro terror del momento.		49
El dolor de haber perdido a su último compañero de Ntah tal vez habría arrastrado a Jing a ensoñaciones y hecho que rechazara a Varilla-el-amigo a causa de Varilla-el-médico .		22

Sus limpialamedores eran únicos, según se decía, capaces de eliminar el veneno de cualquier herida en pocos días y de lograr una rápida recuperación.	60
Tenemos suficiente reserva de comida en las junqs para hacer el viaje, y las vejigas de agua están repletas; no hay pestes ni plagas en las plantas y tenemos remedios para todas las enfermedades concebibles .	108
Entre la gente de Ushere y Casadelcorazón ya hay mucho mestizaje .	80
—¡La verdad! En Forb hay una plaga asquerosa que empezó en el Sur. Los animales también se mueren, ¡hasta los bravoárboles se secan!	40
Morphological adaptation	
Al parecer Awb hablaba con libertad de su enfermedad y su recuperación [...]	194

9.4. Other terminology

9.4.1. Seeders

Original item	Spanish translation	Page
Literal translation		
George scratched his cheek and the black, threadlike protrusions that covered his face like tiny worms. They had appeared on his forehead months ago, growing larger and spreading, becoming puckered and itchy and a constant source of irritation.	George se rascó la mejilla y las protuberancias filosas y negras que le cubrían la cara como gusanos diminutos. Habían aparecido en su frente hacía meses, y se extendían y crecían, enquistándose y provocándole picores y una irritación constante.	2

Using sensitive acoustical equipment placed underground, he discovered that the roots of the plant were making a clicking noise, a kind of chatter that registered at 220 hertz .	Al usar equipamiento acústico sensible situado bajo tierra, descubrió que las raíces de la planta producían un tintineo, una especie de charla que se registraba a 220 hercios .	27
“Humans have long been under the delusion that we are somehow autonomous from the rest of nature, elevated above all of earth’s creatures. So terrified are we of losing our exalted status, we cling to the anthropocentric notion that we are the only intelligent life on earth.”	- Los humanos han vivido mucho tiempo en el engaño de que, de algún modo, somos autónomos del resto de la naturaleza, elevados por encima de todas las criaturas terrestres. Nos aterra tanto perder nuestro estatus exaltado que nos aferramos a la noción antropocéntrica de que somos la única forma de vida inteligente de la Tierra.	28
“I was merely pointing out the fact that nonhumans , even plants, are more similar to us than we realize.”	- Tan solo estaba señalando el hecho de que los no humanos , incluso las plantas, se parecen más a nosotros de lo que somos conscientes.	29
“It’s quite rare. One of the few red diamonds in the world. Nearly one carat .”	- Es bastante inusual. Uno de los pocos diamantes rojos del mundo. Casi un quilate .	58
“You’re making the same mistake as most scientists, measuring intelligence as it relates to our own abilities. It’s a kind of meat chauvinism against any creature without a brain.”	- Estás cometiendo el mismo error que la mayor parte de científicos, medir la inteligencia en relación con nuestras propias habilidades. Es una especie de chovinismo de	96

	la carne contra cualquier criatura que no tenga cerebro.	
“You see, the brain works just like a supercomputer .”	- Ya ves, el cerebro funciona igual que un superordenador .	96
“Then it reaches across the soil and wraps itself around the plant several times, attaching suckers that penetrate its prey to extract the nutrients.”	- Entonces atraviesa el suelo y se enrosca varias veces alrededor de la planta, adhiriendo ventosas que penetran a la presa para extraer los nutrientes.	97
“Exactly. Our brain haven’t evolved enough to comprehend an answer. Just as we can’t understand gravity or imagine a ninth dimension or know what comes after infinity .”	- Exacto. Nuestro cerebro no ha evolucionado lo suficiente como para comprender la respuesta, al igual que no podemos entender la gravedad, imaginar una novena dimensión o saber qué viene después del infinito .	98
<i>“You may freely eat of every tree of the garden; but of the tree of knowledge of good and evil you shall not eat, for in the day that you eat of it you shall die.”</i>	- Puedes comer de cualquier árbol del jardín; pero del árbol del conocimiento del bien y del mal no comerás pues, en el día en que comas de él, morirás.	100
The wooded landscape was a continuous pallet of earthy browns and greens , a repetitive backdrop of trees, rocks and vines.	El paisaje arbolado era una paleta continua de marrones terrosos y de verdes , un fondo repetitivo de árboles, rocas y enredaderas.	106
The fire had a pleasant smoky aroma and cast dancing shadows over the hunter-green walls and heavy tapestry curtains.	La lumbre tenía un aroma ahumado agradable y proyectaba sombras danzantes sobre las paredes de color	126

	verde cazador y las pesadas cortinas tapizadas.	
Burrs stuck to his arm and continued down the side of his trousers to his muddy boots.	Tenía bardanas pegadas al brazo y por todo el lateral de los pantalones, hasta las botas embarradas.	133
“They’ve been reduced to nothing more than food for consumption , kindling for fires, lumber for houses. They’ve been cultivated and slaved on millions of acres for the sole purpose of slaughter.” He spun around, pointing a menacing finger. “What if it were your children? Imagine a place where human bones are used to build shelter, flesh and blood to nourish offspring .”	- Han sido reducidas a nada más que comida que consumir, combustible que quemar y leña para los hogares. Las han cultivado y esclavizado en millones de hectáreas con el único propósito de masacrarlas. - Se giró y señaló con el dedo de forma amenazante. - ¿Y si se tratara de tus hijos? Imagina un lugar donde se usaran huesos humanos para construir refugios, y la carne y la sangre para alimentar a la progenie.	181
He grasped a countertop covered in algae that felt mushy and cold.	Palpó una encimera cubierta de algas que resultaba musgosa y fría al tacto.	203
It took the rest of her remaining strength to pull herself up and drag Luke’s body over the slimy outcropping of rocks.	Tuvo que aunar el resto de sus fuerzas para incorporarse y arrastrar el cuerpo de Luke por el saliente viscoso de rocas.	203
The idea was so outlandish she wondered if maybe her own mind was slipping.	La idea era tan extravagante que se preguntó si quizás no estaría perdiendo la razón ella misma.	232
By sunset, the shining beam from the Liscomb Island lighthouse would blink	Al atardecer, el haz brillante del faro de la Isla Liscomb parpadeaba como el ojo	233

on and off like a cat's eye and on rare nights the city lights of Halifax could be seen.	de un gato, y algunas noches se podían ver las luces de la ciudad de Halifax.	
Perhaps because he had no mirror, Jules did nothing about his ghastly face . The black bumps covered its entirety, as well as most its neck. They were elongated and had a glossy sheen .	Quizás porque no tenía espejo, Jules no hizo nada para arreglar su rostro espeluznante . Los bultos negros lo cubrían por completo, así como la mayor parte del cuello. Eran alargados y tenían un brillo lustroso .	295
Isabelle noticed he was wearing a holstered gun and felt a twinge of calm .	Isabelle se percató de que llevaba una pistola enfundada y sintió una punzada de calma .	295
Really high-tech stuff from the NSA , like this was some kind of terrorist attack or something.	Cosas de última generación de la Agencia de Seguridad Nacional , como si esto fuera un atentado terrorista o algo.	307
Morphological adaptation		
Most of the fungus was soft and fluid, but there were tiny shoots of a purplish growth protruding from the floral structure like minigrains of rice.	La mayor parte del hongo era suave y fluido, pero había pequeños brotes de un recrecimiento purpúreo que sobresalía de la estructura floral como granos diminutos de arroz.	111
Chaos swirled in his brain, trying to process the sudden flood of information while struggling to ignore the sensations in his body so he could focus on what to do next.	El caos se arremolinaba en su cerebro, intentando procesar el torrente de información repentino mientras se esforzaba por ignorar sus sensaciones corporales para poder concentrarse en qué hacer a continuación.	128
He had come down to breakfast that morning, love-struck and dreamy-eyed	Había bajado a desayunar esa mañana, henchido de amor y con la mirada	141/142

after their evening encounter, but Monica didn't look up from her oatmeal.	obnubilada tras su encuentro nocturno, pero Mónica no levantaba la vista de sus gachas.	
When he looked up he noticed the pine trees looked more vibrant than before, vivid green like traffic lights, while the woods were bathed in golden sunlight, the sky an unnatural violet.	Cuando levantó la vista se dio cuenta de que los pinos parecían más intensos que antes, de un verde vívido como el de un semáforo, mientras que el bosque estaba bañado en una luz dorada, y el cielo era de un purpura antinatural .	301
Jules spewed on about climate change and deforestation , conversion and intense farming, logging and urbanization . His eyelids blinked rapidly, as though trying to keep up with his streaming thoughts .	Jules siguió divagando sobre el cambio climático y la deforestación , la agricultura intensiva y de conversión , la tala y urbanización . Parpadeaba rápidamente, como si intentara seguir el flujo de sus pensamientos .	181
"This isn't who I am, Luke. The real me is back in Brooklyn. When we go home, everything will be the way it was before. You'll be with the brainiacs and I'll be alone like always."	- Esta no soy yo, Luke. Yo soy la de Brooklyn. Cuando volvamos a casa todo será como antes. Tú estarás con los cerebritos y yo estaré sola, como siempre.	229
"They interpreted the message wrong. It's something to do with mixed-up connections in the brain. They get the message all boggled ."	- Interpretaron el mensaje de forma equivocada. Tiene algo que ver con conexiones erróneas en el cerebro. El mensaje les llegaba completamente desvirtuado .	315
A blaze of emotions swept through Isabelle's body like a brushfire. She	Una explosión de emociones barrió el cuerpo de Isabelle como una llamarada.	315

wrestled with joy and fear in equal measure.	Se debatía entre la euforia y el miedo a partes iguales.	
Semantic adaptation		
If plants had the means to destroy humans, would they? Like the cowpea that releases peptides against the armyworm , or the tannins of a hemlock that kill attacking bacteria; would that <i>Dianthus caryophyllus</i> you just decapitated want to chop off your head?	¿Si las plantas tuvieran una forma de destruir a los humanos, lo harían? Como el chícharo que emite péptidos contra el cogollero del maíz , o los taninos de la cicuta que matan a las bacterias atacantes; ¿te querría arrancar la cabeza ese <i>Dianthus caryophyllus</i> al que acabas de decapitar?	32
<i>SEEDERS must be planted a good distance from human habitation.</i> <i>SEEDERS may be planted individually or in clusters three feet apart. For best results, only healthy specimens should be used.</i> <i>SEEDERS are not to be moved or transported under any circumstances while rooting is in progress. Rooting may take one to three years.</i>	<i>Las MATRICES deben plantarse a una distancia considerable de los asentamientos humanos.</i> <i>Las MATRICES pueden plantarse individualmente o por grupos separados por un metro. Para obtener mejores resultados, solo deberían emplearse especímenes sanos.</i> <i>Las MATRICES no deben moverse ni transportarse bajo ninguna circunstancia mientras el arraigo esté en proceso. El arraigo puede durar entre uno y tres años.</i>	198
It wasn't the frigid temperatures either. Jules couldn't feel the sensation of cold on his skin.	Tampoco eran las temperaturas gélidas . Jules no podía sentir el frío en la piel.	213
Jules found himself wondering who the people were, seven young men and two	Jules se quedó pensando quiénes habrían sido aquellas personas, siete hombres	215

women. Perhaps students of George's. At one time useless, all-consuming humans. Now they were vital to the earth. The first Seeders .	jóvenes y dos mujeres. Quizás estudiantes de George. Antaño humanos inútiles y destructivos , ahora eran vitales para la Tierra. Las primeras Matrices .	
Even worse, maybe it was never buried here at all and she'd been sent on a wild-geese chase .	Aún peor, quizás nunca había estado enterrado allí y se había embarcado en una búsqueda inútil .	272
Explanation		
Isabelle pointed to a stack of videotapes and VCR inside the cabinet.	Isabelle señaló una pila de cintas de vídeo y videocassetes dentro del cajón.	84
"Here we go. Zenith circa 1980 ." She revealed a small television set and put it on the counter.	- Allá vamos. Un Zenith de alrededor de 1980 . Desveló un pequeño aparato de televisión y lo puso sobre la mesa.	84
They sat on the flowery bedspread like an old married couple, staring at their feet and passing the bottle back and forth, not speaking for a long moment.	Se sentaron en la colcha de estampado floral como un matrimonio de ancianos, mirándose los pies y pasándose la botella el uno al otro, sin decir nada durante un rato.	127

9.4.2. The Day of the Triffids

Original item	Page	Spanish translation
Mixed (Literal translation + Creation +)		
"So far we've practically nothing except a quantity of anti-triffid gear ."	55 / 56	- De momento no tenemos prácticamente nada, salvo algo de equipamiento anti-trífidos .
"And see that the cab window closes," I suggested. "There are quite a lot of triffid nurseries around London, particularly to the west."	84	- Y mira cómo se cierra la ventana de la cabina. -sugerí- Hay bastantes criaderos de trífidos en Londres, sobre todo hacia el oeste.
My first tentative trip there I took alone, returning with cases of triffid bolts , paper, engine parts, the Braille books and writing machine that Dennis so much desired, the luxuries of drinks, candies, records, and yet more books for the rest of us.	119	En aquel primer viaje de prueba fui solo, y volví con cajas de balas para trífidos , papel, componentes de motores, los libros en braille y la máquina de escribir que Dennis deseaba tanto, el lujo de las bebidas, las golosinas, los discos y aún más libros para los demás.
"Darling," I said, "do you really see me in the position of a seigneur , driving my serfs and villeins before me with a whip—even if the triffids haven't overrun me first?"	139	- Cariño, -dije- ¿de veras me ves en la posición de un señor feudal , conduciendo a mis siervos y villanos frente a mí con una fusta... incluso si los trífidos no me avasallan primero?
So we must think of the task ahead as ours alone. We believe now that we can see our way, but there is still a lot	141	Debemos pensar en la tarea que nos aguarda como únicamente nuestra. Ahora creemos poder ver nuestro

of work and research to be done before the day when we, or our children, or their children, will cross the narrow straits on a great crusade to drive the triffids back and back with ceaseless destruction until we have wiped out the last one of them from the face of the land that they have usurped.		camino, pero aún nos queda mucho trabajo que hacer y mucho por investigar antes de que llegue el día en que, o nosotros o nuestros hijos, o sus hijos, cruzarán los cortos estrechos en una gran cruzada para hacer retroceder más y más a los trífidos con una destrucción sin fin, hasta que hayamos eliminado hasta el último de ellos de la faz de la tierra que han usurpado.
Literal translation		
"Yes," I said. "That's why we are going to Clerkenwell . There's a place there that makes the best triffid guns and masks in the world."	40	- Sí, -dije- por eso vamos a ir a Clerkenwell . Allí hay un lugar que hace las mejores máscaras y pistolas para trífidos del mundo.
For public consumption he had shown that the sticks were something more, and that a triffid deprived of them gradually deteriorated. He had also established that the infertility rate of triffid seeds was something like 95 per cent.	23	Para el consumo público, había mostrado que las ramitas eran algo más, y que un trífido desprovisto de ellas de deterioraba paulatinamente. También había determinado que la tasa de infertilidad de las semillas de trífido rondaba el 95 %.

8.4.2.1. *The Day of the Triffids* – Published translation

Spanish translation	Page
Mixed (Literal translation + Creation)	
Para el consumo del público había demostrado que esas varitas eran algo más, y que un trífido privado de ellas se deterioraba gradualmente. Había establecido también que la infertilidad de las semillas de trífido alcanzaba a un noventa y cinco por ciento.	33
Así que debemos pensar que la tarea que nos espera es sólo nuestra. Creemos ya vislumbrar el camino, pero hay todavía mucho que trabajar e investigar antes que nuestros hijos, o los hijos de nuestros hijos puedan cruzar el estrecho e iniciar la gran cruzada que hará retroceder a los trífidos , más y más, destruyéndolos incesantemente hasta borrarlos de la faz de la tierra que han osado usurpar.	190

9.4.3. The Crucible of Time

Original item	Page	Spanish translation
Creation		
Walbushes had been trained to make a circular windbreak, and their rhizomes formed crude steps enabling one to look over the top for near-horizon observations.	55	Habían entrenado a los muriarbustos para formar un parapeto circular, y sus rizomas formaban peldaños toscos que permitían mirar por encima y observar hasta cerca del horizonte.
He described the subtropical climate of Ntah, and then progressed to a general account of the Lake and its environs -the creeperbridges	95	Describió el clima subtropical de Ntah, y después pasó a ofrecer una imagen general del Lago y sus alrededores: los

stranding out from island to island [...]		trepapuentes que colgaban de isla a isla [...]
Next day distraught peasants with came crying that a snowbelong had killed a child from the furthest-outlying village [...]	79	Al día siguiente llegaron campesinos afligidos gritando que un nieveser había matado a un niño de la aldea más alejada [...]
But there was reddish Swift youth , currently in a retrograde phase of the kind which had led Ntahish astrologers to center their system on the sun; there was Steady man , almost white, lagging behind; there was Stolid churl , somewhat yellower, there were Stump along and Sluggard , both faintly green, the latter markedly less bright...	106	Pero estaba el cobrizo Presto joven , actualmente en una fase menguante del tipo que llevó a los astrólogos de Ntah a vertebrar su sistema en torno al sol; estaba Perseverombre , casi blanco, más atrás; estaba Quedosiervo , algo amarillento, estaban Tocón largo y Rezagado , ambos de un verde desvaído, el segundo mucho menos brillante...
It had been hard enough to accept the distances he had been taught about in childhood, necessary to let Sunbride race around the sun, the world stride around it, and the outer planets follow at their own respective speeds.	129	Ya le había costado bastante aceptar las distancias que le habían enseñado durante su infancia, suficientes para que Noviasolar circunde el sol, el mundo le dé la vuelta y los planetas exteriores hagan lo propio a sus respectivas velocidades.
They sat in her bower, high in the castle and well defended, at a time when normally the night would be quiet but for distant icefaw screams and maybe a little music.	185 / 186	Se sentaron en su emparrado, en lo alto del castillo, a una hora en la que la noche solía estar en silencio salvo por los gritos distantes de los gelifauces y, quizás, algo de música.
"The price is fair, surely! If you doubt the quality of the seed, come and see	168	- ¡El precio es justo, eso seguro! Si dudáis de la calidad de la

what a jeweltree the Count sprouted from one I gave him last fall. Even during the winter –“		semilla, venid y ved qué árboljoya hizo brotar el Conde a partir de uno que le di el otoño pasado. Incluso en invierno...
Calque		
Now Drakh lay delirious beside him, as for days past, shivering less at the bitter air than the racking of his illness.	26	Ahora Drakh yacía delirante junto a él, como en los días anteriores, temblando menos por el aire gélido que por los estragos de su enfermedad.
A Shreeban , well accustomed to being shunned by his Forbish neighbors and mocked by their children when he went abroad	26 / 27	Un Shreeban , acostumbrado a que sus vecinos forbeses lo evitaran, y a que sus hijos se rieran de él cuando viajaba al extranjero
Twig said it was because the cold weather had sent their minds into hibernation, like the dirq and fosq which were so abundant in the summer and vanished into burrows in the fall.	121	Vara dijo que se debía a que el frío había hecho que sus mentes hibernaran, como los dirqs y los fosqs que tanto abundaban en verano y se desvanecían en madrigueras en otoño.
“Oh-hya-na-ut thra-t-ywat insk-y-trt ah-bng-llytr-heethwa ibyong hr-ph-tnwef-r heesh-llytr-kwu-qtr-annibyong”	143	Oh-hya-na-ut thra-t-ywat insk-y-trt ah-bng-llytr-heethwa ibyong hr-ph-tnwef-r heesh-llytr-kwu-qtr-annibyong
“It is the Honorable Jing ? Here am I, Ah-ni Qat! ”	151	- ¿Sois el Honorable Jing ? ¡Soy yo, Ah-ni Qat!
Literal translation		

Rainbow was eager to get to the observatory, and Jing -reluctant though he was to abandon these three who might well be his last surviving compatriots- [...]	162	Arcoíris ardía en deseos de llegar al observatorio, y Jing, a pesar de ser reacio a abandonar a aquellos tres que bien podrían ser sus últimos compatriotas con vida [...]
I'll give you Sturdy . With him at your side you need fear nothing from the sacerdotes .	93	Te daré a Recio . Con él a tu lado no tienes nada que temer de los ministros .
If one put such lenses in a viewing funnel -no, not a funnel, better a tube- of pliobark , or whatever was to be had here in the north, and made provision for adjustment to suit different observers...	118	Si alguien pusiera aquellas lentes en un embudo de visión (no, un embudo no, mejor un tubo) de pliocorteza , o lo que fuera que se empleara aquí en el norte, e hiciera los ajustes necesarios para acomodarse a distintos observadores...
It was not because he shared the sacerdotes ' conviction that the sun was only the Maker's Eye and therefore could not be the focus around which the planets revolved [...]	100	No era porque compartiera la convicción de los ministros de que el sol no era más que el Ojo del Creador y, por ende, no podía ser el centro en torno al que giraran los planetas [...]
Was it a fragment of the Maker's Mantle , the aurora which at unpredictable intervals draped the sky in rich and somber colors?	126	¿Era un fragmento del Manto del Creador , la aurora que, a intervalos impredecibles, cubría el cielo de colores profundos y oscuros?

8.4.3.1. *The Crucible of Time* – Published translation

Spanish translation	Page
Calque	
Ahora Drakh yacía allí, a su lado, delirando desde hacía días, temblando menos por el aire helado que por la locura de la enfermedad.	11
—un Shreeban , acostumbrado a que sus vecinos de Forb lo evitaran y los niños de esos vecinos se burlaran de él cuando se iba a otras tierras-	11
Varilla dijo que era porque el frío había hecho entrar sus mentes en hibernación, como pasaba con los dirq y los fosq , tan abundantes en verano y que sin embargo en otoño se escondían en madrigueras.	31
— Oh-hya-na-ut thra-t-ywat insk-y-trt ah-bng-Ilytr-heethwa ib* yong hr-ph-tnwef-r heesh-Ilytr-kwu-qtr-annibyong...	35
Literal translation	
La fe en la bondad del universo que Jing había sostenido toda su vida había sufrido un duro golpe, pero no pensaba caer en el delirio como hacían otros.	11
El jefe de todos ellos, dijo el doctor, se había refugiado en el castillo del Conde de Espina .	12
Arco Iris estaba ansiosa por ir al observatorio y Jing —aunque no sentía deseos de dejar a las tres personas que tal vez eran los únicos supervivientes de su ciudad—	39
Os daré a Fuerte . Con él a vuestro lado, no tendréis nada que temer de los sacerdotes .	25
No porque compartiera con los sacerdotes la convicción de que el sol era sólo el Ojo del Hacedor y por lo tanto no podía ser el foco alrededor del cual giraban los planetas [...]	27

¿Era un fragmento del Manto del Hacedor , la aurora que a intervalos impredecibles cubría el cielo de ricos y sombríos colores?	32
Creation	
Con los instrumentos de medición y los niveles y los gnomons y su gran tubo de visión de pliocorteza en forma de trompeta, que tapaba la luz desde abajo y permitía que el ojo se adaptara completamente a su tarea de estudiar las estrellas.	26
Pero ahí estaba el rojizo Brevejuventud , actualmente en una fase recesiva como la que había llevado a los astrólogos de Ntah a basar su sistema en el sol; ahí, un poco más atrás, estaba Bravohombre , casi blanco; y Brutoinsensible , algo más amarillo; y Bogalento y Blando , los dos levemente verdosos, el último mucho menos brillante...	28
Al día siguiente, llegaron varios campesinos inquietos a decir que un delanieve había matado a un niño de la aldea más alejada de la ciudad [...]	22
—El precio es justo. Si dudáis de la calidad de la semilla, venid a ver el hermoso joyárbol que hizo germinar el Conde de la que le di el otoño pasado. Incluso en invierno...	40

