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LANGUAGE EXTRAPOLATION.

GLOSSOPOESIS IN SCIENCE FICTION

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LANGUAGE EXTRAPOLATION. GLOSSOPOESIS IN SCIENCE FICTION

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"Language exists less to record the actual than to liberate the imagination."

– Anthony Burgess

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Abstract

In this thesis, I address the following research question: how can fictional languages add depth and credibility to a narrative? To this, I explore the literary phenomenon of glossopoesis in science fiction regarding fictional languages as narrative constituents rather than as unimportant textual decorations. According to this view, glossopoesis should be the object of literary criticism, unlike most previous studies that have largely revolved around such properties as linguistic accuracy or plausibility criteria anchored in natural language paradigms. Throughout this thesis, I have applied a predominantly bibliographic method, thoroughly reviewing authoritative scholarly works and prominent literary texts informed by an interdisciplinary framework. The first part of the thesis provides a diachronic survey of literary glossopoesis that ranges from the 1500s to contemporaneity and is sensitive to literary and historical contexts. Additionally, I reanalyse the reading protocols of science fiction, foregrounding textual features that form the set of interpretative cues common to the genre. With a qualitative approach, the second part of the thesis deploys an analytical toolkit that draws on literary stylistics, pragmatics and narrative theory. On that account, I revisit Stockwell's (2006) three broad functions of fictional languages in contrast with Cheyne (2008) and Tolkien (2016) to propose a new model comprising of five specific functions: speculative, rhetorical, descriptive, diegetic and paratextual. The speculative and descriptive functions seek to conciliate what Stockwell and Cheyne respectively refer to as 'indexical' and 'alien encounter' as well as 'elaborative' and 'characterisation', including particular world-building techniques. The rhetorical function is concerned with the use of glossopoesis as a rhetorical device to generate readerly and textual effects. In the diegetic function, glossopoesis operates as a diegetic ancillary tool to move the plot forward, interfacing theme and style within the narrative discourse. Finally, the paratextual function involves fictional languages shown in extradiegetic material, not written in prose and outside what is typically considered narrative, while still impacting reading and interpretation. Using case studies with a corpus covering twentieth- and twenty-first-century English-language science fiction novels and short stories, I focus on texts in which fictional languages become narrative dominants, studying them from a theoretical perspective centred on the narrative function that is most salient in each. As a result, a critical model to tackle various aspects of literary glossopoesis in a principled way is provided, in addition to new interpretative angles to architexts and more recent literature as I combine key findings from each case study to present a multipart account of the literary phenomenon of fictional languages in science fiction.

Keywords: Glossopoesis; Science Fiction; Narrative; Stylistics; Criticism.

Chapter 1 – Introduction

This thesis proceeds from the premise that fictional languages can add depth and credibility to a narrative. This axiom and its different iterations seem to be adduced by language inventors, writers and scholars whenever fictional languages are a subject of academic discussion (see Tolkien 1981; Lo Bianco 2014; Beckton 2015; Fimi and Higgins 2018; Langdon 2018; and Wahlgren 2021). Although this topic was approached by previous studies, as I will demonstrate later, there is still significant room for further research. One specific area that needs attention, assuming the axiom is correct, is how fictional languages can add depth and credibility to narratives, and this is the question I am setting to address.

To this end, I regard glossopoesis (language invention) as a literary phenomenon that manifests itself as various stylistic and narrative tools and devices. This opposes the view of fictional languages as little more than set decorations, occasional embellishments or perfumery; on the contrary, they consist of complex narrative constituents. In line with this, I argue for a 5-part typology that analyses glossopoesis from the perspective of specific narrative functions that fictional languages can have. Throughout this thesis, I survey science fiction (henceforth SF) texts in which fictional languages become the narrative dominant, informing their plot, their themes, and their narrative discourse (Malmgren 1993: 15). Notably, this is an idea couched in the principle that every element in a text "signifies"; and even when certain details may appear insignificant, their apparent insignificance or absurdity will be their function (Barthes 1974: 261).

As I consider it here, the term narrative refers to its Platonic broader sense, the diegesis-mimesis dichotomy. In other words, it involves "the representation of an event or series of events" (Abbott 2021: 256; Genette 1980: 25). Schmid (2010: 3) posited that it is sufficient that change of action or event be implied, for instance, via "the representation of two mutually contrasting states" for a narrative to take place. As it is, the changes of state or succession of events and the circumstances indispensable for a narrative do not need to be unambiguously denoted, which means they can be alluded to or even somewhat concealed for the more attentive reader to decode.

A narrative framework is thus the bulk of literary devices a writer utilises to tell a story; it refers to a literary element, sometimes also described as a structural framework, that largely determines the manner (a single narrative or frame narratives, e.g.) in which the narrative discourse is rendered (Abbott 2021: 25). Typically, this framework is divided into three basic layers: text, context, and subtext. Text is the most immediately accessible layer; it is the surface

meaning expressed by words and sentences in a story. Context is the layer that adds information such as backstory, character traits, rules and conventions of the setting where a story unfolds as well as social, cultural, ideological and historical contexture. The subtext is the layer of implied meaning; it adds information that can be inferred from the interaction between text and context. Additionally, I would argue that paratext consists of a fourth layer, as it can and often does inform a story with comparable impact. The freeplay of all these layers can bestow depth upon a narrative.

For the purposes of this thesis, I am assuming that narratives that have depth are thought-provoking, multidimensional, rich in detail, well-wrought in terms of world-building and have various discourses, levels or subplots, and non-obvious subtext, something the theory of omission proposed by Hemingway addresses as I comment on in Chapter 7 (Johnston 1984: 69; see Booth 1983: 186, Abbott 2021: 245). This may result in resonance, a series of rhetorical effects, and a plethora of different interpretative possibilities, increasing a text's sense of artistic significance or aesthetic value, which Beardsley defined as:

> [The] capacity to impart, through the adequate apprehension of it, a marked aesthetic character to experience – on the supposition that the presence of that aesthetic character itself confers value on that experience […] when the right receiver comes along.
>
> (Beardsley 1981: 239, 240)

Credibility, or *ethos* in classical rhetoric, can be somewhat trickier to define and approach, especially because it is normally taken in juxtaposition with the idea of depth. Although discussing credibility or believability in imaginary milieux may seem paradoxical, this is a critical aesthetic value in fiction. In his work *Biographia Literaria* (1817), Coleridge described this value as "poetic faith", or a "willing suspension of disbelief". In this light, literary credibility is a different notion to credibility outside fiction, the actual world.

There is no evidence pointing to the existence of a reading-fiction mode that readers activate when dealing with a literary text as if the mind had some sort of toggle switch to suspend one's ability to disbelieve (Gerrig 1993: 17). Nonetheless, Tuzet (2020: 475) argued that, at least in the literary context, this credibility has to do with coherence. This coherence is assessed by the reader under the genre's reading protocols of a given text instead of simply by logic or internal consistency. For instance, a realistic novel might have to maintain closer proximity to the reader's actual world coherence than a speculative text in order to be credible (see Chapter 3).

By the same token, Csicsery-Ronay (2008: 139) pointed out that this so-called credibility has to do with an appearance of plausibility and authenticity or realistic representation of fantastic things, a sort of disguised arbitrariness typical of the SF genre – a façade of rigorous scientific logic rendered in prosaic style – the central poetic illusion (see Chapters 3, 4 and 5).

Mel (1995: 793) stated that credibility is part of the intricate readerly process whereby the writer establishes a constructed world's discourse that "the reader is willing to accept" on the author's authority depending on how skilfully the events and persons are depicted and how intelligently the characters are assigned "their own voices". As I examine later, glossopoesis can lend some rhetorical elements that may contribute to credibility or engagement.

This view of fictional languages as narrative constituents has at least three implications. First, they should be the object of literary criticism and interpretation instead of an analysis that only covers accuracy using the same paradigm applied to natural languages, which is how most prior studies have addressed the subject. Second, as with most known narrative devices, it must be possible to understand the functions these linguistic fabrications have in a text. Third, reading these languages must not only be possible but indispensable for a broader appreciation of the texts in which they appear.

In line with this understanding, I have structured this study so that I can pursue the following specific objectives: (1) Survey a significant range of different literary time periods throughout history so as to demonstrate the scope of the glossopoeic phenomenon as well as to explore the ways fictional languages have been used throughout history; (2) Review authoritative studies that broach SF in stylistic terms from a readerly standpoint with a view to providing a basis on which to conciliate the reading of fictional languages and SF theory; (3) Establish a 5-part typology that approaches literary glossopoesis in a principled way.

Thus, rooted in a more structuralist tradition, I propose to revisit Stockwell (2006) in light of Cheyne (2008) and Tolkien (2016), also considering Wolf (2012), and Fimi and Higgins (2019), drawing on their contributions to further the understanding of literary glossopoesis. In effect, I propound to break Stockwell's three broad functions into a new model encompassing five specific functions whilst keeping my corpus restricted to twentieth- and twenty-first-century SF texts, as follows: speculative, rhetorical, descriptive, diegetic, and paratextual. Additionally, I seek to demonstrate that these functions can often overlap, meaning one fictional language can and frequently does have more than one narrative function.

1.1 Scope

Communication has been an ever-present theme of discussion in fiction, most emphatically in speculative fiction. Some narratives may not directly address this, but most texts broach the subject one way or another. Concerning this, Meyers (1980) stated that even in Mary Shelley's embryonic SF, one can perceive a preoccupation with communication problems. In effect, Victor Frankenstein's monster lurks behind a shepherd's cottage after being abandoned by his maker, realising people possess methods of imparting their feelings and experiences to others through verbal means (Meyers 1980: 1).

Subsequent SF works have underscored virtually every imaginable communication problem, from contacting aliens to futuristic corruption of speech due to cataclysmic events. Several exploratory works have focused on debating the 'science' of SF to show how the genre attains that "alchemical mix of art and science that is its distinguishing characteristic" in contrast to fantasy (Meyers 1980: 1). Scholes and Rabkin (1977: 153) noted that "Language itself has been both a problem and an opportunity for science fiction writers. Most of them have fudged the problem and thus missed the opportunity".

SF along with fantasy and dystopia have possibly been the leading literary genres regarding problems of language and communication. They are still present even when little consideration is given to them. Over the course of history, authors have come up with the most diversified ways to deal with them. As it happens, SF offers a profusion of plot possibilities for discussions of language or the contact of various speech groups. As Meyers pointed out:

> […] Only one job requires its practitioners to put down on paper their estimates of the language of the next decade, the next century, or the next millennium – the job of writing science fiction. Science fiction has, therefore, a special relationship within the field of language to historical linguistics.
>
> (Meyers 1976: 131)

Some, however, have gone with uninspiring solutions, such as aliens who speak perfect English even in a first contact story as in many *Star Trek* episodes or the convenient Galactic Standard in *Stargate SG-1* that is still just English. As in Alfred Bester's *The Demolished Man* (1953), other beings have telepathic powers. Yet others use a variety of universal automatic translators, as in Larry Niven's *Ringworld* (1970) or the *Star Wars* C3PO that claims to be fluent in six million tongues. Similarly, Douglas Adams's *The Hitchhiker's Guide to the Galaxy*

(1981) tells of the babel fish, which, once placed inside someone's ear, feeds on his or her brain waves and translates any thoughts into any language.

Such artifices have in common that they pose several plausibility problems, which interfere with their credibility. Hardly anyone would find it believable that English should be the galactic *lingua franca* or that there is a magical language understood by everyone in the universe. Also, even automatic translators must be fed information before performing any translation. As it is, a fish that translates brain waves sounds a bit more credible than the other two solutions but is still rather unconvincing and fantastic. Except for Adams's text, which is a comedy and a satire, *Star Wars*, *Stargate*, and *The Demolished Man* should supposedly take themselves more seriously, which, as Suvin pointed out, is something expected from the genre:

> Significant modern SF, with more profound and more lasting sources of enjoyment, also presupposes more complex and wider cognitions; it discusses primarily the political, psychological anthropological *cause and effect of science, and philosophy of science*, and the becoming or failure of new realities as a result of it. The consistency of extrapolation, precision of analogy and width of reference in such a cognitive discussion turn into aesthetic factors.
>
> (Suvin 1972: 381)

In a similar vein and supporting Suvin's argument in the above quotation, Meyers (1980) added that SF is before anything else about sound ideas rooted in scientific knowledge. Although Suvin's presuppositions on the consistency of extrapolation and precision of analogy are known to be stricter than what is observable in most SF works, one must agree that attention be paid to such basic premises of the genre as cognitive estrangement or a sort of defamiliarisation that appeals to reason, and not simply to an alleged passive suspension of disbelief from the part of the audience (see Gerrig 1993: 207).

If, on the one hand, those 'poor solutions' I mentioned do not invalidate the affiliation of those texts with SF, on the other hand, they impinge on the perceived aesthetic value of a work of fiction. For instance, first contact stories that deal with communication with alien species on the grounds of the greeting message, 'Take me to your leader' uttered in a robotic voice are generally not taken particularly seriously.

In effect, even if authors take on a dismissive attitude towards issues of intercommunication, there is always the question of naming strategies. As Le Guin (2019: 55) noted, "those who write fiction with an entirely imaginary setting […] need names for characters, creatures, and places of their fictive world". Coined names can be a good index of

a writer's interest and ability to play with language. The pulp era of SF saw a wide array of underdeveloped conventions regarding namecraft: heroes received names such as Buck, Rick or Jack, aliens used to be called anything like Xbfgg or Psglqkjvk, as long as the names remained unpronounceable, whereas princesses were named something like Laweena or LaZolla (Le Guin 2019: 55).

If several writers have taken scientific discourse relatively lightly concerning the theme of communication, critics have set the bar significantly higher for linguistic issues than for other scientific fields such as the natural sciences. Usually, no reasonable measure of poetic licence is granted, which, in a way, emphasises the 'science' but forgets about the fiction that is also a staple of the genre. Some writers have sought to grapple with the issue of plausibility, hence, by exploring language invention.

Not all literary texts that take an interest in linguistics are about glossopoesis. Still, the degree of complexity and artistry of a given story may drastically increase when authors subscribe to the language invention movement. Invented words and names, when carefully crafted, can open new windows into the story and its fictional world in ways that more orthodox prose cannot. As I argue, thus, the study of the use of glossopoesis in SF texts or in neighbouring genres is justified first because of the frequency and diversity with which they appear in literary works, and second because of the intricate ways in which invented languages have been deployed in narratives.

Literary fictional languages featured in a story can be highly expressive and poetic. As I elaborate on in the next chapter, because of its scope and diversity, glossopoesis constitutes a significant phenomenon in literature and is thus well-deserving of a systematic scholarly investigation. The need for a validated method of criticism for works of fiction featuring glossopoesis is yet another justification that this research seeks to satisfy.

To this, I have compiled texts with a considerable impact on twentieth- and twenty-first-century English-language literature or with outstanding experimental features. They all deploy glossopoesis as narrative constituents, meaning that it becomes a dominant theme and, in some cases, a stylistic tool to advance the plot. But before moving forward, it is crucial to take a moment to discuss the nomenclature I have adopted here. Throughout this thesis, I will deal with polysemic concepts that are relatively unstable, fluid, and enjoy a modest degree of standardisation.

1.2 Definitions

To begin with, the art of language invention, whether in literature or for art's sake, has received many distinct names – language construction, language creation, glossopoesis, glossopoeia and conlanging. Although the first two terms may seem transparent to any speaker of English, the last three deserve additional consideration. Both glossopoesis and glossopoeia are Romanised versions of the Greek words *γλωσσα* and *ποίησις* (glôssa and poíesis) or language invention, possibly by analogy with mythopoesis/mythopoeia, the creation of myths. *Poiesis* literally means the activity in which a person brings something into being that did not exist before. It derives from *ποιέω*, 'to make'. This opposes other Greek words that also translate as 'creation', such as *δημιουργία* and *ποιητική*, respectively, creation (as in all that exists), and poetics.

Throughout my publications, I have consistently used the spelling 'glossopoesis'. It has been suggested that the spelling 'glossopoiesis' is a more appropriate orthography as it reflects the original Greek word more closely. However, I contend that the word-formation process that led to 'glossopoesis' is the same as in the case with '*ποιητική* > poetics', which, to the best of my knowledge, has always remained unchallenged. The same spelling is found in the analytical derivative 'glossopoeic', seen in the *Glossopoeic Quarterly,* published between 1988 and 1992, probably the first documented use of the term.

Likewise, conlang is an acronym of **con**structed **lang**uage, and whilst it refers to the product, a constructed language, conlanging, with the noun action suffix '-ing', refers to the activity. The term 'conlang' tends to be more popular among aficionados whereas glossopoesis and glossopoeia, denoting the art of language invention rather than the product, appear more often in scholarly essays. In the past, the term 'artificial language' was frequently used as a synonym for conlang. The unpleasant connotations of the qualifier 'artificial' seem to have forced the term into disuse, which is understandable since most constructed languages, except for the logic ones and a few alien tongues, are made to look as natural and organic as any natural language.

As it happens, some linguists have stated that conlangs are not *ipso facto* languages. Noam Chomsky is thought to have said, "Esperanto is not a language. It's just parasitic on other languages" (Stria 2016: 40). In pursuit of a definition, many others have ignored the conlangs created by enthusiasts, only taking notice of those meant for international communication. The term is indeed debatable, and the number of different synonyms or near-synonyms related to invented languages validates the search for a standardised taxonomy.

It could be argued that any language found in literary works and academic writing is invented or artificial since it differs significantly from everyday speech. Because of that, I believe a short delimitation of what I consider a conlang or invented language is in order. As treated here, therefore, glossopoesis refers to the conscious invention of a language, one that an individual or individuals create rather than one that slowly evolves through use in a speech community which is how natural languages are born. Le Guin (2019: 60) posited that what most novels need to do in this respect does not go much beyond making up a few mysterious words that confer a flavour of foreignness on the stories, provided that the result seems linguistically plausible.

Incidentally, a line is drawn between constructed and fictional languages regarding the degree of development. While most fictional languages are simply sketches existing only within the fictional milieu, constructed languages are usually more fully developed and are not necessarily connected to a narrative (Cheyne 2008: 386). Watt (2011: 162) suggested that invented languages can be assumed to encompass the ones constructed or created through systematic typology, with unique (or distinctive) phonology, morphology, syntax, and discourse, frequently having "a synchronic surface of structure and a diachronic backstory", in addition to restrained stylistic creations innovative enough to highlight the political and cultural charge of a given literary work.

In practical terms, as I will demonstrate in Chapter 2, most fictional languages do not consist of much more than a basic linguistic concept worked out in a story. Only a few happen to be fully-fledged languages (Peterson 2015: 19). Also, these languages may entail simple or intricate naming strategies, futuristic dialectal variations, fictional *Ursprachen,* pastiches of other languages, as in invented pidgins, or even constructions with a comprehensive vocabulary and a complete grammar. Ultimately, the notion of invented language I have adopted here could even include sign or tactile languages, musical tongues, and extreme extrapolations such as a language of colours and lights, smell or taste.

So, taking the term in a broad sense, for the purposes of my discussion, by language, I mean any complex or straightforward communicative system described or mentioned in a work of fiction. Put differently, if a text presents a narrative entity, say a vocabulary, and directly or obliquely describes or handles it as a language, it will fit the parameters I have set here. To avoid confusion, throughout the thesis, I have used the term 'fictional language' to refer to the invented languages that appear in fiction and 'conlang' to refer to those that do not. Wherever I use the term 'invented language,' I will be referring to either fictional languages or conlangs

in a generic sense. The language creator shall be referred to as a conlanger regardless of whether he or she is a literary author in addition to a language inventor or a language inventor only.

Typically, I do not view code creation, language planning, natural pidgins and creoles, or revived tongues as glossopoesis. Also, I prefer not to consider oneiric languages (languages acquired in dreams) or glossolalia (speaking in tongues because of incantation or spiritual influence) under the umbrella of glossopoesis. Religious people may believe these phenomena are factual rather than fictional. Thus, perhaps, they should be studied from a sociolinguistic or psycholinguistic perspective, unless, of course, they are represented in fiction.

Isolated neologisms and neosemes usually do not fall under the category of glossopoesis either. In plain words, by neologism, I mean the creation or borrowing of new words still associated with the current stage of development of the English language. SF is full of those: cryogenics, androids, unobtainium, and so forth. Neosemes, nevertheless, refer to shifts in the meaning of existing English words – force fields, Frankenstein (shifted to mean the creature in the popular imaginary rather than the scientist), utopia (shifted to mean any delusional optimistic idealisation), etc. (Stockwell 2000: 115, 119). Glossopoesis is in the business of getting authors "outside their own languages" (Spruiell 1997: 441), whereas neologism and neosemy consist more of inventive language rather than invented language.

A notion that can be particularly problematic in terms of its differences and similarities with glossopoesis is 'literary experimentalism'. As the term implies, 'literary experimentalism' experiments with literature, challenging language and what is regarded as artistically valid, questioning the nature of verbal art (Farsi 2019: 29). It could be argued that experimentalists write against traditions and canonised literary achievements. Thus, experimental literature is highly inventive and innovative, constantly open to stylistic and technical renovations, reconceptualisations and reconfigurations. Such exponents of literature as *Finnegans Wake* (1939), *Barefoot in the Head* (1969) and *A Clockwork Orange* (1962) are usually considered experimental literature and are treated here as glossopoesis. This can be explained by the way these three works experiment with language. All three imagine an invented language – 'Oirish', 'Psychedelic English', and 'Nadsat' – characterised by their technique, linguistic hybridism, resulting in something that is linguistically unreal.

Conversely, other instances of literary experimentalism, although employing curious changes in language, do not target language invention but the 'conventionalised' meaning and aesthetics associated with concepts or what sounds normal and correct. This can be noticed, for example, in Acker's novels that attempted to break with the aesthetic norm by challenging

notions of plot, character consistency, time and space or by prominently figuring things like razors, suicides, infection and other abject imagistic texture (Rock 2001: 205). Although highly innovative, these experiments did not cause that sense of foreignness called forth by the three fictional languages I mentioned.

Likewise, Gertrude Stein's poetry sometimes features what could be described as extreme cases of alliteration and anthimeria (using a part of speech as another), such as in the sentence "Rose is a rose is a rose is a rose" in part of her 1913 poem *Sacred Family*. The experimental character of the poem is evident in the use of 'Rose' as a proper name and subsequently as a common noun and as a verb. Nonetheless, the experiment typification does not include the notion of another language or a traceable language invention technique. In essence, this differentiates Joyce's experimental tone from that of Kafka's, Proust's, Lawrence's and Woolf's, for example, again invented vs inventive language.

Some could regard Joyce's inventions as experimentalism only rather than glossopoesis. However, it is possible to note a number of systematic inventions such as a near-obsession with etymology, change in conventional syntactic structures, and most importantly, borrowings from several languages with a view to granting words what the writer himself referred to as "more valuable thoughts" (Joyce 1955: 27).

In other words, this in-betweenness of literary experimentalism and language invention can be attributed to the fact that several experimentalists have often deployed glossopoesis as a stylistic tool and creative technique. However, the term literary glossopoesis does not bring with it any set of methodological baggage in contrast with 'literary experimentalism'. This neutrality, I argue, is necessary for the innovative angle from which I intend to study fictional languages.

Concerning the creative process, constructed languages are usually classified as either *a priori* or *a posteriori* (Eco 1997: 209; Crystal 1997: 354). The former means they are not based on existing languages, whereas the latter implies the influence of one or several natural languages. With respect to taxonomy, constructed languages are commonly classified according to motivations or orientation. By conlanger's motivation, I mean why he or she is creating a language – for artistic purposes, his or her hobby, a job or a novel? As for the invented language's orientation, I mean what it is designed for – to be logical, sound alien, look foreign, or for international communication. Peterson (2016: 19-20) lists at least six taxonomic terms long in use both among conlangers and scholars that I would like to elucidate here:

1. Artlangs (artistic languages) are created for aesthetic, fictional, or other artistic purposes.

2. Auxlangs (auxiliary languages) are languages created for international communication or as a *lingua franca* for people who speak related languages – Steenbergen's pan-Slavic, Slovianski, for instance. They are sometimes termed IALs (International Auxiliary Languages).

3. Engelangs (engineered languages) are created under rigid principles, generally involving logic.

4. Fictional languages are the ones supposed to exist in a fictional context.

5. Fake languages, sometimes also referred to as grammelots, a term that emerged from comedy and theatre, are those created to give the impression of an actual language in some particular context or to pass as another language (Wahlgren 2021: 39). I would also insert into this type, the languages created primarily to render an appearance of foreignness. Brazilians have a brilliant term for this, used wittily: *embromation* (from *embromar*, Portuguese for 'to deceive' or 'to make a fool of', plus the English action suffix *-ation*).

6. Jargon or pastiche refers to hybrid invented languages that accommodate foreign features, making it harder for others to understand.

Moreover, Eco (1997: 209) has shed light on the philosophical languages, those that allegedly reflect puzzling philosophical views, such as a language that relays the real character of things and logical languages. Some language invention projects may share different orientations. Of course, some may be artlangs and auxlangs at the same time. Others may be engelangs and auxlangs. Others can be fictional artlangs, engelangs, auxlangs, and so forth (see Figure 1). Yet others, as Rosenfelder (2010: 11) has noted, are drolly called a kitchen-sink language, because they contain too much 'linguistic exoticism', a notion I elaborate on in Chapter 6.

Fictional languages are generally further classified according to their complexity or development level: sketchy, naming, and fully-fledged. Of course, I am relativising the concept of 'fully-fledged' here to subsume invented languages developed to the point of being usable in real-life communication. Such invented languages generally have constructed phonetics and morphosyntax, albeit a limited vocabulary of content words. It is worth stressing that this last classification is formalist rather than functionalist.

There are all sorts of subcategories. *A posteriori* languages, for instance, may be subcategorised according to the language family they are more closely associated with: Indo-European, Uralic, Mayan, etc.; language branch, the family subgroup: Germanic, Romance, Slavic, Altaic, etc. Additionally, they could be analysed in terms of grammatical structure: analytic, synthetic, fusional or agglutinative. Nevertheless, the scope of this research does not allow me to dwell on those.
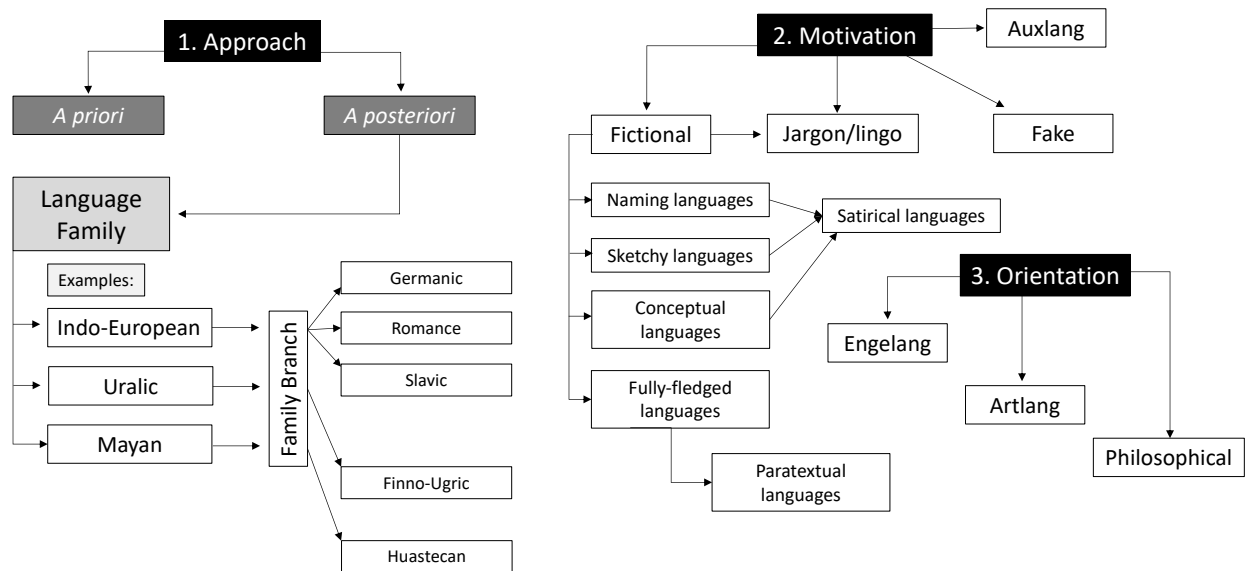
Figure 1. General taxonomic representation of conlangs

The motivation to create a language can range from bringing personal satisfaction to enriching the plot of a literary or cinematic work of fiction. An invented language's complexity and specific orientation can also vary dramatically from one piece to another. It may comprise an ancillary narrative framework designed to remain concealed at first glance or even to add information as subtext so as to avoid the overuse of other narrative devices, perhaps to sidestep a narrative style reputed as less than adequate.

Also, depending on the level of complexity an author wishes his or her project to exhibit, the construction activity may include deciding on the sounds of the language, creating a lexicon, developing grammar rules and designing a writing system, which could be alphabets, abjads, abugidas, pasigraphies, pasimologies, or even the use of colour patterns or dots. As might be expected, invented languages do not always have to be *Schriftsprachen* – tongues with a writing system. Glossopoesis might also be used with purely artistic intents to apply or demonstrate

aesthetic concepts. A few examples of glossopoesis also result in engaging aesthetic effects, and this is something which I also want to account for.

By analogy with conlang, enthusiasts of glossopoesis, mainly those who also endeavour to write SF or fantasy, have coined the term conworld, short for constructed world. This term is equivalent to Tolkien's "subcreation" and Wolf's "imaginary world" (2002: 154). In other quarters, it refers to the setting of the story, that is, the world constructed by the author to host the story. These conworlds usually have their own physical laws, and the concept of 'possible' inside them is frequently amplified. Conworlds require a specific 'mythopoesis', which involves that which Le Guin (2019) calls a backstory, a foundation myth, a fictional culture, and finally, a fictional language. I have used 'conworld' throughout the thesis because it refers unambiguously to world-building as found in SF or fantasy. All these narrative constituents are interdependent, and a certain consistency level is necessary for a cohesive story (Tolkien 2016: 53).

Finally, whenever I use the terms 'reader' or 'initiated reader', I will be referring to someone who has the necessary schematic knowledge and is familiar with textual features and background to understand a text fully (Black 2006 and Delany 2009). This is the equivalent to a competent reader (Culler 1975), the implied reader (Eco 1992 and Iser 1972), or the intended readership for a given text.

1.3 Review of Literature

Despite being more than 500 years old as a consistent phenomenon in English-language literature, it was not until relatively recent times that the study of glossopoesis started to be taken more seriously. As it gained a scholarly tone, a 'demarginalisation' process began to take place like the one SF has also undergone. Pushed by the rise in the notoriety of authors who employed fictional languages in their works, not only in SF but also in the other speculative genres, literary glossopoesis has received increasing attention. Some of these celebrated literary authors were Tolkien, Le Guin and Orwell.

After Suvin's trailblazing work *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (1979), research papers and book-length essays picked up from where he left off, tackling issues about SF and the presence of glossopoesis in literary works of fiction. Therefore, in this review, I have grouped works thematically to point out what contributions each research brings to the present thesis and the research gaps they left, which I intend to fill.

A careful analysis reveals that a significant part of the scholarship about fictional languages exhibits a predominant memorialist and formalist nature. For instance, *Les Fous du Langage* (1984) by Yaguello described the phenomenon both inside and outside literature in thematic and chronological order. She grouped glossopoeic projects as 'myth and utopia', tackling the relationship between glossopoesis and mythopoesis as well as the connection between language invention and historical background, "over time", addressing the search for a perfect language from the sixteenth and seventeenth centuries, "at two poles of the linguistic ghost", where she broached the examples from outside literature that have mystical or religious associations, and "defence of natural languages" in which she argued for a philosophical differentiation between natural and invented languages.

It is possible to note that Yaguello sought to conciliate glossopoesis, cultural expression, and historical background throughout her survey. This served as a basis for my timeline of English-language literary glossopoesis in Chapter 2. However, one gap left by Yaguello that I intend to explore is how the glossopoeic phenomenon relates to the literary movements in each period, genre and school of thought in addition to the historical context.

Yaguello's approach is similar to how Rasula and McCaffery studied the phenomenon in *Imagining Language: An Anthology* (1998) which significantly informs Chapter 2 as well. Although more diverse and ample in scope, *Imagining Language* also tackles issues of language invention in chronological and thematic order. Like Yaguello, they did not focus on the literary realm but incorporated all sorts of language inventions: constructed, fictional or simply unorthodox use of natural languages and prosody without a solid inventive component. In other words, their account ranges from sound effects to more complex creations, going back in time to as early as 350 B.C.

Concerning literary occurrences of glossopoesis, the number of English-language instances seems disproportionally higher than in other languages. This appears to suggest that literary glossopoesis as a consistent phenomenon may be predominantly found in literature written in English and that occurrences in different languages, such as German, French, Italian, Spanish and Portuguese, may be sporadic rather than systematic.

This assumption seems to be endorsed by Conley and Cain in *Encyclopedia of Fictional and Fantastic Languages* (2006), which presents a short description of fictional languages from films and literature across different genres and periods. Out of the more than 220 examples of literary and filmic glossopoesis, only five are not anglophone. This is also the case in *From Elvish to Klingon – Exploring Invented Languages* (2011), edited by Adams. The volume brings

an antholgy of essays by various scholars who provide a stylistic analysis of fictional languages like Newspeak, Nadsat, Klingon, the Joycean pastiches, and Tolkien's conlangs.

One could argue that this alleged English predominance is due to the fact that English-speaking authors collected the data in such works. However, this can also be inferred from several non-anglophone scholarly papers dedicated to studying literary glossopoesis that document mostly examples from anglophone literature and cinema (see Fernández 2019: 275; Yaguello 1984; Albani and Buonarotti 1994: 13-17; Seeber 1945: 586-597; Rogers 2011: 298). This postulation has oriented the delimitation of the scope of my research to centre on English literature as more consistent evidence appears to be available. This facilitates an analysis of the connections between the phenomenon and the various literary movements. However, it is relevant to emphasise that this anglophone predominance seems to be found only in literary and filmic glossopoesis, not the case with the art of language invention in general.

The previously mentioned memorialist approach was eventually replaced with a more analytical method starting with Beauchamp in "Future Words: Language and the Dystopian Novel" (1974). Broaching language invention and other ways in which speculative fiction dealt with linguistic problems, Beauchamp attempted a critical reading that focused on linguistics as a plot device. By the same token, Meyers, in *Aliens and Linguists – Language Study and Science Fiction* (1980), attempted a contextualised analysis that conciliated the conworlds of the stories and the linguistic postulations that informed the plot of the narratives. Here again, it is impossible to notice a clear differentiation between the general use of linguistic postulations and glossopoesis. Many of the instances that Meyers mentioned range from telepathy to universal translators in order to represent alterity in communication rather than through language invention.

Two distinct foci seem to have permeated Meyers's study. On the one hand, he compared the various ways SF authors have used linguistics in narrative as a criterion for plausibility and, consequently, artistic value. The result of this approach is that, in general, Meyers demonstrated how inaccurately communication problems are treated in works of SF. On the other hand, he pointed to a bulk of literary texts that, according to him, form the canon of literary glossopoesis due to their complexity, innovation, impact, relevance, and depth: *The Lord of the Rings* (1954), *Nineteen Eighty-Four* (1949), *The Languages of Pao* (1958), *The Winds of Time* (1959), *The World of Null-A* (1945), *The Embedding* (1973), and *Babel-17* (1966). Meyers concentrated his more detailed analysis on such texts. Evidently, *The Lord of the Rings* stands out as non-SF.

Nevertheless, Meyers claimed that the degree of linguistic accuracy and artistry displayed by Tolkien's languages characterises the text as having SF leitmotifs.

Following Meyers, Sisk presented an analytical study that focused on the fictional languages in dystopian writing in *Transformations of Language in Modern Dystopias* (1997). He benefited from a number of other works that had come up after Meyers, although maintaining a very similar corpus. His purpose was to offer "a generic model of language use in dystopian literature" (Sisk 1997: 2). Even though Sisk clearly intended to separate dystopia from SF, he admitted that the boundaries between the two genres are blurry, which explains the similar corpus to that of Meyers that is clearly restricted to SF: *Nineteen Eighty-Four* (1949)*, Native Tongue* (1984), *A Clockwork Orange* (1962), *Riddley Walker* (1980), and *The Dispossessed* (1974), in addition to other texts that address problems of communication without an obvious connection to language invention.

The investigations of Meyers and Sisk eventually became authoritative studies in the field, but both left interesting research gaps that began to be explored first by Stockwell in "Invented Languages in Literature" (2006) and later by Cheyne, who, based on Stockwell, devised a critical model of SF and glossopoesis in "Created Languages in Science Fiction" (2008). Her work was predicated on the notion that fictional languages are communicative devices rather than empty entities that could be dismissed as unessential.

After reviewing the previous works mentioned heretofore, both Stockwell and Cheyne concentrated purely on fictional languages, abandoning the previous model that did not distinguish glossopoesis from other ways in which linguistic issues are discussed. They presented an outline of the primary functions of literary glossopoesis as elaborating the distance between the reader's actual world and the world imagined by the texts (Stockwell 2006: 3; Cheyne 2008: 392).

Stockwell (2006: 9) innovated by proposing a 3-part typology to account for the broad textual functions of fictional languages. The first one was the elaborative function since fictional languages can lend "an ornamental richness to the imagined landscape and works essentially as detailed lyrical description". The second was the indexical function because fictional languages can serve as an index of the difference between the reader's actual world and the conworld. And the third one was the emblematic function, for fictional languages can "represent a thematically important idea".

In a similar vein, Cheyne (2008: 391-392) noted that literary glossopoesis is polyvalent and allows writers to reach readers at various levels. Cheyne arranged the communicative

aspects of literary glossopoesis into four functions: testing the Whorfian hypothesis, language as characterisation, languages as an emblem, and language as a cumulative alien encounter (alien denoting 'otherness', not necessarily extraterrestrial, and cumulative meaning progressive). Cheyne argued that most fictional languages share two or more common characteristics that range from "utterances in or purporting to be in" the invented language, to translation and explanation of particular lexicon or grammar, subjective analyses of the fictional language's sonority or syntax, a debate about one or many of their quirks, and glossaries of terms and illustrations of constructed scripts, or constructed writing systems (conscripts).

The pioneering notion that fictional languages can have narrative functions outlined by Stockwell and later Cheyne laid the basis for my 5-function typology. However, the typical limitations in the scope of an encyclopaedia entry and a scholarly paper left reasonable room for further investigation that can be explored considering Tolkien's *A Secret Vice – Tolkien on Invented Languages* (2016) and Wolf's *Building Imaginary Worlds: The Theory and History of Subcreation* (2012). Both Tolkien, read by Fimi and Higgins, and Wolf discussed how fictional languages play into world-building and narrative worlds.

Fimi and Higgins (2019: 22) wrote that using glossopoesis with a foreign or alien "sound-sense" emphasises the nature of the peoples who speak the fictional languages. Fimi and Higgins observed that glossopoesis could introduce new concepts or highlight the 'otherness' of a particular fictional race or culture in a conworld in line with Tolkien's three primary directives, something Wolf (2012: 183) also upheld (see Chapter 6). They also agreed that SF authors commonly appropriate linguistic postulations, mainly involving the Sapir-Whorf hypothesis (see Chapter 4) or extrapolations thereof. Additionally, they pointed to a connection between glossopoesis and historical/literary contexts.

It is reasonably evident, therefore, that all three models, Tolkien's, Stockwell's and Cheyne's, share relative compatibility. All of them classify the roles a fictional language can take up in a work of fiction into three or four functions or directives, which offer an array of engaging perspectives. Fittingly, it seems necessary to state that I do not intend to replace these models as I regard each one as correct. However, I mean to expand upon them, offering alternative ways in which fictional languages can enrich the narratives that feature them. This intended expansion and the intersection of the three models are represented in Figure 2.

It is worth noting that although Stockwell's and Cheyne's corpora were significantly diverse and benefited from more recent texts than those explored by Sisk and Meyers, they still cover some of the same texts: *Nineteen Eighty-Four* (1949)*, Native Tongue* (1984), *A*

Clockwork Orange (1962), *The Embedding* (1973), *Babel-17* (1966), *The Languages of Pao* (1958), *Riddley Walker* (1980), and *The Dispossessed* (1974). This repeated mention of these texts across many different studies has bestowed upon them the status of glossopoeic architexts in the genre of SF. Therefore, I have selected them as part of my own corpus.
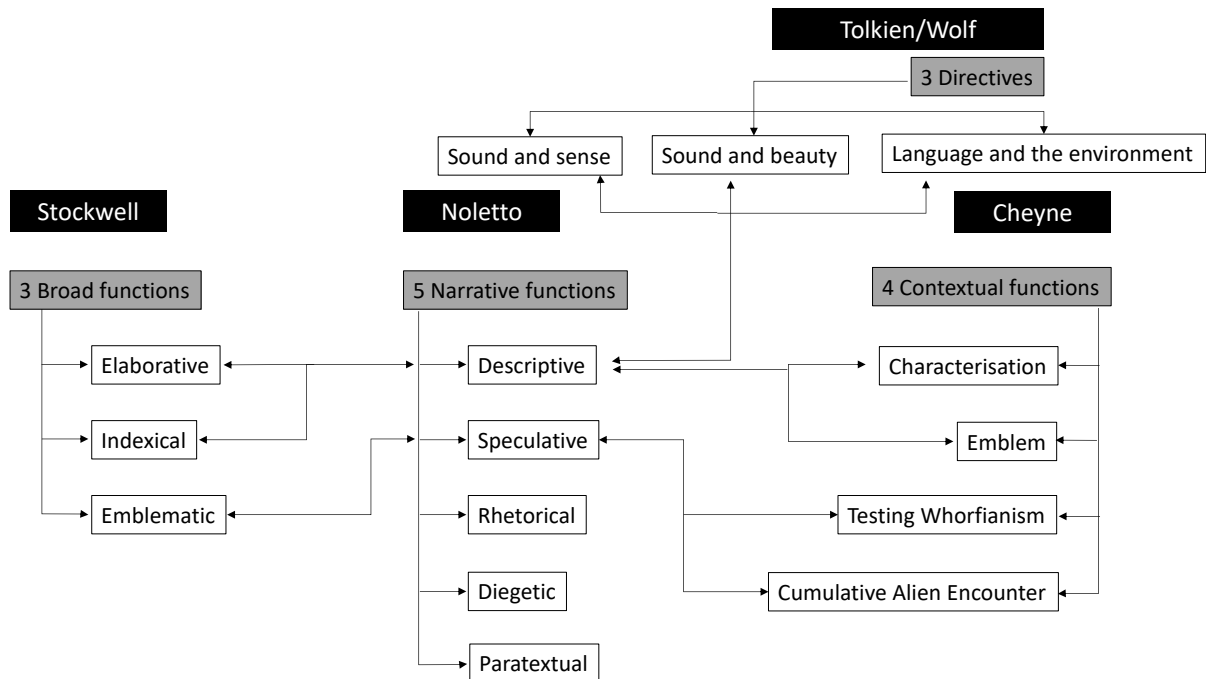
Figure 2. Interaction of the different glossopoeic typologies.

As previously stated, Tolkien explored the particularities of phonaesthetics and setting or character description. At the same time, Wolf tried to conciliate the notion of subtext and the concept of fictional languages as means of communication between writer and reader. As I detail in Chapters 5 and 7, the characteristics pointed out by Stockwell and expanded upon by Cheyne and Tolkien's views on the connection between world-building and glossopoesis form the basis for the analysis of fictional languages as rhetorical figures and diegetic tools.

Additional notes on the workings of narrative and, more specifically on SF narratives, have been drawn from Stockwell's *Poetics of Science Fiction* (2009), Delany's *The Jewel-Hinged Jaw: Notes on the Language of Science Fiction* (2009), and Abbott's *The Cambridge Introduction to Narrative* (2021). These texts employ a stylistic approach to reading and interpretation that I seek to apply to reading glossopoesis in SF.

1.4 Methodology and Thesis Overview

Instead of an outline of the complete analytical apparatuses that I use, I thought it more beneficial to describe them as I go over them in each chapter. However, a brief preliminary account might be in order. Overall, I regard the glossopoeic phenomenon first as literary, then as the conjunction of social, historical and literary forces that reveals disquiets and interests in such matters as style, culture and ideological expression. I consider it a free epistemological space that invites a vast array of constituencies and inspires a great variety of creative methods and styles. Therefore, rather than neglect this or that view, I intend to produce an interdisciplinary study that merges the memorialist and analytical approaches scattered throughout several works and the critical approach I devise here.

In terms of theoretical affiliation, this study adopts a stylistic methodological take in that it draws on the consolidated insight available within literary stylistics and literary theory. It applies theoretical frameworks to have the most currency in academia but also benefits from the vision of practitioners – writers and conlangers. Such traditions of thought as Structuralism and New Criticism, all of which made the language of the text being analysed a central concern, form my analytical frame of reference (Giovanelli and Harrison 2022; McIntyre 2012).

This frame of reference will allow me a critical methodological eclecticism that makes it possible for me to choose the most appropriate tools depending on the tasks at hand, which are both many and diverse. Fittingly, this study is also informed by the resources of neighbouring epistemic fields such as narrative theory, pragmatics, and of course, general linguistics, since my main interest here is communication, whose most basic object of enquiry, like in most mentioned areas, is still language.

While literary stylistics has primarily focused on the craft of writing, or how linguistic choices and writing techniques play into the literary text, engendering readerly effects, narrative theory is more concerned with the distinctions and definitions of structural features. In other words, stylistics distinguishes theme from style, whereas narrative theory helps to understand the differences between story and discourse. As I seek to demonstrate throughout this thesis, combining these two perspectives is key to a thorough analysis of literary glossopoesis (see Leech and Short 2007, and Herman 2002). Moreover, literary stylistics and narrative theory seem to agree with a procedure that involves isolating the various components of a text and studying the interconnectivity among them, which is the basic principle of my method.

I regard fictional languages with a high degree of development, regardless of completeness, as standalone artwork. Thus, on occasion, I will proceed with an ekphrastic

analysis to explore how the probable creative process might play into the appreciation of a text with some sort of glossopoesis. This is particularly the case in Chapter 5 and the last two sections in Chapter 6.

Lem (1985: 212) stated that sample representativeness in other epistemic fields is quite different from literature. For instance, every normal tiger is a valid species representative, but there is not anything like a "normal story" (see Bould 2002: 55). Nonetheless, Lem (1985: 232) maintained that a "theory of literature either embraces all works or it is no theory". Therefore, to ensure that the model resulting from this study can be applied to approaching other SF texts containing glossopoesis, my procedure involves analysing a large body of texts starting with the first recorded exemplar.

In line with this, regarding data collection, my investigation is primarily bibliographic. It is pertinent to note that, although this is predominantly a work of literary criticism that aims to study glossopoesis from a literary perspective, due to the interdisciplinary character of my study, a few times, it will be beneficial to cross over into the domain of cinema given its intrinsic confluences with literature. Moreover, contrasting fictional languages from SF and fantasy will sometimes be helpful.

Therefore, I begin my survey by conducting a historiographic study of glossopoesis in English-language Literature. The study provides a diachronic perspective that is sensitive to historical and literary contexts. As I expect to demonstrate, the spectrum of the literary phenomenon of fictional languages is unusually broad to be handled in its entirety by one single study. I shall carry out case studies to produce a more in-depth analysis that can sufficiently establish the validity of my 5-part model. These case studies will isolate cut-outs of the phenomenon so that I can analyse it more appropriately via close reading.

Since the glossopoeic phenomenon appears to be predominantly found in literature written in English, it seemed suitable to establish literature written in English as the first scope constraint. The second one, thenceforth, has to do with the time period. Instead of looking at literary glossopoesis from the 1500s onwards, I decided to examine contemporary works, the body of works produced from the 1940s to the 2010s. This is in line with the third constraint, which concerns genre boundaries. As I highlight in detail in the next chapter, glossopoesis occurs across various genres but has concentrated on speculative fiction in contemporaneity. Consequently, I decided to analyse glossopoesis as it appears in SF since the genre seems to offer more evidence of fictional languages as narrative devices.

I have divided the thesis into two parts. Part 1, Departure, considers key aspects of my two areas of concern: glossopoesis as a literary phenomenon and SF as a genre. Accordingly, my procedure in Chapter 2 consisted of a quantitative survey of literary works for the use that writers have made of glossopoesis throughout history. It traces an overview and historical contextualisation of the numerous pieces of fiction that featured fictional languages, as stated, from the 1500s up to contemporaneity, in literary texts and other types of media.

This historiographic and theoretical analysis demonstrates how wide-ranging and multifaceted the phenomenon is, in addition to showing how the historical context impacts and is reflected by the literary construction of languages and how issues of communication have always stood out as a leading debate theme in fictional works written in English. In other words, this chapter consists of a second review of literature; only this time, it focuses on works of art rather than scholarly texts. This should also give a broad-spectrum view of how the models of Stockwell and Cheyne and the one I propose here could be used to read glossopoesis in general since it is possible to trace its communicative character.

Chapter 3 is concerned with the theories of SF, which I approach from a perspective that highlights the genre's writing traditions and reading protocols. This chapter adopts a bibliographic framework informed by the views of judgemental experts about how language is used in a more specific way that differs from how it is used in other genres. I also propose a readerly approach to SF based on the interplay of elements such as device, style, and tropes. This chapter draws on the contributions advanced by Suvin (1979), Csicsery-Ronay Jr (2008), Rieder (2010), Evnine (2015), Stockwell (2000), Delany (2009 and 2012) and Mandala (2010).

I intend to pay attention to the two poles of literary works: the poetic and the aesthetic. While the so-called poetic pole refers to the artistic creation, the text, the aesthetic has to do with its realisation and effect on the reader (see Iser 1972: 279 and Ingarden 1968: 69). Therefore, Part 2 of the thesis, Poetics & Aesthetics, is concerned with the inner workings of literary pieces that feature fictional languages and their theorised impact on the reader. Aesthetic expressions can be considered context-bound. So, the analytical portion of this study will consist of case studies of the architexts indicated earlier by Stockwell, Cheyne, Sisk and Meyers, in addition to other selected texts that particularly contribute to the understanding of literary glossopoesis.

These less renowned novels and short stories outside the body of texts already mentioned are worth thorough analysis firstly because they stand out in the features that I have set out to explore, secondly due to their uniqueness in how glossopoesis is used in them, and thirdly

because they represent more recent expressions of the phenomenon. Furthermore, I have organised each case study in this part into thematic streams according to the narrative and prose characteristics that appear to be most salient in each text, as follows:

1. Thought experiments: *Embassytown* (2011), *The Embedding* (1973), and *Snow Crash* (1992).
2. Experimental prose: *Riddley Walker* (1980), *Barefoot in the Head* (1969), and *A Clockwork Orange* (1962).
3. Onomastics and characterisation: *The Sparrow* (1996), *Dune* (1965), and "A Spot of Konfrontation" (1973).
4. Narratorial style based on glossopoesis: "Story of Your Life" (1998), *Babel-17* (1966), *Nineteen Eighty-Four* (1949), *The Languages of Pao* (1958), *The Dispossessed* (1974), and *Native Tongue* (1984).
5. Use of paratexts: *Always Coming Home* (1985).

Consequently, Chapter 4 discusses the speculative function of glossopoesis. This chapter centres on linguistic theories explored via fictional languages such as Whorfianism and Chomskyanism. What is more, I also survey philosophical debates raised by glossopoesis that go beyond language. Chapter 5, then, investigates the rhetorical function. This chapter studies dialectal extrapolations of English in futuristic corrupted forms, approaching them from a more readerly perspective, highlighting three effects: immersion, disorientation, and repulsion. Chapter 6 is concerned with the descriptive function. This chapter focuses on three types of description related to world-building and characterisation: phonoaesthetic, semantic, and mixed models.

Chapter 7 introduces the diegetic function, divided into parallel, supporting and competing narratives. Chapter 8 explores conscripts, maps and glossaries as paratexts, their nature both inside and outside narratives, or their mimetic properties, through iconic, verbal and transmedial paratexts. Finally, I seek to reconcile the reading protocols of SF, the poetics and aesthetics of literary glossopoesis and the five narrative functions in a reading model to approach fictional languages in SF.

Part 1 – Departure

Chapter 2 – Glossopoesis in English-language Literature: An Annotated Timeline

It has been suggested that SF matters partly because it is a substantial, widespread, and highly influential living genre (Stockwell 2000: 2; Csicsery-Ronay 2008: 14). If this view is correct, glossopoesis matters for similar reasons. With all of its intricacies and curious uses in prose narrative technique, it is among the broadest phenomena in literature in terms of variety and time frame.

The earliest record of language invention of any kind is probably Aristophanes' comedy *The Acharnian,* dating back to 425 BCE. *"I artemane Xarxas apiaona satra"*, the opening line from the King of Persia's minister, Pseudartabas, apparently consists of a fake language designed to mimic the Persian language, with the use of a satirical namecraft, as the prefix 'pseudo' implies. The play, set during the Peloponnesian War, is a satire on war and warmongers, and the language is used to engender a comic effect (Conley and Cain 2006: 1).

Aristophanes recognised the utility of glossopoesis to give his audience both a representation of foreignness and non-obvious subtext. So much so that he turned to the same technique sometime later in his comedies, *The Birds* and *The Frogs*, respectively, featuring a bird language and a frog language (Wahlgren 2021: 15).

After that, sometime in the 1200s, Hildegard von Bingen's *Lingua Ignota* made the second known contribution to the phenomenon. Profoundly sensitive to music and phonaesthetics, the German abbess coined a series of unknown words (*Aigonz*, God, *sunchzil*, shoemaker, etc.) allegedly according to a specific kind of religious aesthetic effect to use in her poetry and music (Higley 2007: 63; Peterson 2015: 7). Other inventions by influential creators include Dante Alighieri's *De Vulgari Eloquentia* (1302 or 1305, CE), Raymond Lull's *Ars Magna* (in the early 1300s) and Jakob Böhme's *Natursprache* (1623). These linguistic projects sought the original human language. Numerous other language inventors presented their projects, at times involving an aesthetic sense again but also aspiring to the contentious position of the IAL.

The idea also captivated such illustrious thinkers as Descartes, who invented unique signs for the communication of those with impaired speaking or hearing, and Leibniz, who created a universal language to express metaphysical, mathematical and scientific concepts. From the original tongue spoken by Adam and Eve in the garden of Eden to Dalgarno's and Wilkins's *a priori* philosophical languages that intended to epitomise the truth and essence of things, the sixteenth and seventeenth centuries were marked by the search for a perfect language due to profound religious tensions (Eco 1997: 228).

In the seventeenth century, England saw the birth of rationalist thinking, which contributed to an increase in ideas such as Francis Bacon's 'real character'. This semiotic writing system was expected to be understood by anyone regardless of the language (Large 1985: 5). Then, initially around 1879, enthusiasts of the IAL movement began to engage in the effort to conceive a neutral means of global communication. Many offered their visions of what a *lingua franca* should look and be like. Instances of this include Volapük, Ido, Novial and the most well-known of all, Zamenhof's Esperanto.

As noted, language invention has generally taken one of two paths: either as an art form in its own right or as a literary phenomenon. While the former has occupied people from all walks of life, intellectuals, linguists, and enthusiasts, writers have deployed the latter as a multipurpose narrative device, which I intend to investigate in this chapter.

However, unlike most exhaustive conlang listings, Conley and Cain (2006), Rogers (2011), and Albanni and Buonarotti (1994), I intend to produce a chronological study that lists fewer examples but is history-sensitive, broaches the phenomenon's evolution, reflecting upon the central and transversal literary influences, and furthers the understanding of the occurrence of glossopoesis in fiction. Two of the very few studies that have taken a similar path are Seeber (1945) and Yaguello (1984).

The first section of this chapter explores key aspects and traces literary glossopoesis' evolution from the 1500s to the 1800s in connection with the traveller's tale tradition. This initial account focuses on the moment glossopoesis entered the English-language literature. The second section highlights a change in paradigm whereby fictional languages started to incorporate scientific and political commentary. Next, the third section discusses the languages of fantasy and the influence of Tolkien on them. Finally, the fourth section addresses the current transmedial phase of films and TV.

2.1 The Traveller's Tale and Language Encounters

The traveller's tale was characterised by a utopian vision of the fictional worlds described. Also known as imaginary voyages or *Reiseroman*, this narrative framework merged realist and fantastical tropes to mirror accounts of exploratory travels. Typically, these stories were written in a satirical style filled with irony in the form of "veiled attacks on contemporary political figures and practices" (Arthur 2008: 197; Fimi and Higgins 2018: 23). The use of fictional languages has long been a familiar device to communicate the satirical message of this type of literature.

In great measure pushed by the Age of Discovery and the English Renaissance, the traveller's tale gained popularity in Britain from the seventeenth to the early nineteenth centuries. Still, its earliest representative was probably *Utopia* (1516) by Thomas More. This narrative presented an account of a fictional nation and its allegedly superior society, Utopia, literally meaning 'no place'. The language of Utopia was heavily based on Latin, Greek, Hebrew and Persian and consists of a tool to convey a self-negating message that delivers the story's satirical tone.

By creating a type of word puzzle, More could communicate with readers at a secondary narrative level that contradicted the flow of information provided by the surface narrative. This became a stylistic model replicated by subsequent narratives even today. In this technique, every character's name, people, geographical feature, or honorific mentioned happens to contain a self-negating message:

> "This Raphael, who from his family carries the name of Hythloday ..." (More 1997: 2). That character's name was not chosen carelessly. Raphael (from Hebrew God's healer, רפאל) was meant to possess a sound and critical personality, a man whose knowledge about Utopia could serve as a cure for England's misdeeds. The first part of the name undoubtedly derives from the Greek ὗθλός, 'nonsense.' According to G. J. Vossius's interpretation, the second element comes from δαίος, 'cunning.' […] Hythloday's companion's name is, too, enlightening. His name and surname, Tricius Apinatus (More 1997: 56), both derive from Latin words for nonsense; trica and apina.
>
> (Noletto and Lopes 2019: 5)

Roughly a century thereafter, William Shakespeare used the same stylistic tool. The Choughs' language, a gambit Parolles' soldiers use to expose his cowardliness in the play *All's Well That Ends Well* (1623) adds both humour and an exotic flavour. For Conley and Cain (2006: 8), the fake language appears syncretic, mixing smatterings of French, Italian and English. However, the alliteration "Muskos muscovites" (Shakespeare 2014: 832) suggests a fake Latin, perhaps imitating a citation, with nominative and genitive forms. This use of glossopoesis was a simple but compelling plot device to add depth to Parolles' characterisation. It exposed his lack of intellectuality and courage.

First, he was deceived by a fake Latin created by unschooled soldiers; ergo, he had no significant knowledge of classical tongues at a period when this was of paramount importance. Second, he was too frightened by the prospect of facing foreign invaders, thus a coward.

Simultaneously, the Choughs' language exhibited phonoaesthetic features (notably the endings *-os* and *-ites*) recognisable to Shakespeare's audiences, which enabled them to be aware of the humorous component.

In a similar vein, Francis Godwin wrote *The Man in the Moone or A Discourse of a Voyage Thither by Domingo Gonsales* (1638), introducing Lunarian, the moon's language, inaugurating the concept of musical languages, those based on musical notes. Lunarian served to represent otherness in a way Godwin's readership could relate to but also echoed the common misbeliefs of the time about Chinese, which, in the West, was viewed as the most exotic language (Yaguello 1984: 197; Smith 2011: 25; Large 1985: 17). This alienating effect anticipated another common way in which glossopoesis has been used in modern fiction, that is, to lend a sense of alterity rooted in orientalism and thus reinforcing stereotypes.

The number of extraordinary voyages swelled with the exploration of the poles and Australasia around the 1700s. While many works from this period consist essentially of adventurous tropes, others, such as Jonathan Swift's *Gulliver's Travels* (1726), instated a lasting satirical verve, scathing even the genre it identifies with (Stableford 2012: 15). Mostly a critique of the British Whig Party, the stories contained several fictional peoples and languages, each with a specific satirical element.

The tiny Lilliputians, for instance, symbolised humankind's excessive pride (lilli<little; put<*puta,* 'prostitute' in Spanish). The giants of Brobdingnag were possibly a critique of the Enlightenment, which, claiming to be the Age of Reason, overlooked the simple facts of everyday life (brob<broad; ding<things; nag<to nag). The Laputans likely symbolised the absurdity of knowledge without testing or applicability (la puta – 'the prostitute' in Spanish) (Noletto et al. 2017: 521).

By the same token, the Houyhnhnms represented an idealist existence governed by reason and moderation, which philosophers have talked about since Plato. Like the Utopians, with an allegedly flawless society, the Houyhnhnms seemed to be living in perfect harmony. Even their subjugation of the *yahoos* (a word invented out of a simple excitement interjection) seemed necessary and justified. But their nonsensical language, sounding like mere horse neighing, and their snobbish, pseudo-intellectual tone of superiority, denounced the horse lords as a mockery of philosophy and the Enlightenment.

As true milestones, More and Swift were followed by several language creators that implemented glossopoesis as an ancillary means to elaborate on narrative entities. In addition, these two novels instituted a glossopoeic prototype explored by numerous writers as diegetic

devices to mediate competing and supporting narratives or to fit out extradiegetic material. For example, Robert Paltock's *The Life and Adventure of Peter Wilkins, A Cornish Man* (1751), likely the first novel to contain a list of invented words, glossed 103 entries in the appendix "Explanation of Names and Things Mentioned in this Work". Wolf (2012: 188) highlighted the consistency shown in the root structure of the language, perceptible in examples such as *Colamb*, 'governor', and *Colambat*, 'government' as well as *Lask*, 'slave' and *Laskmett*, 'slavery', contributing to add depth and credibility to the story.

Closing the 1700s, in *The Memoirs of Planetes, or a Sketch of the Laws and Manners of Makar* (1795), Thomas Northmore described Makar as a strange place where his imaginary voyager learns the language of the natives. As soon as he arrives on the island, the protagonist castaway is greeted by the cries, "*Doom*! *Doom*!, 'silence!, silence!' and "*Yan, yan-a-roo*", for which no translation is given (Seeber 1945: 593). Since many samples are left untranslated, the Makar language gave the story a sense of mystery, deploying phonaesthetics to mark out the otherness of the fictional people depicted in the narrative.

At the dawn of the Dark Romanticism and the Gothic era in the eighteenth and nineteenth centuries, Edgar Allan Poe wrote the novel, *The Narrative of Arthur Gordon Pym of Nantucket* (1838). His language invention innovated with a mysterious and even mystic referential factor. The narrative presents samples of the language of the Tsalal, an indigenous people from a fictional island beyond the Antarctic polar circle: *Anamoo-moo* and *Lama-lama* or *Tekeli-li! Tekeli-li!*. 'Tsalalish' is full of reduplications and vowels, notably representing the phoneme /ʊ/, perhaps as a stereotypical impression of aboriginal tongues, of which little was known. The language also incorporated consonantal clusters exotic to the English phonotactics, such as initial /ts/ to create a sense of foreignness.

Commonly in extraordinary voyages, the protagonist offers translations that do not come with a guarantee of precision, perchance to maintain obscurity and leave the text open to various interpretations. Over the years, cases have been made for similarities between Tsalal and Malayo-Polynesian tongues, Ethiopian, Arabic, Egyptian and even Hebrew because of the resemblance with "*Mene Mene Tekel Upharsin*", the biblical writing on the wall (Conley and Cain 2006: 133).

Later, Lord Edward George Bulwer-Lytton, a conservative and formerly a Whig member of the Parliament, penned *The Coming Race* (1871). He dedicated an entire chapter to describing the fictional language of the Vril-ya (Yaguello 1984: 209). The symbolic properties literary glossopoesis had shown since More can also be observed in this narrative. A careful

analysis of the Vril-ya language can reveal subtextual information often regarded as an anti-feminist tenor (although not necessarily known in such terms at the time), perhaps as a reference to ideals and values of the late Romantic period (Conley and Cain 2006: 34).

In due course, the Victorian era in tandem with the Second Industrial Revolution marked a long transition from extraordinary voyages to distant lands towards fantastic journeys to uncharted places. In this context, Lewis Carroll authored *Through the Looking-Glass and What Alice Found There* in 1872, a follow-up story to *Alice in Wonderland* (1865). In the novel, as Alice revisits the wonderland, she comes across a "Looking-glass book" whose pages only become readable when reflected in a mirror. Jabberwocky, a poem Alice reads, appears somewhat nonsensical, as suggested by the element "jabber" and the general aesthetics in Carroll's stories, but the language seems more oriented towards creating an impressionistic soundscape.

Although written according to English syntax, the verses, in anticipation of Joyce's style, are filled with invented terms like *borogoves*, *vorpal, galumphing, toves, outgribing* and *frabjous*. They seem to deploy a phonoaesthetic description and display the same quasi-psychedelic impression as the rest of the story.

Then, in the last quarter of the nineteenth century, Samuel Butler wrote a satire of utopian societies and ideals entitled *Erewhon* (1872), 'nowhere' spelt backwards. The Erewhonian words consisted of reversals of their English equivalents, including Yram, 'Mary', and Mr Senoj Nosnibor, 'Mr. Robinson Jones'. Erewhonian, like Utopian, is used as a tool to contradict the information elicited in the story's primary narrative in addition to generating a comic effect couched in the absurdity of the conlanging technique.

Closing the period of fantastic journeys, H. G. Wells's *The Time Machine* (1895) described the language of the Eloi that the Time Traveller meets in the future. The language communicates the misbeliefs of Wells's contemporaries who thought that 'primitive' people spoke 'primitive languages'. This means that less technologically advanced people supposedly speak simpler languages. Wells used the contrast between the languages of the Eloi and the Morlock, grounded in phonoaesthetic ideals, as an ancillary characterising technique. Until this point in history, most fictional languages are used either this way or according to the Utopian paradigm. This tendency continues to be observed in contemporaneity and has even been improved (see Chapter 7).

By and large, the literary language invention of the traveller's tale period was "as much about the building up of stereotypes of the distant cultural other as it was about seeking to

conceptualize the concrete facts reported by explorers" (Arthur 2008: 207). The minor concern with accurate information of the time allowed writers certain flexibility to fake or completely misrepresent natural languages. The improvements in science and technology of later periods made a progressive contribution to changing this scenario, as I demonstrate in the following two sections. Interestingly, glossopoesis continued to have very similar stylistic and narrative functions.

2.2 The Languages of Modernism and Postmodernism

The rise of Modernism at the beginning of the twentieth century saw a slight change in paradigm. Extraordinary voyages had essentially given way to fantastic travels to other dimensions, planets, and the future, all tropes of SF, fantasy and dystopia. As Fimi and Higgins (2019: 22) have pointed out, language invention has always caught the attention of genres that rely on world-building, the evolution of erudite thinking both in the natural sciences and in the humanities, history-changing events such as the two World Wars, or changes in cultural trends. Therefore, nowadays, with a few exceptions, such as the cases in Irish literature I discuss ahead, and Nabokov's *sui generis* novels, *Bend Sinister* (1947) and *Pale Fire* (1962), glossopoesis has largely become a speculative fiction phenomenon.

For instance, Edgar Rice Burroughs' prototypical SF novel, *A Princess of Mars* (1912), tells the story of John Carter, who travels to Mars via a portal. Among the world-building devices Burroughs deployed is the sketchy fictional language Barsoomian, spoken on Barsoom, Mars' native name. In the conworld, most Martians had telepathic abilities, so even long conversations consisted of relatively few words. Burroughs enriched his narratives with just a handful of Barsoomian words, such as *kaor* (a common greeting), *sak* (a command to jump), and *o mad* (a man who has not acquired a second name for winning a battle) (Conley and Cain, 2006: 152).

The ascent of Modernism also made way for smaller literary movements that sought inspiration from Surrealism and, later, Impressionism. In 1928, H. P. Lovecraft started his glossopoeic experiment with *The Call of Cthulhu,* which presented the R'Iyehian language, made up of elements of Welsh and German, but with a conscript similar to Arabic and Southwestern Asian tongues. Even today, most monolingual English speakers view these languages as exotic, and thus they still communicate a strong sense of foreignness. Later,

Lovecraft alluded to Aklo, a speech described as having mystical powers. Arthur Machen was the first to mention it in his story *The White People* (1899).

Overall, up to that point, despite its narrative properties, literary glossopoesis still exhibited little concern with conlanging sophistication and visual or euphonic aesthetics, which means language inventors were more preoccupied with what their languages signified in the plot than how they looked or sounded. Also, at that point, most fictional languages were conceptual or sketchy, developed only for the immediate needs of the narrative. Invariably, however, glossopoesis kept in tune with its historical context.

Fittingly, many works were published either advocating for or criticising the IAL movement, which was in full swing in the early to mid-1900s. As the political scenario became increasingly turbulent – The Great Depression, international affairs on thin ice, World War II – many idealists began to look for innovative ways to promote peace by supporting an existing IAL or by creating their own. H. G. Wells, e.g., penned *The Shape of Things to Come* (1933), in which a future society speaks Basic English, "a simplified version of English pared down to its fundamentals", created by C. K. Ogden in 1930 (Large 1987: 163). It seems plausible to believe Wells was recommending the language. Conversely, C. S. Lewis's *Out of the Silent Planet* (1938) presented the Old Solar language or *Hlab-Eribol-ef-Cordi*. Of course, it existed only within the boundaries of the story. Still, it promoted the idea of a common speech in that Old Solar served as an interplanetary *lingua franca* known by all extraterrestrial beings.

This artifice would be seen again decades later. For instance, instead of creating a new fictional language based on the story's narrative needs, Heinlein opted for a language constructed by others, adapting the plot to such languages rather than the other way around. So, due to his penchant for logical languages, Heinlein incorporated Loglan, supposedly a logic language, into his novel *The Moon is a Harsh Mistress* (1966). The fictional languages from both novels, Wells's and Heinlein's, seem to have a descriptive function.

However, Heinlein's earlier works dealt with authorial languages as well. The novella *Gulf* (1949), for instance, features Speedtalk, a conceptual language comprised of a minimum vocabulary. Highly speculative, it evokes General Semantics theories to explain the nature of thought and how training could make people think more swiftly and precisely. Also in the novel *Stranger in a Strange Land* (1961), famous for bestowing on English the word *grok*, Heinlein deployed the Martian language as a tool for characterising the aliens' serene culture and consciousness, a reference to the 1960s counterculture.

With the emergence of Postmodernism in the mid-twentieth century, experiments with language and narrative to defy known aesthetic traditions became popular and gained notoriety. Among these experiments was another subset of fictional languages, dialectal extrapolations, or altered forms of national languages. The new texts associated with this aesthetic movement were filled with randomness, playfulness, metafictional discourse, and complex cases of intertextuality. Glossopoesis was an obvious tool to arrange these characteristics organically.

That being the case, James Joyce, a pioneer in this new style, wrote *Finnegans Wake* (1939). This *sui generis* work connected glossopoesis and literary experimentalism for the first time, as his texts no longer presented samples but were written in a fictional language. *Finnegans Wake* accommodated thousands of linguistic inventions, many exploited for humorous effect, in a language that blended English, the author's creative coinages (sometimes portmanteaux of near-homonymous words: *collideorscape – collide* plus *kaleidoscope*) and traces of some 41 languages and dialects, including pastiches of Albanian, Welsh, Finnish, Russian, Romani, Sanskrit and others (Watt 2011: 162, 169). Likewise, Joyce also incorporated words semantically unrelated to the context, suggesting cacophonous associations:

> Bygmester Finnegan, of the Stuttering Hand, freemen's maurer, lived in the broadest way immarginable in his rushlit toofarback for messuages before joshuan judges had given us numbers or Helviticus committed deuteronomy (one yeastyday he sternely struxk his tete in a tub for to watsch the future of his fates but ere he swiftly stook it out again, by the might of moses, the very water was eviparated and all the guennesses had met their exodus so that ought to show you what a pentschanjeuchy chap he was!) . During mighty odd years this man of hod, cement and edifices in Toper's Thorp piled buildung supra buildung pon the banks for the livers by the Soangso.
>
> (Joyce 1939: book 1, page 4 lines 18-28)

Something similar is also noticeable in Joyce's other novel, *Ulysses* (1920). These dialectal extrapolations followed an *a posteriori* approach, satirical motivation, and a clear political-philosophical orientation. The writer later explained that his use of glossopoesis sought to recuperate a sense of 'Oirishness'. For him, Ireland had forsaken its language nearly completely. It acknowledged the language of the subjugator without being able to integrate the culture or adjust itself to the mindset of which this language is the means (Joyce 1959: 212-213). As Watt observed, not only Joyce but also other exponents of Irish literature, such as Beckett and Muldoon, at differing levels, invented their own languages (Watt 2011: 168).

After the two World Wars, with the escalation of the Cold War and an upsurge of totalitarian regimes, global concerns started to centre on the danger of a nuclear holocaust. This arguably fuelled the creation of many kinds of post-apocalyptic worlds. As could be expected, the fictional languages of the time were significantly impacted by these ongoing events, communicating the apprehension of the epoch (Sisk 1997: 61). Several writers began to "put language at the centre of their fictions for didactic as well as emotional purposes" (Sisk 1997: 13).

It was around the same time that the Whorfian era established itself. The linguistic relativity hypothesis advanced by Sapir and Whorf in 1940, also known as the Sapir-Whorf hypothesis, stated that thoughts are shaped by language (see Chapter 4). This idea has permeated an impressive number of works ever since. George Orwell, for instance, wrote *Nineteen Eighty-Four* (1949), introducing the infamous Newspeak. The language, a transformation or deformation of English, is used by the Socialist Party, *IngSoc*, to deprive people of enough vocabulary to entertain thoughts contrary to the Party's ideology, emphasising the horror in the story beyond measure (see Chapter 7).

Soon, a series of post-apocalyptic narratives written in fictional languages began to emerge. They combined Orwell's Whorfianism and Joyce's experimentation, foregrounding the power of language on thinking as a recurrent theme. For example, Anthony Burgess authored *A Clockwork Orange* (1962). His text presented the Nadsat slang, a fusion of colloquial British English and Russian imbued with a profound political commentary (Noletto and Costa 2017: 258). Burgess explored the narrative properties of glossopoesis again in his other lesser-known novels, *Nothing Like The Sun* (1964) and *The Wanting Seed* (1962). Similarly, B. W. Aldiss experimented with glossopoesis in *Barefoot in the Head* (1969), which is partially written in his psychedelic language, and in "A Spot of Konfrontation" (1973), which featured SpEEC, a pastiche of English, French, German, Spanish, Italian, Dutch, Danish and Swedish (see Chapters 5 and 6).

In line with that, Russell Hoban's *Riddley Walker* (1980), featuring Inlish, sometimes referred to as Riddleyspeak (see Chapter 5), and Iain M. Banks's *Feersum Endjinn* (1994) were also entirely or partially written in their invented languages. These novels followed a tradition of embedded information, either as subtext or characterisation. Many SF and dystopian stories published around the same time also implemented glossopoesis as a stylistic tool for interfacing style and theme, "making the change of a language not just part of the atmosphere but a device to forward the action" (Meyers 1976: 4).

Meanwhile, as the world sank deeper into political instability, amidst the rise of marginalised groups such as women, African and Native Americans, etc., the fear of totalitarian regimes spurred even more cases of fictional languages that reflected social concerns. These fictional languages were filled with oppressive or rebellious motifs. In consonance with this, Ursula K. Le Guin published *The Dispossessed* (1974), highlighting Pravic, a language constructed according to the ruling ideology (see Chapter 7). Ursula Le Guin also wrote a large number of other novels featuring various fictional languages, which include *The Left Hand of Darkness* (1969), *The Word for World is Forest* (1972), *Always Coming Home* (1985), and *The Telling* (2000).

This reiterated use of glossopoesis indicates that Le Guin utilised fictional languages as meaningful narrative constituents. Each fictional language plays a distinctive role in her novels, but they all seem to inform the themes and the plots somehow. The way Le Guin uses mentions of the Athshean language in *The Word for World Is Forest*, for instance, demonstrates this. The language-based holistic philosophy expressed in the novel's title indicates that the reader should not take the fictional language for granted but must look for translations of Athshean words when reading the narrative. This distancing effect generated by made-up words and their referents is made clear in the passage: "*Sha'an* meant god, or numinous entity, or powerful being" (Le Guin 1972: 121). Interestingly, the Athshean word for god also meant 'translator' (Conley and Cain 2006: 218).

Likewise, Suzette Haden Elgin penned the novel *Native Tongue* (1984), the first of three books portraying the women's language, Láadan (see Chapter 7). Supposedly, the invented tongue promoted feminist ideals by providing specific words for women's peculiar characteristics and needs. Le Guin's and Elgin's novels were profoundly influenced by the evolving American Postcolonial thought of the time. Language invention, therefore, was being used to deal with issues of identity, alterity, decolonisation, and social class conflict.

The use of glossopoesis for political commentary developed well enough to become another glossopoeic epiphenomenon. Every so often, fictional languages with embedded criticism are invented that inform plot and theme similarly to Le Guin's and Elgin's languages. Nearly all these novels were rooted in the Whorfian language-thought relationship, which gained increasing notoriety in the period. For instance, *The Languages of Pao* (1958) by Jack Vance featured several fictional languages that have a central descriptive function, elaborating on the various groups embrangled in the story's many conflicts, even if just a few samples of the languages were presented.

Also applying glossopoesis as a descriptive tool, Herbert's *Dune* (1965) brought several mentions and samplings of fictional languages. For instance, Galach claimed to be an "*Ing-Slavic*" hybrid – a clear allusion to the historical context of the time: a world polarised between the USA, with the English language, and the USSR, with Russian. Like Nadsat, many words are left untranslated and do have a Russian feel. Also represented in the novel are the Fremen language, which derives from Arabic, judging from terms such as *jihad*, *hajj*, *kindjal*, and *usul*, and the ritualistic military language, Chakobsa (see Chapter 6). As happened centuries earlier, invented words are left untranslated apparently to allow readers to try their own construal while also alienating the reader.

Taking language to extreme extrapolations, Samuel R. Delany's *Babel-17* (1966) presents the eponymous language as a weapon to enable mind control. The novel also mentions the Çiribian language *en passant*, spoken by an alien race whose culture is entirely based on heat and fluctuations in temperature. However, the focus remains on Babel-17, which works like a virus, reprogramming peoples' minds to bypass their self-reflective and critical capabilities to induce them to commit sabotage (see Chapter 7). It seems that *Babel-17* somewhat mimicked or was heavily influenced by the age of spies and secret agents led by the CIA and the KGB. In line with languages that can alter perception, *The Troika Incident* (1970) by James Cooke Brown described a future in which adopting the Panlan language transforms the globe into a utopia. The narrator praises the advantages Panlan has over all other languages, which, in the end, hints that the novel is but a promotion of the author's conlang, the IAL Loglan.

Likewise, Iain M. Banks's collection of novels *Consider Phlebas* (1988), *The Player of Games* (1988), *The Use of Weapons* (1990), *Excession* (1996), *Inversions* (1998), *Look to Windward* (2000), *Matter* (2008), and *Surface Detail* (2010) in addition to the short-story collection *The State of the Art* (1993) all dealt in detail with Marain, a language constructed by the Minds, the computer systems that, upon becoming self-aware, came up with an idea for a universal language capable of bringing durable peace (Rogers 2011: 137), once more reusing Whorfianism as a theme.

In the meantime, Ian Watson penned *The Embedding* (1973). Despite being amidst the Whorfian era, the novel challenges Noam Chomsky's theories, such as the Universal Grammar, by broaching subjects such as self-embedding and recursion, brought to light by Daniel Everett's research on the Pirahã language, which gained prominence around the same time (see Chapter 4).

After the dissolution of the USSR in 1991 and amidst the de-escalation of the nuclear threat, the publication of dystopian fiction experienced a downturn. Nevertheless, that did not equate to a migration away from linguistic or philosophical elements connected to the Sapir-Whorf hypothesis or Chomsky's ideas. Examples of this are Neal Stephenson's *Snow Crash* (1992), which goes in the same direction as *Babel-17*, attributing neural reprogramming capacities to language, and Ted Chiang's "Story of Your Life" (1998), which describes Heptapod B. This non-linear semasiographic alien tongue could change the way its speakers perceive time (see Chapters 4 and 7).

Aligned with this notion, Mary Doria Russell's *The Sparrow* (1998) used phonaesthetics to describe the alien races Jana'ata and Runa (see Chapters 4, 6 and 7). Finally, China Miéville's *Embassytown* (2011), with the enigmatic Ariekei language, marked a new generation of philosophical languages designed to question the nature and power of speech (see Chapter 4). As can be noted, after the long, tempestuous post-war era, SF and dystopian fiction aesthetic values broke with the visual or euphonic patterns of extraordinary voyages of previous centuries to centre overarchingly on the thought experiments that fictional languages could offer.

2.3 The Tolkienesque Languages of Fantasy

Glossopoesis continued to develop in fantasy fiction following its own path. Contrary to what can be observed in SF and dystopia, Tolkien did not believe his languages created a second diegetic level (Fimi and Higgins 2016: 123). Nonetheless, the spoken word, mainly in songs, played a central role in his stories, nearly as a character, definitely as a relevant narrative entity. For instance, in the song of the Ainur, Iluvatar creates the world using speech: *Ea!* 'Let it be!', like the biblical account of creation in the book of Genesis, in which Jehovah speaks all things into being (Noel 1974: 55; Genesis 1:1-25).

Tolkien's Elvish languages are often classed as a hallmark of complexity and completeness in language invention, so much so that Meyers (1980: 149) associated Quenya and Sindarin with SF because of their linguistic rigour. Similarly, Tolkien's novels, the three books of *The Lord of the Rings* (1954-1955) and *Silmarillion* (1977), reveal an underlying concern with form, visual and euphonic effects. The phonetic fitness of the onomastics found within the stories' ambience has been a recurrent object of discussion (see Wilcox et al. 2018 and Robinson 2013). But rather than languages constructed to feature in stories, it is believed that Tolkien wrote his novels to flesh out his languages' historical and cultural backgrounds (Weiner and Marshall 2011: 77).

In *A Secret Vice* (2016), it is stated that the effectiveness of Tolkien's invented languages is not forthwith assessed based on objective principles but is 'felt', or as Tolkien pointed out, the aesthetic value *"in word-form"* is *"considered abstractly"*, and out of *"ingenuity in the relations of symbol and sense"*, not to mention its *"ingenuity grammatical arrangements,* nor its *hypothetical historical background"* (Weiner and Marshall 2011: 77, italics in the original). Key to Tolkien's Elvish language invention was the notion of sound predilection, reflecting such languages as Finnish, Irish and Welsh, "a sense of fitness between word form and meaning", and an inextricable connection between glossopoesis and world-building (Fimi and Higgins 2018: 24).

By the time Tolkien published his first works, Modernism was already in full fling. The movement's influence can be seen in his constant use of war themes related to his post-war experience, hero journeys and fantastic tropes. Other Modernist influences are in the ambit of narrative style and themes: glossopoesis, philology, Christianity, mythology, archaeology, and ancient and modern literature.

Tolkien's achievements as both a writer and a conlanger inspired generations of language inventors who would use glossopoesis as a world-building tool and a descriptive device. Tolkien's phonoprint and mythopoesis design have served as a basis for a great many authors. For instance, Robert Jordan's *The Eye of the World* (1990), the first of a six-book series called *The Wheel of Time*, also gained notoriety. Rich in mythical and cultural descriptions, Jordan's stories portrayed the 'Old Tongue'. Well-developed, the language is said to have been based on Turkish, Arabic, Russian, Chinese, Japanese and Gaelic. Also, in the *Harry Potter* book series (1998-2007), J. K. Rowling mentioned a certain Parseltongue, the language of the snakes. Harry Potter is considered one of the few Parselmouths who can speak it. In *Harry Potter and the Half-Blood Prince* (2005), an exchange appears between Tom Marvolo Riddle and Morfin: *"Sasōl, ebei? Shēsin Muggle saum hwinæ. Tōr shēsin Muggle harisa"* – Course I am, then… I thought you were that Muggle. You look mighty like that Muggle (Rogers 2011: 173).

Frequently overlooked but exhibiting a degree of world-building complexity comparable to Tolkien's, Austin T Wright's 2000-page *Islandia* (1942), published posthumously, returned to the utopian vision via a brilliant and convoluted description of peoples, culture, language, and literature of the Islandian conworld. As Conley and Cain (2006: 96) explained, Wright's fictional language display consistency in construction, with the frequent use of suffixes and root words as in *apiata* (diminutive suffix *-ta*), *win* (river), *matwin* (broad-river), or *alwin* (swim-river), etc.

2.4 The Era of Transmediality

Glossopoesis transmedial phase started when the first films were made containing fictional languages in the late twentieth century. Like previous occurrences, this latest stage also reflected the global scenario of the time. The popularisation of TV and cinema gave rise to the figure of the professional conlanger, generally a trained linguist. This new class of professionals would work alongside filmmakers to create languages focused on eliciting specific alienating effects on the screen, no longer on paper.

This opened an entirely new market and critically impacted the sophistication level of fictional languages presented in films and TV shows. It has also significantly affected the literary market since, under the influence of successful cinematic productions, writers began to commission conlangers to create their conlangs, resulting in a much more linguistically accurate product. Among the first examples of glossopoesis on TV is the American TV series *Land of the Lost* (1974-1976). The show featured the Paku language, constructed by Linguist Victoria Fromkin. But the tendency to outsource the production of languages continued to grow slowly. In many cases, improvised languages were still being used. For example, in 1982, *Blade Runner* introduced Cityspeak, a French, Hungarian, and German portmanteau, created by the actor who played Gaff, Edward James Olmos.

In 1984, *Star Trek III: The Search for Spock* featured the Klingon language, which marked a turning point in the history of filmic fictional languages. What was initially a few improvised lines was soon transformed into a fully-fledged language (Okrand *et al.* 2011: 113). Klingon built up the cultural background of the aliens while also producing a defamiliarisation effect on the audience (Okrent 2009: 265). What is more, Klingon also became the most popular fictional language ever, with incredible engagement from its fan base (see Chapter 8).

By the late 1970s, *Star Wars* quickly became a staple of adventure SF. The film featured the unconventional Huttese, Wookiee, Jawa and the Droid languages. The transition from printed media to television came with a new requirement: phonology. If previously, a language's sound could just be hinted at, now filmic fictional languages must be concerned with the visual (the written form) and audio (see Chapter 6).

While many resorted to mechanical sound production techniques, like recordings of simple noises or unrelated dialogues in exotic natural languages, others went to great lengths to deliver a credible language. Examples of languages whose creators took this second path are *Stargate* (1994) with the Goa'uld language, reconstructed in a principled way from Ancient Egyptian by Egyptologist S. T. Smith (Noletto 2010: 152), and *The Lord of the Rings* (2001-

2003) filmic trilogy with a faithful representation of Tolkien's conlangs, which were adapted by Linguist David Salo (Fimi and Higgins 2016: 128). That marked the birth of another glossopoeic subset that has overlapped with the Whorfian era, that is, Tolkienesque languages, those profoundly influenced by Tolkien (Fimi and Higgins 2018: 22).

These new concerns with aesthetics, consistency and completeness constituted a game-changer regarding the sophistication of literary glossopoesis, breaking with the dominant paradigm of naming languages or rudimentary languages. With the help of professional conlangers, several filmic languages showed a high level of conlanging sophistication, not only in how they were constructed in a rigorous way rather than invented disorderly but also regarding their narrative functions. Examples of this are *Avatar* (2009) and *The Interpreter* (2005).

Na'vi, created by Linguist Paul Frommer and featured in *Avatar*, has an intricate descriptive function in that it cues social deictic shifts in the mind of the viewers, who would promptly make associations with Amerindian peoples (Adams 2011: 230). With a similar level of sophistication and generating similar effects, Said el-Gheithy's Ku, short for Chi'itoboku, was a pastiche of Bantu languages to represent a fictional country in *The Interpreter*. It sounded authentic without having an exact referential in the actual world (see Chapter 6).

The advent of TV streaming services, such as HBO, Netflix, and others, seems to have accelerated the pace of the epiphenomenon of filmic and TV languages. Commissioning professional conlangers became a common practice to deal with linguistic creativity. In this context, David J. Peterson was contracted to create languages for the TV shows *Game of Thrones* (2011-2019), *Defiance* (2013-2015), *The 100* (2014-2020), *Shadow and Bones* (2021), in addition to various films. Again, these 'professional' languages showed considerable concern with linguistic accuracy and narrative functions, chiefly description and characterisation.

The rapid evolution of the technologies used to create video games also played into the transmedial phase of glossopoesis. As graphics and sound improved, the industry started to borrow many elements from literary and filmic glossopoesis, and in time, the number of video game fictional languages increased significantly. With differing levels of complexity, some of the games that are known for their fictional languages are *The Legend of Zelda* (1986), *World of Warcraft Series* (2004), *Starcraft Series* (1998), *The Sims* (2000), *Final Fantasy* (1987-2020), *The Elder Scrolls V: Skyrim* (1994-2020), and naturally the gamified counterparts of novels and films, such as *Game of Thrones* and others. While most of these are not more than

sketchy languages, some videogame fictional languages display the same creative prowess as some of the most acclaimed literary and filmic invented languages.

Figure 3 presents a timeline of the evolution of glossopoeic literature in English. Literary movements directly linked to the fictional languages of relevant periods are shown in black, while transversal literary or social influences are shown in grey. Pertinent historical facts are presented in white boxes attached to the timeline. As the figure demonstrates, the number of fictional languages has had an exponential growth from the 1500s onwards, reaching its peak between Modernism and Postmodernism, catapulted by the trend in filmic adaptations of texts featuring glossopoesis.

Curiously, most fictional languages are either conceptual or sketchy, basically consisting of nouns, proper and common, adjectives and untranslatable words, frequently things that are unique to the conworld of the story, or honorifics that the reader can pass without fully understanding. Spruiell (1997: 445, 448) calculates that 89 per cent of the total inventory of samples are nouns, mainly referring to objects and official titles, with a few denoting imaginary emotional states or nuances; verbs, however, are rare.

That might be because fictional nouns may disturb the reading experience less than imaginary verbs. Nouns may require fewer inflexions, as long as declensions are not ruled out. This, in turn, requires less specific knowledge of the language's inner workings to decode. Verbs, on the other hand, are more complex, demanding conjugation, tense, mood and aspect if they are being modelled after natural languages, allowing some degree of familiarity while generating "the impression of exotic detail" (Csicsery-Ronay 2008: 37). What is more, most occurrences of fictional languages in SF are comprised of commentary on the tongue, hence, more often than not, there is no need for a wide-ranging lexicon.

This analysis of literary glossopoeic has unveiled the interplay of historical context and interpretation. As it happens, cultural, historical, political, ideological, and identity issues play a part and are reflected in how glossopoesis presents itself in literature. Besides, this discussion helps to organise the phenomenon into time and movement periods, which foments a more principled and orderly research study. Chapter 3 will review aspects of the style, structure and thematic categories needed for a better understanding of SF narratives.

Renaissance (1485-1660)

1500s-1600s

Utopian (1516)
Lunarian (1638)

Age of Discovery (1400s-1600s)

Enlightenment (1700-1800)

1700s

Choughs' language (1741)
Lilliputian, Laputan, Houyhnhnms, etc (1726)

Poles and Australasia exploration

Romantic Period (1798-1870)

1800s

Tsalal (1838)

Gothic era

Great Depression, IAL, Int'l affairs decline

Victorian Period (1837-1901)

Jabberwocky (1865)
Vril-ya (1871)
Eloi (1895)

Modernism (1910-1965)

1900s

Economic, scientific, and educational growth

WW I

R'lyehian (1928)
Basic English (1933)
Finnegans Wake (1939)
Sindarin, Quenya, etc (1954-1955)
Newspeak (1949)
Valiant, Technicant, Cogitant (1956)
Nadsat (1962)

WW II

Whorfian era (1940-Today)
Filmic adaptation era (1962-Today)

Stream of Consciousness
Experimental narrative

Cold War

2000s

Klingon (1974)

Sindarin, Quenya, etc (2001)
Na'vi (2011)
Dothraki, High Valyrian (2011)
Heptapod B (2016)

Transmediality boom

Tolkienian era (2001-Today)

Postmodernism (1965-Today)

Babel-17 (1966)
Xemahoa (1973)
Pravic (1974)
Inlish (1980)
Láadan (1984)
Galach, Fremen, Chakobsa (1984)
Heptapod B (1998)
Ariekei (2011)

Postcolonial ideals
Post-apocalyptic themes
Technological motifs

Captions:
■ Timeline
▨ Major literary context
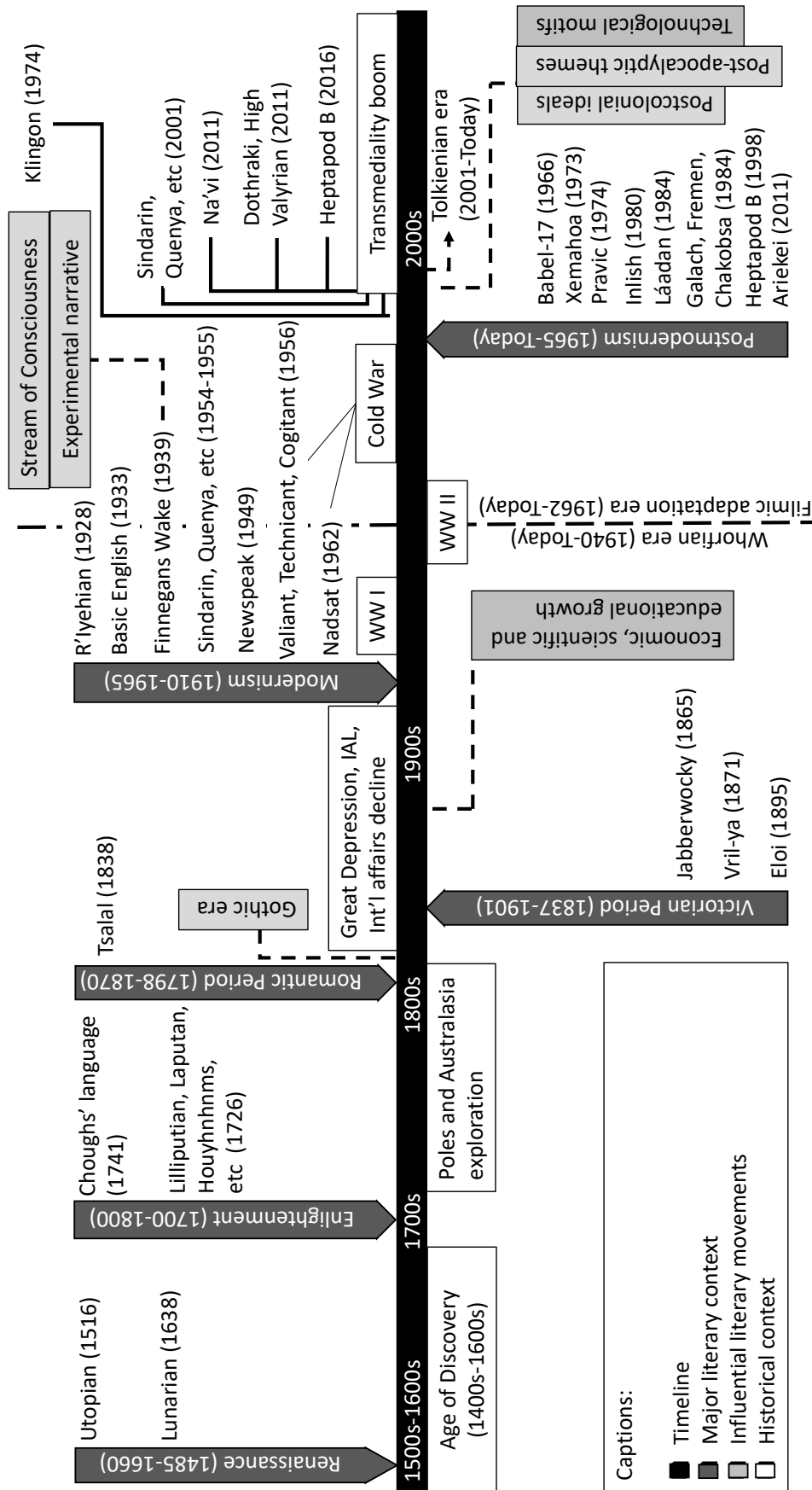▢ Influential literary movements
□ Historical context

Figure 3. A timeline of the glossopoeic phenomenon in anglophone literature

Chapter 3 - The Reading Protocols of SF

'Reading protocol' or 'reading convention' is a notion Delany (2012) used to account for specific stylistic and thematic elements traditionally deployed in SF literature that not only mark the genre but also must be noted in order for the reader to make sense of the text. In essence, Delany pointed out that beyond a purely essentialist take, a rigorous criticism of SF should also account for a stylistic analysis because it is the way language is used in the genre that truly distinguishes it from other types of literature. In this context, then, reading protocols can be regarded as ways of reading and codic strategies, and thus, they are closely related to writing tradition. Although Delany appears to have somewhat abandoned this notion, it is still particularly helpful for my discussion because it allows me to regard glossopoesis as a stylistic feature of SF.

Additionally, as I argue ahead, the structuralist aspects that numerous theorists have successively highlighted also play a part in understanding the literary phenomenon of fictional languages. Therefore, I also wish to account for them briefly.

3.1 The Interplay of Genre and Writing Tradition

As it happens, the inner workings of any literary genre largely determine most aspects, patterns and parameters of a given piece of text. Thus, the primary step towards an effective method of literary criticism runs through the taxonomic discussion. The definition of that which is generally understood by genre in literature involves "roughly, the general conventions and ways of seeing which would have governed the author's meanings at the time of writing" (Eagleton 1996: 59). In other words, it consists of an ever-growing body of texts characterised by similarities in form, style, and themes. This is to say that "living" genres must allow new works to associate with them all the time, provided that such new works follow the traditions and conventions instituted by the canon, the founding body of works, of that specific genre.

This being the case, as Auerbach stated in *Mimesis* (1946), literary renderings of reality have always undergone stylisation and conventions. It follows that "authors produce works in the knowledge, and under the influence of works previously produced as parts of a [writing] tradition" (Evnine 2015: 5). Hence, I argue that SF works observe a set of traditions rather than belong to the genre, as though genre were knowledge compartments where texts are stored. An implication of this view involves conceding that authors draw on consolidated devices, style and archetypes, or tropes. Accounting for such consolidated elements seems to have permeated the attempts to define SF.

As noted by Stockwell (2000), SF "does not suffer from a lack of definitions" (12). Ironically, the endeavour for a 'definitive' definition has never ended. Many have chosen a descriptive and essentialist take that has to do with determining what a text should do or have to be in the genre. Amis (1960: 14), for example, concisely stated that SF is the class of prose tackling a situation that supposedly could not arise in the actual world but is posited on the basis of scientific or technological innovation, actual or imaginary, whether anthropogenic or extraterrestrial. Asimov described SF as the branch of literature that deals with human responses to science and technology changes. Also, Bradbury suggested that changes in society and nature be added to that list of the genre's special interests (Ingersoll et al. 1987: 69).

As a well-developed genre, Suvin (1979: 10) noted, SF has a comprehensive repertoire of functions, conventions, and devices. What is it then that makes it so hard to define? First, there is the question of scope. A passing look at its 'repertoire' reveals just how unfathomably large and diverse the genre is. Then, there is the question of the time frame. The long period in which it has existed makes SF, in some ways, an ever-changing genre. What is more, science is constantly renewing itself, mostly advancing. As one can expect, SF has to struggle to stay ahead and retain the qualifier 'fictional'. Fortunately, size and reach have not been enough to change the fact that SF has remained reasonably coherent until now. But undoubtedly, the scenario has resulted in a massive profusion of definition possibilities.

Thus, unlike previous studies, rather than formulating an all-encompassing theory, I intend to pin down critical elements that may offer insight into the reading of fictional languages in SF works. To this end, I have divided this chapter into three thematic streams according to contents and methods as follows: (1) I briefly review the structuralist approach advanced by Suvin (1979) and expanded upon by Csicsery-Ronay (2008). (2) I survey and categorise tropes and leitmotifs featured in the SF megatext. (3) Based on Delany (2009; 2012), Stockwell (2000), and Mandala (2010), I analyse key stylistic features that have remained reasonably common from the Golden Age to the New Wave movements. As I mentioned in Chapter 1, because of the persistent transitions between SF literature and cinema, I sometimes draw on filmic examples as well but as an additional way of illustration.

3.2 A Formalist Approach

Suvin described SF as the genre of estrangement and cognition (Suvin 1979: 7). He explains that estrangement, translated from Ernst Bloch's *Verfremdung*, or defamiliarisation, serves as an index of difference between the actual world and the conworld of the text (for an analysis of

some inconsistencies within Suvin's definition of estrangement, see Spiegel 2008). Other forms of literature try to represent or reproduce the world via fictional stories, following the principle of minimal departure from the readers' actual world. This means that, unless the text explicitly informs otherwise, the actual world rules and conditions also apply in the conworld (Ryan 1991: 48; Stockwell 2000: 141). Put differently, as Walton (1990: 138) describes it, reading SF involves a gap-filling process called "reality principles", whereby the reader fills the gaps left in fiction with schematic knowledge of the actual world.

SF marks out the various conworld differences via the narrative discourse. It relies on scientific leitmotifs to sound plausible. In other words, it appeals to reason, which is what Suvin meant by cognition. Nonetheless, SF requires that state of suspended disbelief broached in Chapter 1, whereby the reader is 'transported' to the conworld and constantly tries to make sense of the differences between the two worlds. This is what Suvin labelled estrangement, that is, this emphasis placed on that which is purely fictional in a story.

However, this does not emerge "through a passive and wholesale suspension of disbelief but through active scrutiny of the particular information proffered in fiction" (Gerrig 1993: 207). In SF, defamiliarisation can and must be reasoned about. When well worked out, it can defy natural human scepticism. Notably, SF is most emphatically different to other types of fiction because of how the relationship between the story's conworld and the actual world must be construed (Delany 2009: 32). As Stockwell (2000: 59) stated, the rendition of partial recognition of our reality with sufficient alternativity to result in such a cognitive estrangement is a fundamental pattern. This is usually achieved by means of a novum.

Csicsery-Ronay (2011) defines the "novum" as an innovation, the main imaginary novelty presented in the story; "the source of the most important distinctions between the world of the tale and the world of the reader" (47). The novum is the feature that is expected to cause a 'sense of wonder'. Fantasy is said to cause the same effect, and as a matter of fact, purely dystopian fiction as well. Nevertheless, the nova of fantasy fiction are rooted in magic. Therefore, they do not require a plausible explanation of any sort (Freedman 2000: 17). As for SF and dystopian SF, the novum must be validated by cognitive logic, that is, scientific thought, even if only loosely (Csicsery-Ronay 2011: 47; Suvin 1979: 69). Due to the presence of the novum, the activity of writing and reading SF invariably entails an act of speculation and extrapolation about scientific themes and ideas.

Those who write SF are expected to extrapolate hypothetical situations centred on some scientific topic. This is the motivating question of any SF text: 'what if?' What if one could

travel back in time? What if one could travel faster than light? What if humans and machines merged? The result of such speculations has to be an extrapolation of the currently known science: by employing a time machine that warps or dilates time, one can travel to the future or the past. Through wormholes in the space-time continuum and FTL drives (faster than light drives), it is possible to trek across the galaxy within a matter of days, hours, and, depending on the story necessities, a few minutes. In essence, 'what if?' is also the question dystopias ask. That is why one way to view futuristic dystopias is as the SF political subset (Noletto and Lopes 2019a: 11).

Gibson (2009: 467) states that a work that somehow mimics philosophical pieces, perhaps consisting of *Gedankenexperimente*, thought experiments in literary disguise, types of dramatic proof, or exercises in moral reason, does not stand for the majority of literary works but rather is something peculiar to SF. Gibson (2009: 470) finally pointed out that "literature's cognitive achievements must be bound up with its aesthetic achievements".

In the preface to *Différence et Répétition* (1968), Gilles Deleuze claimed that a text of philosophy must be partly a sort of SF. Ironically, it could be argued that a SF text must be partly a kind of philosophy text, too. Paraphrasing Plato, I could posit that men began to philosophise by an act of wonder. Plato and Suvin curiously chose similar terminology, "act of wonder" and "sense of wonder", to refer to the act/effect of philosophising and reading SF. This can be realised in the audience's expectations of the text and the activity of reading and interpreting it. In effect, determining which genre a text is most closely associated with directly affects how a story will be interpreted.

3.3 The SF Megatext

A study conducted by Menadue *et al.* (2020: 6-10) showed that tropes play a relevant role in how readers determine if a text is SF. Their study involved surveying an initiated audience in Australia. The questionnaire asked, among other things, "what is it about a book that makes you think of it as fantasy/SF?" The answers demonstrated a fair degree of unanimity. There were naturally some cases of apparent confusion regarding stories like, for example, *Dune* (1965), which blend many tropes from both genres. I present in Figure 4 a schematic representation that summarises the appointments I shall address hereafter. On the role of this megatext in the reading protocols of SF, Broderick stated,

These star pilots, the sf-trained reader understands via a many-played reconstruction from the mega-text, are taking their ships through windows in hyperspace by proving theorems! It's an audacious and shivery pleasure to those who know the trick to decoding such sentences is not by way of the conventional dictionary and encyclopedia—although it is true that recognizing the fixed-point theorem (which governs the transformation of one set of points into an isomorphic set) helps you appreciate a sense of recursion in what is being described/constructed (Broderick 2017: 141).

As Shippey (2016: 14, 121) remarked, SF is "intrinsically a 'high-information' genre", and everything contains information so long as one knows how to process it. Therefore, SF narratives are usually filled with a great variety of tropes and pseudoscientific themes that speculate and extrapolate scientific ideas. The speculation tradition usually falls into the categories of philosophy and the natural sciences, metaphysics, sociology/politics/ethics or linguistics. While these thematic classes work as backdrops, the focus remains on the plot and its implications. They supply the novum and concurrently function as plot devices or frameworks within which the narrative unfolds. These thematic classes are known as the SF megatext since they function as an underlying structure for stories in the genre.
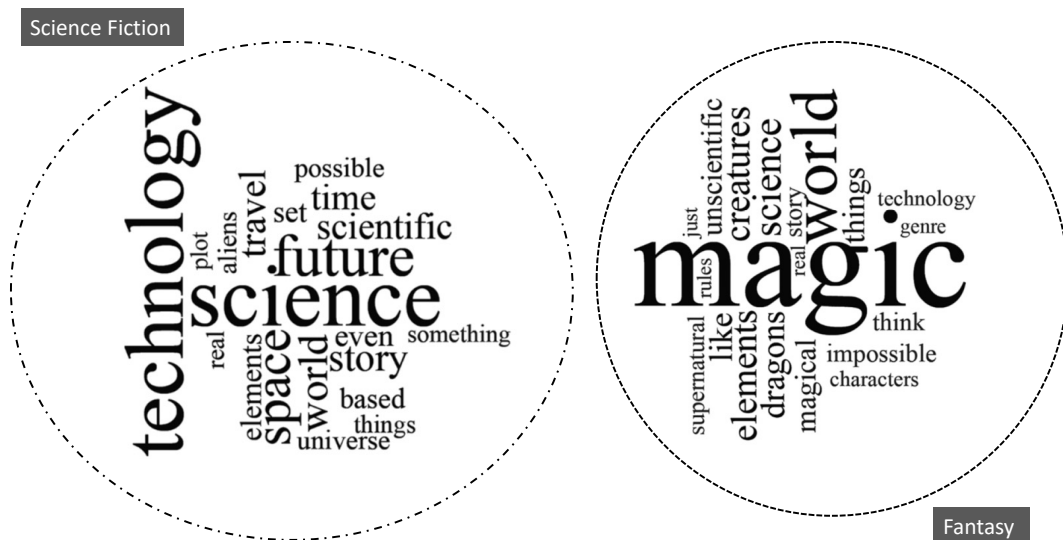

Figure 4. Typical tropes of SF and fantasy[1]

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[1] Adapted from "An Empirical Revision of the Definition of Science Fiction: It Is All in the Techne…" by Menadue *et al.*, who conducted polls and surveys with readers of SF and fantasy to find out how they differentiate each

SF and the natural sciences. The generic term science, like its equivalents in other languages (*science* in French; *ciencia* in Spanish; *ciência* in Portuguese; *Wissenschaft* in German; *наука* in Russian), was first attested as a body of regular or methodological studies and postulations concerning a particular subject or speculation in the 1700s. However, archaic definitions of science as organised knowledge in opposition to lore or myth have been in use since the mid-fourteenth century. The notion of science that is more commonly accepted today comes from the Greek word *ἐπιστήμη*, knowledge, from which also stems the English word epistemology. In plain terms, it refers to intellectual knowledge, the one acquired through systematic study, "rooted in the evidence of the senses, carefully sifted by deductive reasoning and the experimental testing of generalizations" (Stableford 2012: 15). The science in SF, however, has a different application, as it is 'fictional'.

Several popular SF stories showcase the traditional tropes of time travel, space travel, more advanced extraterrestrial beings, wormholes, black holes, relativity, A.I., teleportation, parallel universes and other dimensions. Concerning space travel, Stanley G. Weinbaum's "A Martian Odyssey" (1934), Nancy Kress's "Out of All Them Bright Stars" (1985), and Frank Herbert's *Dune* (1965) can be regarded as architexts, although *Star Trek* and *Star Wars* may be more commonly cited. These two are usually considered space operas and thus are not known for philosophical issues encompassing physics, except for the apparent fact that the stories are set in space and unfold through the device of the interstellar voyage. In terms of epistemological depth, nonetheless, *2001: A Space Odyssey* (1968) by Stanley Kubrick and Arthur C. Clarke as well as *Interstellar* (2014) by Christopher Nolan are probably better archetypes.

H. G. Wells's *The Time Machine* (1895), previously referenced, popularised the idea of travelling through time using a machine. The story speculates on issues of physics, evolution and sociology. In the novella, the time machine is the instrument that mediates the reader's access to the frame narrative set in the future. Consistent time travel may involve concrete knowledge of the future, people being in two places at once, people parenting themselves and technology that does not presently exist (Hanley 2016: 386). It is worth noting that using some SF common trope does not necessarily suffice for a text to be considered SF. For instance, the trope of time travel has already been explored in fantasy, although in connection with magic or unknown forces. So, to qualify as SF, time travel stories must give a passing scientific rationale (Roberts 2000: 4).

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genre. For more on survey methodology and supplementary data, please refer to the article. The word webs on SF's and fantasy's themes/tropes were reprinted under permission from the authors.

Indeed, time travel stories make for excellent thought experiments to speculate about time paradoxes. "All You Zombies" (1959) by Robert A. Heinlein and its filmic adaptation, *Predestination* (2014), directed by Michael and Peter Spierig, do just that. What if a person could change sex, get back in time, have sexual relations with oneself and then give birth to oneself? At which point in time does this person begin to exist? This is a typical case of *creatio ex nihilo* and reversed causality similar to what happens in *Twelve Monkeys* (1995), directed by Terry Gilliam. Time travel tales often present many disputable philosophical issues: the grandfather paradox or the bootstrap paradox (Lewis 2016: 364).

SF and reality. The nature of reality is another frequent theme in SF. What if all that exists were, in fact, a computer simulation? This metaphysical speculation is elegantly approached in *The Matrix*, in which intelligent machines cultivate humankind to generate electricity. Similarly, *Simulacron-3* (1964) by Daniel F. Galouye, which likely inspired *The Matrix*, presents a world where companies create a supercomputer that hosts a virtual replica of 1937 filled with simulated people who are conscious and believe they are 'real'. In a different direction, but also questioning reality, existential dilemmas, and issues of personhood, Philip K. Dick's *Time Out of Joint* (1959) and *Ubik* (1969) describe future societies where people's minds can be uploaded onto hard drives. These storylines present a version of an old philosophical fable: the brain in a vat – what if it were possible to split a person's brain and body while keeping them wirelessly connected? Where would that individual's personhood be? Where is a person's mind or personhood (Chalmers 2016: 35)? As Bostrom (2016: 22) pointed out, the intriguing part of such tales is that despite sounding absurd, there is no way to invalidate them.

This entanglement between the actual world and the virtual (computer's digital world) has led many philosophers and critics to speculate on the plausibility and real-life implications of the narratives. In tandem with the simulation stories, many texts address other profound issues concerning personhood, or what defines a person, and the coexistence of free will and determinism. Ted Chiang's "Story of Your Life" (1998), Philip K. Dick's *The Minority Report* (1987) and Stephen King's "The Jaunt" (1981) make an illuminating case for these questions.

SF and sociology/politics/ethics/environment. This thematic stream is perhaps the most exhaustively explored in SF, both literary and filmic. Androids, replicants, mutants, cyborgs and the notions of posthumanism and transhumanism are the standard allegories chosen to present social criticism. SF works with such tropes are a powerful tool. They can challenge well-established truths and even what it means to be human. Such stories were responsible for

popularising erudite issues that the mass audiences would otherwise probably never consider. *A.I.* (2001), directed by Steven Spielberg and loosely based on B. W. Aldiss's "Supertoys Last All Summer Long" (1969), is one such work. The film compels the spectator to sympathise with David, a childlike android uniquely programmed with the ability to love. Because David is a machine, he is not alive, but he is, artificially or not, conscious. This poses an intriguing issue. What is the right way to treat another conscious being if they are not human?

The problem is also broached in *Do Androids Dream of Electric Sheep?* (1968) by Philip K. Dick and its filmic adaptations as well as in Isaac Asimov's *I, Robot* (1950) series, which addresses yet another question: what should robots be allowed to do? Is it ethical to make them conscious if all they will ever do is form a workforce? In a different direction, *Brave New World* (1932) by Aldous Huxley describes a futuristic society dominated by a "World State" that rotates around science and efficacy; individuality and emotions are conditioned out of people. In the story, whereas some castes are created to live a life of pleasure, others are bred to be emotionless automatons who do the hard labour.

The allegories these narratives present, however, do not discuss future societal models. They denounce social class issues, totalitarianism and moral questions involving individual freedom, respect for life and others in contemporaneity. Constantly, cases are made that some of those works are only dystopias rather than SF. Still, the apparent ingredient of ultramodern scenarios used in connection with the social sciences exposes the tradition they follow, so much so that, to the very least, one must consider them as being in both genres (Freedman 2000: 41; Csicsery-Ronay 2011: 31; Suvin 1979: 76).

Another way to explore ethical concerns has been the representation of environmental problems. The so-called ecotopias usually address specific issues by setting stories in devastated futures and wastelands. Instances of this thematic subcategory include Frank Herbert's "Seed Stock" (1970) which deals with the scarcity of supplies due to environmental problems caused by anthropogenic action as well as Charles Stross's "Rogue Farm" (2003), which describes a bizarre world of biological fabricators, eight-legged cows, and genetic upgrades.

SF and linguistics. Few things are so terrifying as the oppressive control of language. Most of what fiction has shown in this respect cannot be reproduced in real life. Yet, the idea continues to be terrifying (Sisk 1997: 1). Perhaps, if a government has enough power even to try, this already constitutes overwhelming control and loss of freedom. Many SF works that feature fictional languages use them to produce this atmosphere of horror. Thanks to these texts,

the masses have posited ontological speculations that extrapolate current science and philosophy. However, the audience's expectations of SF are ruled less by the story's content than by how it is rendered. This view foregrounds the question of style.

3.4 A Stylistic Analysis

When reading a text or watching a film, not everyone will be able to tell whether the novum in a story contradicts scientific facts or not. Of course, it is commonplace that until now, travelling through time is impossible or teleportation is an unreality, but how many people know that sound does not propagate in the vacuum and this being the case, noisy spaceships and buzzing laser canons in space are unscientific? Or how many know that due to inertia, spaceships do not have to keep their engines running all the time?

Some could argue, therefore, that Suvin's theory on cognitive estrangement is far-fetched. Justifying something impossible as 'science' is just a change of words; in a sense, it is the same as saying a carpet flies because of magic. I agree that the concept of "impossible" may constantly change, depending on science and technology advancements. Nonetheless, perhaps even more than the thought-provoking ideas peculiar to SF, what distinguishes the genre are several distinctive stylistic features. This is to say that the novum and the consequent effect it calls forth are embodied not simply by the pseudo-scientific justification but in how it is presented to the reader, usually as a metaphor.

Stockwell (2000: 157) differentiates two types of metaphor realisations: visible and invisible. While the former involves a direct linguistic representation that depends on syntactic markings, thus being more clearly perceived as a metaphor, the latter requires more inference. SF texts use both, but only the second one is a staple of the genre. This invisible metaphor realisation operates through a specific "subjunctive level" that multiplies the range of word choices that can be put together in a meaningful way (Delany 2009: 11). The subjunctive level to which Delany refers encompasses the tension in the word-meaning-context relationship in a specific text.

In other words, the reader applies a corrective process based on his or her knowledge of genre style to make sense of the text. This is especially relevant in SF due to how language is manipulated in its writing tradition. As previously mentioned, Barthes (1974: 261) argued that every element in a text "signifies"; even when certain details appear insignificant, their absurdity or uselessness will be their function.

The excerpt that follows invariably requires the interpretative proficiency of an initiated reader. The passage also demonstrates how the genre of a text influences how the reader decodes the metaphor.

"He turned on his left side"; the realist reading understands that someone has changed the position of his body, but the sf reading might mean that he has activated the left side of his body by turning on a switch. The point of this example is not so much that the sf reading exploits the grammatical and semantic possibilities of the language in a different and richer way, as Delany argued, as that the second reading depends upon the reader's familiarity with and use of sf conventions.

(Rieder 2010: 197)

As noted, readers who are aware they are reading SF choose very specific interpretation paths that are proper to the tradition of SF texts. Delany (2012: 220) states that the novum alerts the reader to the fact that he or she cannot take things for granted; cannot assume that the text simply reproduces the actual world. Extrapolations can often manifest themselves as details that shift the text's mode entirely to create the so-called sense of wonder.

This contrasts SF texts with more realistic fiction. Quoting Heinlein's *Beyond This Horizon* (1942), Delany (2012: 228) draws attention to the wording describing a scene in which an office worker types in a security code, and "the door dilated" instead of 'opened'. In realistic fiction, 'the door dilated' is meaningless or can only mean that a metallic or wooden door dilated because of heat or humidity, slightly expanding its size. Nonetheless, being fully aware of the tradition followed by the story, the reader applies a specific corrective process and takes it to mean that dilation is a technological way to open the door; perhaps it liquifies and escapes to the edges of the gate, opening a passage the character can go through.

Similarly, as Delany (2009: 12) defends, a sentence like "The red sun is high, the blue low" is nonsensical in realistic fiction because of the conventions associated with this type of writing tradition. Although the same sentence could fare better at the subjunctive level of fantasy, it is still reasonably unclear because the genre corrective process is more limited than SF. The red sun could be read as 'sunset', hence the colour red, while the blue sun could be explained as a being created by magic. In SF, however, the sentence becomes completely clear. Both suns are real, and their colours are literal, but they also evoke a sense of otherworldliness.

Accordingly, upon analysing Gibson's *Neuromancer* (1984) opening line, Stockwell (2000: 182, 201-202) indicates an altered *Weltbild*, as the colour of the sky is compared to the colour of a television screen tuned to a dead channel, rather than the other way around. This

might suggest a futuristic setting where televisions are more commonplace and natural than the sky, a cultural implicature that cannot be taken for granted. Perhaps, in the future, skyscrapers have dominated the landscape so much that the deprived people who live on the surface can no longer see the sky. Conversely, upon reading Vonda McIntyre's novella *Superluminal* (1983), initiated readers would interpret the passage "She gave up her heart quite willingly" as Laenea literally handing over her heart as she needed to undergo body alterations to safely pilot spaceships at 'superluminal' speeds. In contrast, readers of realistic fiction would understand the sentence only figuratively.

Another area that sets SF apart from virtually all other genres is the use of direct exposition – the flow of necessary information to the reader. Dialogues between characters, for example, are a common way to use it. This is a tool often deployed to promote solidarity with the reader who might not understand the scientific jargon and more complex concepts. Works from the pulp phase and even the New Wave movement have been known for overusing or misusing exposition, but many recent texts still apply it regularly.

In *Interstellar* (2014), directed by Christopher Nolan, there is a scene in which Dr Romilly explains to Dr Cooper what a wormhole is. He draws a dot on a piece of paper and then folds it as to illustrate the theory of warping space (*Interstellar* 58:25). While there is nothing inherently wrong with the explanation, it is odd that two astrophysicists should converse in such simple terms about something that has become relatively introductory level in the world of Physics and SF. They do, though, because the exposition is meant to bring up to speed a larger audience, including the non-initiated. Of course, the sense of credibility in the scene is ruined, to say the least.

This is considerably different from what happens in another of Christopher Nolan's films, *Tenet* (2020). In the scene, a scientist explains to an agent, who is a layman in terms of science, how the mechanics of time-inverted objects work (*Tenet* 17:19). The scene is an excellent example of a well-executed direct exposition. There is the figure of the expert who masters the subject matter and someone who is not expected to know anything about it, just like the audience, so there is a natural feel to it. In both cases, there is a significant number of technical terms and, to some extent, even a few instances of scientific gibberish.

An example taken from *Perdido Street Station* (2000) by China Miéville of a cab rank reveals an interesting conceptual structure resulting from this narratorial style: "Cabs waited all along the iron fence. A massive variety. Two-wheelers, four-wheelers, pulled by horses, by sneering pterabirds, by steam-wheezing constructs on caterpillar treads […] here and there by

Remade, miserable men and women both cabdriver and cab" (17). As Mendlesohn (2008: 242) observes, "the first-person narrator talks to the reader as if to a stranger, occasionally to a reader positioned as "posterity," but almost always to the reader as abstract".

Writers have also handled the flow of information by abeyance and implication, which means information is implied rather than forthrightly narrated:

Andrew Harlan stepped into the *kettle*. Its sides were perfectly round, and it fit snugly inside a vertical shaft composed of widely spaced rods that shimmered into an unseeable haze six feet above Harlan's head. Harlan *set the controls* and *moved the smoothly working starting lever.*

(Asimov 1955: 7, my emphasis)

Although the reader does not promptly know what the text means by 'the kettle', he or she certainly understands it is not a teakettle since Harlan steps into it. The fact that Harlan sets the controls, however, implies that he is inside some sort of machine, for he moves the "smoothly working starting lever". The flow of information is thus controlled and spread throughout the text by cueing the reader to guess and puzzle out the information supplied. This might make it difficult for a non-initiated reader to follow. Still, it is considered an engaging technique since it requires that the reader extrapolates to make sense of the text, generating the cognitive estrangement effect. Of course, it also removes the metaphor.

Concerning this, Moylan states that

The generically informed reader of such a text […] learns the strange new world not by way of a condensed reality briefing but rather by absorbing and reflecting upon pieces of information that titrate into a comprehensible pattern, by which the reader subsequently "makes sense" of the plot and character development unfolding within that alternative space-time.

(Moylan 2018: 6)

Finally, as Stockwell (2000: 79, 50) points out, along with jargon and neologisms, the register and most of the stylistic marks, the genre acquired during the magazine era are still used nowadays. Although a departure from the pulp style does exist, it is rare. Intrusive and over-long passages of exposition, story titles resembling newspaper headlines, unusual application of adverbs or adjectives, syntactically complex dialogues as well as unnatural synonyms for the speech reporting verb 'said' feature as style signatures of the genre (Mandala 2010: 14): 'groaned', 'panted', 'gasped', 'snapped' (Stockwell 200: 82).

Overall, however, SF prose still relies heavily on 'transparency' of language. For some, this accounts for weakness of form. Nonetheless, it should be noted that modern SF is, to some degree, a postmodern literary manifestation. As an artistic movement, Stockwell (2000: 68) states, Postmodernism generally claimed to be a populist break from previous forms' elitism. Most emphatically, it disrupted the boundaries of high and low art, seeking a readerly orientation.

This being the case, the use of 'plain language' can be regarded rather as a technique that draws more attention to the estrangement and defamiliarisation articulated by the nova the text presents, thus making the strange (fantastic and non-mimetic concepts) appear familiar through the use of familiar language (Stockwell 2000: 61). After all, as Mandala (2010: 30) points out, for the process of estrangement to be successful, the language that describes "the other world […] cannot be so different that it becomes impenetrable".

Mandala (2010: 106) explains that a series of what-ifs and maybes about the near or far future into a logically consistent narrative structure worked out by plain language allows for speculations to have a semblance of reality. Likewise, Delany (2009: 11) states that the pedestrian language can be further explained by the fact that SF is a highly commercial genre. Stories must be written at a faster pace, and therefore, attention is focused on accurate language rather than flowery.

So, as I treat it here, SF is a popular fictional genre or tradition of accumulated wisdom and referentiality that engages with cultural debates and social concerns around one or more of the categories I have mentioned. Such categories as organised in this chapter, in turn, deal with one or more of the traditional tropes of futurism, artificiality, technology, extraterrestrial contact, time travel, physiological or mental mutation, scientific experimentation, and cataclysmic events. These are then used to produce scientific speculations and extrapolations.

SF texts teem on ideological discourse, which is attainable by the thought experiments presented by the text. Finally, the affinities based on device, tropes and style serve as tips for interpretation, allowing an intertextual hermeneutic exercise by texture familiarity. The following chapters will analyse how fictional languages operate in conjunction with the same writing traditions of SF I discussed here.

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Whenever possible I have favoured the original editions of each literary work. Where this has not been possible, I have included the year of the edition I used in brackets in addition to the original year of publication, as cited throughout the thesis. Both artistic and scholarly texts are listed together to enhance searchability.

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