Journal of Translation Studies 3(1) (2019, New Series), 185–222

Chinese and Other Aliens: How European Writings on Chinese Have Helped Shape Conceptions of Alien Languages in Science Fiction

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Abstract

This paper explores the ways in which Western conceptions of the Chinese language have influenced the development of science fiction in English. I argue that, as the ultimate earthly "Other," Chinese civilization was conceived as utterly alien to Europe and America. Whether viewing China through rose-tinted glasses or with a distempered spleen, Europeans and North Americans have long treated China as different, not just in degree but also in kind. When it came to trying to imagine extraterrestrial Others, China and the Chinese thus naturally functioned as a model. While this was true in regard to a wide variety of aspects of Chinese culture, this paper focuses on language and the ability to communicate with the Chinese as a template for later descriptions of contact with extraterrestrial alien civilizations. I will demonstrate that this holds true for both the written and the spoken language, and is bound up with the search for a universal language, discussions of pidgin English, and the invention of Basic English in the early twentieth century. Finally, I will demonstrate that this discourse has also found expression even in science fiction written in Chinese.

Keywords

science fiction, translation in; Chinese language, Western conceptions of; John Brunner; Frederik Pohl; Pohl Anderson; Robert Heinlein; Michael A. Foster; Liu Cixin

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Published by The Chinese University Press, ISSN 1027-7978.

> [The Chinese language] is peculiar in its nature, differing in its principle from every other language of which we have any idea. It has been carefully cultivated, and tenaciously preserved from every foreign mixture, by one of the most ancient and populous nations in the world. (Marshman 1814, 1)

This paper explores the ways in which Western conceptions of the Chinese language have influenced the development of science fiction in English and, indirectly, science fiction in Chinese. The basic thesis is that the Chinese, as the ultimate "Other" on earth, conceived as completely alien to Europe and America, have functioned as one of the primary models for extraterrestrial aliens right down to the present day.

It is not difficult to see why there might be a link between extraterrestrial aliens and foreigners from another country. The term "alien" to denote intelligent life forms from hitherto unexplored parts of the earth (whether on the surface or inside of it), other planets, or other dimensions, originally simply meant "foreigner." It is still used in this sense, especially with negative connotations of "unwanted," as in the phrase "illegal alien." Indeed, "illegal" is the most common collocate for "alien" according to the Corpus of Contemporary American English,[1] and the *Oxford English Dictionary* gives as one of the secondary meanings, "A person who or thing which is opposed, repugnant, or unaccustomed to a specified person or thing; a stranger to."[2]

Any foreigner or foreign country might thus serve as a model for aliens in science fiction. It is my contention that China and the Chinese language, however, achieved a particular popularity at an early stage and held that position at least until the early 1980s.

However, before moving on to consider the Chinese case, some contextualization is in order. Regarding what countries might be more likely to serve as a model for aliens, in particular hostile ones, those with whom one is at war or who are perceived as a threat are prime candidates. Science fiction in the 1930s and 1940s has many stories featuring Japanese as models of aliens (for example Phillips [1948, 130], where invading insect-like people from Sirius lack "the inventive faculty" and will therefore "be easily beaten in the long run, just as the imitative Japanese had been in the second world war"; for a more recent example see Cherryh 1994). There is even a discussion between Joseph Campbell, the editor of *Astounding Science Fiction*, and a reader, where they come to the conclusion that the Japanese language cannot support scientific

thinking and had to borrow words from German and English; Campbell goes so far as to say that "I did know that all Japanese scientific work was done in European languages" (Morrill 1952, 166; Campbell's original editorial is Campbell 1951).

It is interesting that the European nations of Germany and Italy, although deadly enemies to the United Kingdom and the United States during World War II, seem to turn up less commonly as a model for alien cultures, while other non-Western cultures such as Arabic culture do (Herbert 1965 and Russell 1996 are just two examples). There seems, then, to be a racial component; since Germans and Italians are white, like mainstream British and American culture, they are not as alien as Russians, who are categorized as "Slavic," and Arabs and Japanese, who are categorized as "Asian."[3]

Yet in most of the non-Chinese examples cited here, it is the cultural aspect, not the linguistic one, which is important in delineating the aliens. The aliens from Sirius are like the Japanese, not in the way they speak, but in the way they think (they are imitative); or in *The Sparrow*, the social structure and mores are what makes the aliens Arab-like, not the language (Russell 1996).

By way of contrast, the Chinese language *qua* language excites the European imagination from an early period in ways unlike that of almost any other language, as we will see below in my detailed examination. One partial exception to this is the writing systems of Egyptian and Mayan antiquity, both of which were characterized as hieroglyphs, the deciphering of which were very much in the popular imagination. But these were both "dead" languages, whereas Chinese was and is still very much alive. Thus, while there are many adventure and horror stories that feature Egyptian and Mayan civilization (tales of mummies, buried treasure, ancient curses), there are relatively few science fiction stories that feature languages that resemble them. The story "Omnilingual" by H. Beam Piper (1957) is instructive in this regard.

In "Omnilingual," a team of archeologists are excavating a city on Mars, where seemingly a change in climate and the gradual stripping away of most of the atmosphere led to the extinction of the Martian race. Early on, there is a discussion where the task of deciphering Martian writing is *contrasted* with the decipherment of Egyptian hieroglyphics, because in the latter case linguists could assume some basic similarities with other human languages, and also because there was the Rosetta Stone, which provided a bilingual gloss for part of a text that then gave

linguists a substantial vocabulary with which to work (Piper 1957, 11). On Mars, as someone points out, the archeologists cannot assume that the dead Martian language is anything like human languages, and there is no possibility of a bilingual text, because Martian civilization died out when humans were still preliterate (11). In the end, it is the finding of a periodic table of elements on the wall of what they assume to be a classroom that allows them to begin to decipher Martian writing. Thus, the possibility of a bilingual text as a key is replaced by the possibility that scientific facts are universals, and so if a culture were to reach a sufficiently advanced state of science, then it would be possible to learn the symbols they used to express scientific facts because both their symbols and our symbols point to the same, verifiable, universal truth (46).[4]

It is no accident that, in ruminating on how to decipher a long-dead language found on another planet, the case of Egyptian hieroglyphs should be used as an analogy. However, in the story itself, the analogy breaks down due to a difference in degree of the problem and the analogy is quickly dismissed. More importantly, there is no hint in the story that the Martian writing system is in any way similar to Egyptian hieroglyphs. Rather, we are explicitly told that the archeologists have tentatively divided up the marks into consonants and vowels, and even come up with an arbitrary mapping onto human sounds to allow them to "read aloud" the *phonetic* Martian script (Piper 1957, 13).

The other partial exception to the rule that Chinese is the main language upon which discussions of alien languages are based is the frequent invocation of the Sapir-Whorf hypothesis, which posits that different languages entail (radically) different worldviews. This hypothesis was developed mainly by Whorf working with native American languages, and so every time that hypothesis is invoked, those languages and cultures are also invoked, albeit indirectly. There is also at least one science fiction story in which the Navajo language is invoked directly in a discussion of the Sapir-Whorf hypothesis by a protagonist who has himself studied Navajo. In "Rough Translation" (Janis 1954), a man comes back from Mars speaking English but with odd terms mixed in. Struggling to come to grips with this phenomenon, the protagonist, a linguist, has an epiphany when he compares the problem here with the problem he faced previously when learning Navajo: "Suppose, he toyed with the thought, suppose the Martian language, whatever it was, was structured along the lines of Navajo, involving clearly defined categories which did not exist in English" (Janis 1954, 95). His own learning of

Martian leads to his worldview changing so radically that he is now unable to communicate with his fellow linguists (106). Again, however, there is a caveat: the Martian language does not segment reality in the same way as Navajo. Rather, he applies the general insight that Navajo segments reality in ways different from English to the problem of learning Martian.

Below, by contrast, I will show how very specific features of Chinese were frequently the basis for concrete details of alien languages, and in a more summary fashion, due to space constraints, how other facets of Chinese culture often accompanied these linguistic details.

The paper will adopt a modular fashion of argumentation, with different characteristics imputed to the Chinese language discussed one by one, beginning with the spoken language and then turning to the written. However, since these factors are often inter-related, there will be some overlap in the use of examples as each separate feature is considered in turn. Also, situated as it was at the extreme limit of knowledge, any and all characteristics of Chinese could be conceptualized in terms of binary opposites, both of which could be simultaneously true; Chinese was both musical and cacophonous, simple and incredibly complex, the ultimate rational system and inherently anti-scientific. Instead of a line with each of these extremes at either end, then, we may need to imagine a circle, with the norm (European languages) being one point on the circle and China at the opposite side; one can arrive there by traveling in either direction, left or right, along the circumference.

Finally, a note on sources is in order. There are tens of thousands of science fiction novels and hundreds of thousands, perhaps millions, of short stories. No researcher could hope to read more than a fraction of them. For this paper, I have drawn upon two main sources: my own collection of science fiction (approximately 400 volumes, being a mixture of novels and anthologies of short works), and materials available through the Internet Archive. The Internet Archive includes nearly complete runs of three important early science fiction magazines: *Amazing Stories* (which began in 1926; after 1982 it was sporadic), *Astounding Science Fiction* (which began in 1930; after 1960 it was renamed *Analog* and ran until 1971), and *Galaxy* (1950–1980), plus a number of issues from *Worlds of If* (1952–1974) and *Interzone* (1982–present). These magazines are all fully searchable and downloadable. The Internet Archive (https://archive.org/) also contains hundreds of novels and anthologies, but many of these may not be downloaded; they must be accessed individually

online through a checkout system (where only one user at a time is given access for fourteen days) and searched separately. Besides conducting various keyword searches through the magazine issues, I also searched through a selection of novels and anthologies one by one, using a set of keywords relating to translation, interpretation, and China. For novels outside of my collection, my choice was partly directed by two lists posted online by critics, "15 Memorable Alien Races in Science Fiction" (Grubthrower 2008) and "27 Best First Contact Books" (Livingston 2016), on the assumption that such works were more likely to contain some discussion of alien language and translation. The dates of the works on these two lists stretched from 1950 through 2014, with ten out of the forty-two from after 2000. This means that a fair sample of materials from the 1930s through the present day have been examined, both novels and short fiction.

1. Aesthetic/Affective Judgments Regarding the Sound of Chinese

(a) A Harmonious Sound

Early missionaries and travelers frequently remarked upon the tonal features of spoken Chinese. This meant that Chinese was often conceived as being essentially musical: the Chinese "sang" or produced "harmonies." Niccolo Longobardo writes, in a letter dated 1598, as translated by Luca (2016, 145): "The second difficulty is that it [Chinese] is highly equivocal, insomuch that one word signifies very many and very different things, which are distinguished solely by certain accents, or rather musical tones. This requires a very fine ear and a very distinct and clear pronunciation." Similarly, Matteo Ricci, in his journal as edited by Trigault, notes that Father Cattaneo's being "an excellent musician, with a discriminating ear for delicate variations of sound," was invaluable in distinguishing the tones of Chinese (Ricci 1953, 315). Later important compendiums regarding Chinese often enlarge upon this feature. Le Comte (1697, 1: 181) says "so that the *Chinese* Language, when it is spoken exactly, is a kind of Musick, and contains a real Harmony, which composeth the Essence and particular Character of it,"[5] while Du Halde (1738–1741, 1: 364), whose work is one of the most cited in the eighteenth century, says "these different Tones are so nicely sounded, that Strangers find it difficult to perceive their Difference, especially in

the Province of *Kyang nan*, where the accent is most perfect."

The idea that Chinese was a musical language found its way very quickly into fiction. One of the earliest travel narratives that included a trip to the moon, Francis Godwin's *The Man in the Moone* (1638), features lunarians whose language consists of "tunes and uncouth sounds" (Godwin 1657, 93). The description of their language echoes closely Longobardo's description of Chinese quoted above: they "have few words but they signifie divers and severall things, and they are distinguished onely by their tunes that are as it were sung in the utterance of them" (93–94). However, Godwin goes even further:

> [Y]ea many words there are consisting of tunes onely, so as if they list they will utter their minds by tunes without words: for Example, they have an ordinary salutation amongst them, signifying (Verbatim) Glorie be to God alone, which they express (as I take it, for I am no perfect Musician) by this tune without any words at all. (94)

This is followed by Godwin producing a line of musical notation meant to be the salutation, taking the missionaries' description of Chinese to its logical extreme.

That Godwin drew upon descriptions of the Chinese language for his lunarians has been well documented by Cornelius (1965, 43–63), who also points out his probable influence on parts of John Wilkin's (1641) non-fictional work on codes, as well as on Cyrano de Bergerac's fiction (1657). What is less well documented is the persistence of this trope in twentieth-century science fiction. H. G. Wells's *The Time Machine* (1895) features a futuristic language that is "a strange and very sweet and liquid tongue" (Wells 1978, 17). Then in his *First Men in the Moon (*1901), the Selenites are described as "making the most remarkable piping and whining sounds" (442).

Wells, a figure who straddled serious fiction and genre fiction, might be considered by some to be an exception in a genre that, by the 1940s, became the domain of writers who specialized in nothing but science fiction. Yet if we turn to the works of such genre writers from the 1940s onward, we continue to find a predilection to use the trope of musical language or tonal elements. Robert Heinlein's "Gulf" (1949) specifies that Speedtalk uses musical pitch to distinguish meaning (Heinlein 1953), as does the later work *Babel-17* (Delany 1967), while C. M. Kornbluth's "Friend to Man" (1951) has a creature that uses a rosined appendage to

rub against another appendage like a bow across a stringed instrument to produce speech (Kornbluth 1977, 257–265). In John Brunner's *The Dramaturges of Yan*, the alien species produces musical speech; one sounds like a "cello droning away on a single note" (Brunner 1972, 44). In Poul Anderson's "A Little Knowledge," a space explorer on another planet, meeting an alien, says: "'Stay right where you are,' he commanded. The vocalizer on his breast rendered the sounds he made into soprano cadenzas and arpeggios, the speech of Lenidel" (Anderson 1972, 111). In Stephen Tall's "The Bear With the Knot on His Tail" (1972), Earth receives musical broadcasts that cannot be deciphered, but that convey a feeling of danger and a plea for help. Under its influence, an artist paints a picture wherein the tail of Ursa Major has a knot in it, as if something is wrong, so a starship is dispatched there to see if it is the source. As they approach the music shifts to despair, then resignation and a sort of requiem; after contact, there is a message from the aliens in a sort of symphony that then fades to a solo; a crew member plays the guitar in response to the alien music, and communication is established.[6]

Unlike the case of Godwin, where it is fairly easy to document the direct appropriation of the trope from sources describing China, it is less clear on the surface that there could be a direct link in some of these cases. However, as we proceed through the various characteristics ascribed to Chinese below, we will see a pattern emerging, and evidence that several of these writers drew inspiration from knowledge of earlier and enduring conceptions of the Chinese language.

(b) Cacophonous Chinese

At the same time, however, and often in one and the same work by a writer, the opposite claim is also made: that Chinese sounds uncouth, savage, or cacophonous. After praising the musical tones of Chinese, a few pages later Le Comte (1697, 1: 185) adds a devastating description of the er ending (most prevalent in the north of China, spelled *ll* in his text):

> [T]he sound comes from the bottom of the *aspera arteria*, so uncouth and unnatural, that it alone is capable of spoiling a Language: But as certain forc'd Aspirations in the *Castillian* Tongue, do notwithstanding please the *Spaniards*; so the *Chineses* are perswaded that these same Gutturals that displease us, are a real grace; and that these more Masculine and stronger Tones, gives a body to their Language, without which it would

> be apt to degenerate into a Puerile delicateness, which would at best have no grace but in the Mouth of Women and Children.

Here the sounds of languages are simultaneously gendered and aestheticized, with liquids and open vowels being associated with graceful femininity, while gutturals and hard consonants are associated with brute masculinity.

Later writers, especially British ones, also tend to have negative views of the sound of Chinese. Sir John Francis Davis, in an introduction to his translation of a Chinese novel, tells us that the Chinese often have several names and appellations for each other, but that in his translation he has chosen only one for each to "avoid the unnecessary multiplication of ill-looking and worse-sounding exotic names" (Davis 1829, xiii). In the twentieth century, even the Chinese author Lin Yutang 林語堂, writing in English about the Chinese language, expresses some ambivalence toward the sound of his native tongue:

> The fact that the Chinese spoke in syllables like ching, chong, chang was appalling in consequences. This monosyllabism determined the character of the Chinese writing, and the character of the Chinese writing brought about the continuity of the literary heritage and therefore even influenced the conservatism of Chinese thought. (Lin 1935, 216)

Krueger (1968, 77), in a survey of over 1,200 works of science fiction (both short stories and novels) notes that alien languages are more likely to be "characterized as harsh, strident, grating, and invariably 'guttural'," although he does also note examples of languages that "can produce a pleasant effect." He produces many examples, which I will not repeat here. Rather, I will give one example from after his survey of a work that embodies both tendencies at once: Larry Niven's *Ringworld* (1970).

In the novel, there are several intelligent species from various planets in "known space." When an artificial ringworld is discovered, an expedition consisting of individuals from different species is formed to investigate. Of these, the most important are the puppeteers, the oldest civilization in known space. As the most civilized and stable of races, we should not be surprised to learn that their language sounds like "orchestral music" (Niven 1970, 12). When the expedition was about to leave, Nessus, the puppeteer pilot, "had given them a strange moment just before takeoff. Music had played suddenly through the cabin, complex and lovely, rich in minor

tones, like the sad call of a sex-maddened computer. Nessus whistled. ...the puppeteer was a walking orchestra" (55). Finally, when unpleasantly surprised, Nessus lets out "a discordant blast of music" (26). Here we see musical language as capable of directly conveying to aliens, if not meaning, at least emotion, but also associated with an ancient and distant race.

On the opposite extreme in the novel are the kzinti, a race whose language is characterized as snarling: "One kzin sounded like a catfight. Four kzinti in an argument sounded like a major feline war, with atonics" (Niven 1970, 12). As with the puppeteers, their language is linked to their level of civilization; the kzin are a warlike race, prone to violence upon the slightest provocation, and generally perceived as semi-barbaric by the puppeteers, just as we have seen in the writings of Le Comte over 300 years earlier.[7] The novel thus nicely encapsulates the extremes of the spectrum of how alien languages sound to human ears, with both extremes rooted in an earlier discourse of how Chinese sounds to Europeans.

There is an implicit assumption that in all these cases, euphony is linked to intelligence and in most cases relatively peaceful alien races, pointing to a real chance for translation and intercultural communication. Cacophonous languages signal barbarism, violence, stupidity, and the extreme difficulty or impossibility of communication. This may be related to a strand of European thought elevating music to a special status as a universal language. Schopenhauer, for example, when speaking of music, says:

> Further, its imitative reference to the world must be very profound, infinitely true, and really striking, since it is instantly understood by everyone, and presents a certain infallibility by the fact that its form can be reduced to quite definite rules expressible in numbers, from which it cannot possibly depart without entirely ceasing to be music. (Schopenhauer 1966, 1: 256)

To the extent that Chinese was identified as musical, this Romantic view of music would reinforce the special status of Chinese.

2. Discussions of the Phonetic Sound System of Chinese

If we look at more objective descriptions of the Chinese sound system, grammar and vocabulary, rather than affective responses to it, again, we find there is a bifurcation. But in this instance the bifurcation is between paucity and infinite variety.

(a) Chinese as a Limited Language

Some early descriptions of the Chinese language emphasize that it lacks certain sounds. Peter Mundy, in his journal from the sixteenth century, noted that the Chinese could not produce certain sounds of the English language because they lacked them in their own tongue, and also that they mixed up the pronunciation of *l* and *r* (1919, 3: part 1, 313).

It is not hard to find references to communication with aliens that also note the limited nature of their speech and, especially, there is more than one example in the limited sample I have examined to date where confusion between *l* and *r* is raised. Jack Vance's "Brains of Earth" (1973, 210) features a portable translation device that "seemed to find difficulty with *l*'s and *r*'s, pronouncing them with a rasping and rattling of the glottal mechanism." Samuel Delany's *Babel-17* (1967) includes a discussion of Orientals who confuse *l* and *r*. In Frederik Pohl's *Heechee Rendezvous* (1984, 267), when the Heechee speak to humans for the first time, they mispronounce words and use incorrect collocation. In other words, John Chinaman is alive and well and living in outer space.

Early Jesuit accounts stressed the extremely limited number of words in Chinese (from a modern standpoint, we would probably say syllables). Le Comte (1697, 1: 180–181) produces a table of 328 "words," and this number (or 333, a number that he confusingly uses in his main text) is cited in later works (for example Du Halde 1738–1741, 1: 363). Likewise, early sources either ignore Chinese grammar or, especially in the nineteenth century, say it is extremely simple if not non-existent (Saussy 2001).

At the same time, simplicity could be seen as something positive, because it meant that Chinese was easy to learn and therefore potentially useful as a lingua franca. Many early discussions of the possibility of a universal language see it as something that should be simple and logical (Cornelius 1965, 23, 89–101, 113–114, 127–128, 135).

When we turn to science fiction, here is H. G. Wells again from *The Time Machine* (1978, 29):

> I made what progress I could in the language, and, in addition, I pushed my explorations here and there. Either I missed some subtle point, or their language was excessively simple—almost exclusively composed of concrete substantives and verbs. There seemed to be few, if any, abstract terms, or little use of figurative language. Their sentences were usually simple and of two words, and I failed to convey or understand any but the simplest propositions. (Chapter 6)

This idea of simplicity as a virtue in linguistic architecture is echoed several decades later in a story by Frederik Pohl, "The Gold at the Starbow's End" (1973, 120), where one of the characters notes that "pragmatically useful grammars are without tenses," another characteristic typically attributed to Chinese.

Discussions of Chinese grammar overlapped to some extent with discussions of pidgin English in nineteenth-century British discourse on the Chinese language, to the point that pidgin was taken to be a literal translation of the Chinese language and thus a direct representation of how the Chinese "thought." In turn, pidgin English, which Lin Yutang (1935, 81) aptly summed up as "English meat with Chinese bones," i.e., English vocabulary and Chinese grammar, becomes something of a counter-example for the Basic English movement in the 1930s, which sought to establish a lingua franca that could be used for basic communication around the world using *English* grammar and a radically simplified vocabulary (St. André 2018b, 145–155 and 243, note 12). Therefore the avenues by which the discourse regarding the Chinese language influenced science fiction in regard to phonetic system and grammar was quite varied and crops up in many stories.

Several science fiction writers either directly acknowledge the influence of Chinese on their alien language, or give a list of characteristics that are so close to those described above that it is hard to believe it could have come from somewhere else. Frederik Pohl in *Heechee Rendezvous* invents a civilization call the sailship people, whose language we learn consists entirely of words of one syllable, one consonant plus one vowel, and then building up compounds in a manner similar to Chinese (Pohl 1984, 158). In *The Warriors of Dawn* (Foster 1975, 31) we learn that Singlespeech, the language of the Ier, who are a new race created by humans, is based on Chinese in terms of how its phonetic roots are built up: "Each Singlespeech root has three parts—leading consonant, middle vowel, and final consonant. Within the rules, every combination has four meanings." That each combination should have four meanings correlates to the four tones of Mandarin Chinese, which is presumably where the idea of multiple meanings for each combination comes from.

The idea of a lingua franca based on pidgin English or Basic English is widespread in science fiction. To give just two examples of the use of Basic English, the story "Jerry Was a Man" (1947) features a bio-engineered miniature elephant that can write by grasping a pencil with

his trunk and is said to know almost all the vocabulary of Basic English (Heinlein 1953, 171–192). In his story "Gulf" mentioned previously, his invented language Speedtalk is based on two principles: that there are approximately 100 different phonemes in all the languages of the world, and that Basic English's vocabulary of 850 words was sufficient for most communication (52).

Whereas Ogden and Richard's Basic English had generally positive or neutral connotations in Anglo-American science fiction (in the above passages it is a positive sign of the [limited] intelligence of the elephant and a scientific basis for Speedtalk), pidgin inherited a more complex mixture of connotations. It was either a sign of low intelligence (in nineteenth-century Anglo-American representations of pidgin English spoken by Chinese as revealing their limitations) or, especially in the 1960s and the 1970s, associated with the evils of colonialism as a sign of the colonizer's misunderstanding of the "natives" as stupid.

Ursula K. Le Guin's work encompasses both types of usage. In *City of Illusions* (1967, 70), the plains people (Bassnaska) on another world speak Galaktika (the lingua franca of the known worlds) only in pidgin form as a sign of the extent to which their civilization has decayed after being cut off from the rest of civilization. In *The Word for World Is Forest*, an Earthman uses pidgin English to talk with the native Hilfs on another planet, because he thinks they are half-witted. Thus he says things like "Hot water get-ready, hurry-up-quick!" (Le Guin 1976, 10) even though the hilfs answer him in proper English, as on page 28:

> "Answer now. This Fire, who start it?"
> No answer.
> "Answer now: hurry-up-quick! No answer, then I burn-up first one, then one, then one, see? This fire, who start it?"
> "We burned the camp, Captain Davidson," said the one from Central, in a queer soft voice that reminded Davidson of some human. "The humans are all dead."

Eventually, the Hilfs capture Davidson and mock him through the use of a pidgin English command, the phrase "hurry-up-quick" of which he is so fond.

Resorting to a simple language, especially a pidgin, seems to suggest that operating on a basic level that can cut across species incurs the risk that communication will be very limited or, worse, that serious misunderstanding may arise.

(b) But Then Varied to Infinity

At the same time, early writings often stressed that the Chinese language was extremely complex. Luca (2016, 100–105, 138–146, 151–154) gives several early examples. Again, both Le Comte and then later Du Halde are the best examples, as they were widely cited right down to the nineteenth century. Here is Du Halde, arguing at once that the spoken language:

> [S]eems barren, for it has not above three hundred and thirty Words, all Monosyllables, indeclinable, and almost all end with a Vowel, or the Consonant N, or Ng.
>
> These few Syllables are, notwithstanding, sufficient to discuss all manner of Subjects; because, without multiplying Words, the Sense is varied, *almost to Infinity, by the Difference of Accents, Inflections, Tones, Aspirations, and other Changes of the Voice*
>
> ...
>
> These different Tones are so nicely [French: *finement*] sounded, that Strangers find it difficult to perceive their Difference, especially in the Province of *Kyang nan*, where the accent is most perfect. (1738–1741, 1: 363–364 [Italics added for emphasis])

Compare that passage with one from Heinlein's "Gulf" (1953, 52–53) that describes Speedtalk, the new, rational language invented by a race of supermen:

> To be sure, the phonetic alphabet was much less in number than the words in Basic English. But sounds represented by letters in the phonetic alphabet were each capable of variation several different ways—length, stress, pitch, rising, falling. The more trained an ear was the larger the number of possible variations; there was no limit to variations but, without much *refinement* of accepted phonetic practice, it was possible to establish a one-to-one relationship with Basic English so that one *phonetic symbol* was equivalent to an entire word in a "normal" language; one Speedtalk word was equal to an entire sentence.

Paucity (fewer phonemes than words in Basic English) and fecundity (variation of length, stress, pitch, tone) in both cases combine together to form the perfect alien language.

Similarly, the invented language in Samuel R. Delany's *Babel-17* emphasizes economy, logic, and compactness of information:

> She didn't "look at the room."
> She "*somethinged* at the *something*." The first something was a tiny vocable that implied an immediate, but passive, perception that could be aural or olfactory as well as visual. The second something was three equally tiny phonemes that blended at *different musical pitches*: one, an indicator that fixed the size of the chamber at roughly twenty-five feet cubical, the second identifying the color and probable substance of the walls—some blue metal—while the third was at once a place holder for particles that should denote the room's function when she discovered it, and a sort of grammatical tag by which she could refer to the whole experience with only the one symbol for as long as she needed. All four sounds took less time on her tongue and in her mind than the one clumsy diphthong in "*room*." (Delany 1976, 82)

(c) And So Therefore, Generally Difficult

This combination of simplicity and fecundity comes with a concomitant difficulty in mastering such languages; running through the Jesuit reports on Chinese was often a note of despair at the extreme difficulty of the language. Du Halde's remarks about the refined accents of the south of China being incomprehensible to foreigners is just the tip of the iceberg. In a second long section on language, Du Halde catalogues the problems that await the missionary who, after spending several years learning Mandarin in one place, discovers when he starts traveling that pronunciation varies from province to province. Moreover, it turns out that his efforts to master Mandarin are largely futile because "every Province, every great City, nay every *Hyen*, and even every large Village, has its peculiar Dialect, which is the reigning Language" (1738–1741, 2: 143). He goes on to remark:

> [T]he greater part of the Words in the vulgar Language (which besides being spoken exceeding quick, is mix'd with many Terms that have, or rather seem to have, no Meaning) leave no Traces in the Memory; because they have no Affinity with *Greek*, *Latin*, *French*, *Italian*, or *Spanish* Syllables, and so cannot be comprehended by a Foreigner who only understands such Languages. (Du Halde 1738–1741, 2: 143)

This absolute otherness of Chinese is often echoed by nineteenth-century sinologists, and in the twentieth century it is not difficult to find remarks

classifying Chinese as a "difficult" language. Both Heinlein and Delany emphasize the difficulty of learning their ideal languages discussed above. Heinlein especially notes that only a new breed of mankind that is gradually emerging in the world is capable of mastering such a complex language.

Many works of science fiction also use Chinese as a general analogy when they want to indicate that an alien language is difficult. Three works by Poul Anderson will serve as example here. In *The Avatar* (1978a, 229), when speaking of a complex task of interpreting between different alien languages, the narrator remarks, "The problem was like that which would face a Peruvian called upon to interpret between a Chinese and an Arab, when he is rusty in both their tongues, the former stutters, and the latter is a deaf-mute." In *Mirkheim* (Anderson 1977, 64–65), when someone is using a sort of automatic translator, "he wondered how badly his meaning got distorted. If the Siseman speech had been tonal like Chinese, little but gibberish would have gotten through. The Baburite was wise to require reiteration." Finally, in *The Earth Book of Stormgate* (1978b, 136), when descending to a planet, in a discussion of the difficulty of knowing the language on this particular location of the planet, the interpreter says, "'That does not mean I'll understand the local language,' he finished. 'We're farther from Tyrlan than Europe from China.'" In all three cases, Chinese (along with Arabic in the first instance) is a marker for great linguistic difficulty, expressed in the last case by geographic distance.

Finally, the other opposite of simple in a linguistic sense is flowery or ornate language. Elsewhere I have argued that the use of such flowery language in translations from Chinese was a deliberate ploy to mark the Chinese as strange, with plain-spoken Anglo-American culture being opposed to roundabout, devious, and duplicitous utterances of the Chinese (St. André 2002).

Two examples of the continued use of such flowery language in science fiction should suffice to demonstrate this point. First is C. M. Kornbluth's "Two Dooms," (1958) a "what if" story set in an alternate reality where the Axis powers won WWII and Japan introduced Chinese laborers into the western United States, which is now a Japanese colony. The narrator, who comes from our universe, arriving in the alternate universe somehow, comes across a drowning man and saves him. The man turns out to be ethnic Chinese, and his first words upon recovery are:

"'Honorable sir,' said the Chinese in flat, California American speech, 'you have deigned to save my unworthy life. May I supplicate your honorable name?'" (Kornbluth 1977, 287). This sort of speech continues for the rest of the story. It is important to note that the Chinese speaker does not talk like this because he is incapable of mastering plain idiomatic English; his California accent indicates that he grew up there. Rather, as with pidgin English, it is a marker of how the Chinese think.

The second example is Walter and Leigh Richmond's *Challenge the Hellmaker* (1976), which features as one of the characters on a UN space station orbiting earth a Chinese physicist, named Y Chy Tung, affectionately referred to as Ishie, who says things like, "a thousand ancestral blessings" as a greeting (52), uses self-deprecatory phrases such as "my humble attempt" (52) and "pray to my ancestors" (53). He is especially fond of the self-mocking phrase "Confusion say," which occurs at least ten times (52, 54, 55 [twice], 77 [twice], 94, 106, 112, 115).

Finally, to take a tongue-in-cheek example outside of the Anglo-American tradition, the Polish writer Stanislas Lem, in *The Futurological Congress* (1974, 85) tells us that in the future where he wakes up, "A confuter, for instance, is not a confounding machine—that's a confutator—but a computer that quotes Confucius."

In sum, a wide variety of science fiction writers seem to draw directly or indirectly on descriptions going back to the sixteenth century of the spoken Chinese language as simple, complex or ornate. These attributes of language are, in turn, often read as an index of alien thought, resulting in (sometimes erroneous) judgments as to intellectual capacity, temperament, and trustworthiness.

3. Written Characters as Ideographs

When it comes to the writing system of Chinese, the single most important theory about them, that persists down to today despite numerous attempts by sinologists and linguists to set the record straight (Boodberg 1937 and 1940, DeFrancis 1984, Unger 2004, McDonald 2018), is that Chinese characters are ideograms or pictograms.

As early as 1552, Francis Xavier, in a letter written in Spanish, claimed that "each character indicates one thing" (Luca 2016, 35, his translation). Luca traces the circulation and translation of this letter, including an important French edition over a century later that adds additional details: "The Chinese letters are not like the characters we use,

which express the various sounds of the human voice, but they represent the things themselves, and so are innumerable" (2016, 36). Xavier, who had been to Japan, was fascinated by the fact that Chinese and Japanese could communicate by means of written signs even though they could not speak each other's language; the shared use of Chinese characters across Chinese topolects, Korean, Japanese, and Vietnamese made it the subject of fascination, not just for those specializing in Chinese studies, but for anyone in Europe interested in questions of universal knowledge expressed through a universal language. These included Roger Bacon, who spoke of Chinese characters as real and natural signs; John Wilkins; and Gottfried Wilhelm Leibniz. The tale has been told too often to bear repeating here;[8] suffice it to mention that perhaps the most popular source for this conception of Chinese characters as ideograms in the early twentieth century would have been Ezra Pound's writings, especially *The Chinese Written Character as a Medium for Poetry* (first published 1919; available in a new critical edition, Fenollosa and Pound 2008) and, slightly later, the sinologist Herrlee Creel's semi-popular work *The Birth of China* (1937).[9]

In science fiction, the idea of a writing system that could somehow directly communicate ideas without passing through verbal language has proved irresistible, solving as it does many problems for the science fiction writer as to how alien species that have evolved on different planets, with totally different physiognomy and culture, could possibly communicate with humanity. This is perhaps the most easily demonstrable influence of European discourse regarding Chinese on the characterization of alien languages and problems of translation. In a search conducted upon an electronic corpus of three science fiction magazines—*Amazing* in the period from 1926–1980, *Astounding* in the period 1930–1959, and *Galaxy* from 1950–1980—there were thirty-four stories that referred to ideograms in reference to alien languages, two references to hexagrams (from the Chinese divinatory manual *The Book of Changes*), and three references to Chinese characters, for a total of thirty-nine hits. This database represents only a fraction of the short stories and novels (which often appeared in serial form) that appeared in this period. Given the length of the terms ideogram/ideograph/ideographic, it is likely that a certain number of occurrences were missed due to errors in the optical character recognition software.[10] Finally, it also excludes any general references to the Chinese language,[11] so presumably there are hundreds such stories.

Turning to novels and collections of works by individual authors I

have managed to examine, Poul Anderson stands out for the frequency with which he evokes ideograms in his works. Taking them in order of first publication, in "Hiding Place" (1961), in a description of the console of an alien craft we get: "He pointed to a bank of instruments, no larger than buttons, on each of which a single number glowed. (Or letter, or ideogram, or what? They looked vaguely Old Chinese.)" (Anderson 1964, 19); *After Doomsday* (1962) talks about "mathematical ideograms" (Anderson 1986, 132); "a symbol resembling an Old Chinese ideogram" tops a building on an alien world in *The Star Fox* (Anderson 1965, 232); and as late as *Starfarers* (Anderson 1998, 180) we get the astonishing musings of Sundaram, about an alien language:

> Yes, I am nearly certain now. Yours is primarily a body language, with chemical and vocal elements—characters and compoundings infinitely, subtly variable. It causes your writing to be ideographic, like a kind of super-Chinese hypertext. Is this correct?

These Tahirians, as the earthlings christen them, have a highly hierarchical society, live in groups that are likened to clans, and have a stable civilization that has persisted over millennium. When humans arrive, there is considerable hostility expressed by members of the society against any changes that the barbarians might bring. This description of an alien culture might almost be a parody of European representations of seventeenth- through nineteenth-century Chinese interaction with Europeans.

Anderson is but one example. Going back to Foster's *Warriors of Dawn*, wherein we have already seen that the speech of the ler was influenced by Chinese, we also learn later that the writing system looks like a simplified form of Chinese (Foster 1975, 71–72). In "Shadow of Wings," a mixed fantasy/science-fiction story, Bob Shaw gives us a magician seeking the equivalent of a Rosetta stone to decipher ancient spells in the Old Language. He comes across a piece of parchment where:

> Under each line of the Old Language was a corresponding line, a mixture of ideograms and phonetic symbols, which Dardash identified as late-period Accosian, one of the near-defunct languages he had mastered many years earlier. (Shaw 1984, 59)

A short story by Simon Ings (1990, 48) also references a "strange ideogram inscribed on the floor."

John Brunner's novel *Total Eclipse* (1974) is worth considering in some detail. In it, humanity has discovered the ruins of a civilization on another planet nineteen light years from earth and sent expeditions multiple times in the single interstellar ship they have managed to make so far (space flight being prohibitively expensive, with world governments strapped for cash). The inhabitants of this planet seem to have been able to sense electromagnetic fields with their bodies, and have left behind storehouses filled with crystals impregnated with such fields, suggesting they are some sort of writing. A paleolinguist, Ian Macauley, is sent on the next flight out to investigate. When speaking with the head of the dig on site, Igor Andrevski, Andrevski reproduces one of the enduring myths regarding Chinese, comparing the linguistic development of Chinese to that of the aliens (Draconians): "Isn't it true that over a period of a millennium or so the spoken language there changed radically, but the written language remained comprehensible?" (Brunner 1974, 69). This early comparison to Chinese alerts us to the possibility that Chinese somehow holds the key to understanding their language.

Sure enough, soon Macauley begins speculating on their writing system, and claims, "They didn't have to invent a system of sound-to-symbol correspondence. Their symbols were a direct reflection of a real-time process going on in their nervous systems; in other words, they experienced the imprinted pattern as though it were being—ah—spoken to them" (Brunner 1974, 72). In the next chapter we are told that Draconian communication would "depend on referents to real-time events rather than arbitrary symbols like human words" (87). This leads to the breakthrough:

> "They spoke in ideograms," Lucas Wong said, and snapped his fingers.
>
> "Right! Right!" Growing more and more excited, Ian leapt from his chair and began to pace back and forth, frowning terribly. "I haven't managed to work it all out in my mind yet, but the outlines are starting to appear. Just as Chinese writing originally consisted of stylised pictograms, so the Draconian language would have evolved from a number of relatively simple root concepts most probably associated with bodily states. Naturally, over the centuries it would have grown to be tremendously sophisticated, and the same difficulty that a modern person finds in dissecting the original shape for 'man' or 'house' or 'sun' from a contemporary Chinese symbol will no doubt be found as we try to analyse these imprinted patterns. But we take it for granted that they did get hungry, feel tired, experience the sexual urge, and so on." (87–88)

As they struggle to come to grips with the language of the Draconians and the secret of their demise, the archaeologists find themselves marooned on the planet when the earth ship fails to return to bring them back home, signaling a possible collapse of civilization on earth. Macauley finally solves the problem of the demise of the Draconians, tracing it back to genetic faults caused by incessant inbreeding. But the team completely fails to decipher the language. In the end, "spoken ideograms" defeat all attempts at analysis and remain utterly alien.

Finally, the much more recent novel *A Darkling Sea* (Cambias 2014) features sentient crustaceans, the Ilmataran, who talk using sonar, fashioning echo images for words (97). The humans who come into contact with them are completely unable to reproduce this language, although they correctly guess that this is how they communicate (227). Luckily, the crustaceans have conveniently matched words with numbers, which they then use if they wish to talk privately by tapping numbers out in a sort of Morse code, either on each others' shells or on a rock or other hard substance, and they use cords knotted with these numbers to write out sentences. It is this numeric code that allows the humans to communicate, however imperfectly, with them.

There are two interesting points about the language of these crustaceans. First, as sonar "images," they sound suspiciously like the "spoken ideograms" in *Total Eclipse* (Brunner 1974), where the (extinct) Draconians were also described as crustacean-like. The second interesting point arises from the first: if the sonar images are a sort of ideogram, how can they be recorded? Again, as in *Total Eclipse*, the answer is that they cannot; instead, an arbitrary number is assigned to each one and a literate person must therefore memorize a one-to-one correspondence between a number (say, 273) and a sonar-image word (say, "current"). There is thus no phonetic link between the spoken language and its written form; one must, like the early Jesuit missionaries, match the figure to the thing and this may be done without even being able to pronounce them. The main Ilmataran character, Broadtail, tells a friend that he knows the first 4,000 words in the dictionary and a smattering of terms in certain specialized fields of interest to him (Cambias 2014, 139–141), giving a number similar to ones touted for basic literacy in Chinese. Finally, the idea that the aliens are capable, not simply of sending out a sonic pulse and then using the reflections of the waves to build up a picture of the environment around them, but also of consciously manipulating their sonar pulses to

mimic the echoes of objects and thus create a language, approaches the ideal of the ideogram, which is fabled to unite the sign and the signified.[12]

It is undoubtedly here, in a consideration of alien writing systems, that the influence of a European discourse regarding Chinese is most evident and enduring. Whether attracted by the idea of symbols that bypass sound to represent the thing in itself, the idea that alien symbols may multiply into the thousands and lead to insuperable obstacles (Brunner 1974), or the possibility that disconnecting spoken from written language may paradoxically make communication possible (as in the case of Cambias 2014, where humans cannot reproduce the spoken language but can master the written form), science fiction writers remain fascinated by the possibilities opened up by the imagined Chinese ideograph.

4. Link between Chinese as Ideographic Language, Science, Telepathy, and Universal Language

I have already mentioned that the Chinese language, especially the writing system, excited many Europeans who were hoping to invent a universal language, and given examples. In the twentieth century, when discussions of extra-sensory perception (ESP) gained popularity in science fiction, it is possible to see a relationship between descriptions of how telepathy works and the discussions of how Chinese characters, as ideograms, supposedly worked.

First, telepathy is often theorized as bi-passing verbal speech. This idea goes back to sixteenth and seventeenth-century discussions of figures as images in the mind that are somehow represented by language; ideograms were then a means of trying to bypass spoken representation (Demonet 1992, 189–191). Thus again like ideograms, they are about ideas; or, like pictographs (another term often used to describe Chinese characters, usually from an earlier period), they are about images.

A very early and quite interesting example is found in H. G. Wells's *Men Like Gods*, where each person in a group "hears" the telepath according to his or her own intellectual capacity and knowledge. Predictably, the only woman present, Lady Stella, receives the least sophisticated phrase, "he weighs things," while various men get "physio-chemist," "molecular chemist," and "atomic mechanician" (Wells 1921, 217). This seems to indicate that what telepathy transmits are universal concepts, which individual brains then interpret to the best of their ability.

In A. Bertram Chandler's rim worlds series, telepathy is an established

and important method of communication. In "The Tin Messiah" (1972), the Psionic Communications Officer says, "codes and languages don't matter to a telepath" (Chandler 2000, 269); in *The Way Back* (1978), Commander Grimes says, "We're up against the language barrier, Ruth. Ken and Clarisse [the Psionic Communications Officers], working with ideas rather than words, aren't" (cited in Meyers 1980, 132). This is a typical example of the idea that telepathy can bypass speech, and is therefore universal.

Other authors posit transmission of images rather than words in telepathy, often accompanied by emotions (which in turn links it to the discussions of Chinese as a musical language, and music as something universally understood). In Judith Merril's "Whoever You Are" (1952), as in the story by H. G. Wells discussed above, those images are specific to the individual (Merril 1985, 185–186). In Poul Anderson's story "Kyrie," (Anderson 1969), a few telepathic earthlings can communicate with creatures that are essentially fireballs of energy, communing in a mixture of images and words.[13] Clifford D. Simak, in "The Thing in the Stone," (1971) tells the story of Daniels, a man who received a brain injury in an accident and can "see" the past and "listen to" the stars. Inside a cave near his house, he "feels" an intelligence trapped in the stone in the form of pictures, forms, smells and tastes (Simak 1971, 183) and then a being emerges from the ground and speaks telepathically to Daniels, but has problems getting Daniel to understand certain concepts, suggesting again that, like H. G. Wells, Simak envisions universal signs that are locally interpreted (186–187). In "Earthgate," humans and alien species from a distant planet communicate in broken English (see Clarke 1986, 21 for examples) until a human and a Phuili travel together through a stargate and the experience leads to a telepathic link. Once that link is established, the Phuili suddenly "speaks" fluent English inside the head of the human (30–31). We learn that Phuili culture is monolithic and stable over millennium and, again, they fear that the coming of humans means that they, who have been civilized since mankind was living in caves, will have their social systems irreparably damaged by contact with humanity (23). This is a good example of how, once we start to pay attention to details about the parallels between descriptions of the Chinese language and the language of aliens, other parallels regarding additional aspects of Western stereotypes for China become more apparent. More recently, Ted Chiang's "Understand" (2002), features a man who becomes super-intelligent after an experimental drug therapy is used to revive him from a

coma. He invents a new language based on gestalt theory that uses—you guessed it—ideograms.

Thus, not only does the idea of ideograms inspire many of the written languages in science fiction, it also underpins the conception of how direct mind-to-mind contact, based on direct perception of ideas, might function.

5. Chinese as Counterculture that Represents a Way Out of the Dead-End of Western Culture

From earliest contact, China has tended to attract extreme opinions. It is either a model of the perfect society, speaking the perfect universal language, or a land of barbaric demons speaking gibberish. As a model society, the Chinese were often held up as a mirror of instruction for Europe, most famously by Voltaire during the Enlightenment. Such images of China resurfaced periodically. While anxiety about the "yellow peril" or "yellow hordes" gripped many European countries and America in the late nineteenth and early twentieth century, leading to figures such as the sinister Dr. Fu Manchu, there were also countercurrents, including in Germany following World War I, when German intelligentsia embraced Daoism as an alternate path (St. André 2018b, 195–196). It also resurfaced in the postwar period in the United States, when some members of the counterculture embraced Chinese medicine (especially acupuncture), as well as Daoism, *The Book of Changes*, Sun Zi's *The Art of War*, and other Chinese material from before the establishment of the People's Republic of China.

This trend is evident in science fiction from the 1950s onward, although most of the examples below are from the 1970s and early 1980s. Theodore Sturgeon's early story "...And My Fear Is Great..." (1953) features a woman in New York with seemingly occult powers who identifies the narrator as a potential acolyte and trains him; when trying to explain to him what she does and why, she draws a yin-yang circle (reproduced as an illustration in the story; see Sturgeon 1985, 159). Her description of the symbol is, however, somewhat of a "mistranslation" or re-reading of it. First, she claims it is, "the most ancient symbol known to man" (Sturgeon 1985, 159), although there is no evidence for its existence before the Ming Dynasty (1368–1644; see Louis 2003, 169); second, after talking about how the two halves stand for light and darkness, sky and earth, male and female, light and dark, birth and death, et cetera, she introduces some distinctly unusual pairs

not generally found in discussions of yin and yang: hope and history, love and hate, good and evil; then she proposes God as the totality of the symbol—essentially a Manichean understanding (Sturgeon 1985, 159). Finally, she claims that:

> Human beings, at least with their conscious wills, try to live here, in the yang part. Many find themselves on the dark side, some cross and recross the borderline. Some set a course for themselves and drive it straight and true, and never understand that the border itself turns and twists and will have them in one side and then the other. (159)

The account thus vacillates between a Daoist balancing of neutral forces in nature and a Manichean struggle between good and evil, with yang (male, light) identified as good and yin (female, darkness) identified as evil.

Foster's series that feature the ler similarly draws upon the yin-yang symbol. In *The Warriors of Dawn* (1975, 30), one of the ler, Liszendir, actually has a yin-yang circle tattooed on her palm as a sign of her training. On the next page it is referred to as a "yang and yin mark." It is in this context that the relationship between Chinese and ler singlespeech is first brought up (discussed above), and both the yin-yang symbol and the Chinese language are then linked to another aspect of Chinese culture that the ler drew upon: "'And especially we borrowed from them the lesson of change. They knew change and permutation well, and that all things end. All that begins must end, and all that is, must be something else'" (Foster 1975, 30). In at least two other places, Liszendir refers to this philosophy, first when she tells her human teammate that, "'There is no progress. There is only change'" (35) and second when she actually quotes from the *Book of Changes* (in English translation) (79). Yet although the ler have learned the lesson of change from "ancient China," they also conform to another enduring stereotype of the Chinese: "They were remarkably homogeneous; Ler from different planets spoke the same language and held the same social structures in common" (30). Here the myth of a 5,000-year-old Chinese culture that has not changed merges with the myth of one unified Chinese language.

Other references to Chinese culture are scattered through the book, notably two references to abacuses (Foster 1975, 52 and 207), a Daoist saying about water finding its level (176) and, in another work in the same series, a reference to the military manual by Sun Zi (229).

Interest in the *Book of Changes* can be found in various other stories, for example Brown's "Fear Therapy and Incontinence" (1980), where the protagonist's observation of someone generating hexagrams by using a computer-generated list of random numbers leads him to a breakthrough in how to save the economy of the United States.

The most complete expression of a melding of the *Book of Changes*, language and translation issues, and a utopic future, is surely Frederik Pohl's story "The Gold at the Starbow's End" (1973). In the not-too-distant future, the starship *Constitution* sets out for Alpha Centauri, supposedly to look for life on planet Alpha-Aleph. Later we learn that the planet was a hoax, and the trip is actually an experiment concocted by the scientist van Knefhausen to see if, in a confined space with basic science materials, the group of astronauts can come up with breakthroughs in mathematics, physics, and other sciences. In space, they work on mathematical puzzles to pass the time as instructed, and one woman, Ann, becomes interested in binary arithmetic. When the captain asks why she is flipping a coin and writing down the resulting heads/tails as a binary number, she utters the rather gnomic, "'By means of the easy and simple we grasp the laws of the whole world.'... 'When the laws of the whole world are grasped, therein lies perfection'" (Pohl 1973, 92). Soon we learn that virtually everyone on the ship is to some extent experimenting with the *Book of Changes*, and they complain that the mission planners neglected to supply them with the plant *Achillea Millefolium*, whose stalks are traditionally used for this purpose, or animal bones, another item used (98). Then we learn about their linguistic studies, that they think "a universal grammar is feasible enough" (98), and they develop one that conveys one set of meanings through phonemes and another set of meanings through pitch.

> The idea is that you devise a double-vocabulary language. One set of meanings is conveyed, say, by phonemes—that is, the shape of the words themselves. Another set is conveyed by pitch. It's like singing a message, half of it conveyed by the words, the other half by the tune. (99)

Then we learn that the doctor on board is using acupuncture instead of painkillers when operating on someone's teeth (99), and the communications officer consults the *Book of Changes* before sending a message back to earth to see whether it is an auspicious time to do so (109).

Their language quickly evolves along the lines of simplification and complexity mentioned earlier, with references to simplified notation, the relative "straitjacket" of English (110), and the meaninglessness of tenses (120). The communications of the crew becomes more and more gnomic and more and more like the English translation of the *Book of Changes*. One of the characters, Ann Becklund says, "Set your person at rest, compose your mind before you speak, make your relations firm before you ask for something. Try not to be loathsome about it. Don't be like the fellow in the Changes. 'He brings increase to no one. Indeed, someone even strikes him.'" (122); and, "The superior man understands the transitory in the light of the eternity of the end" (123). Then the next and final message received from the ship is in "a phonetic transcription of what appears to be a dialect of Middle Kingdom Mandarin" (129), the crew having learned it through the English translation of the German translation of the *Book of Changes* (129). This last message, provided for the reader in English with the proviso that "This text is PROVISONAL AND NOT AUTHENTICATED and is furnished only as a first attempt to translate the contents of the message into English" (130), reads like a pastiche of the English translation of the *Book of Changes*. A few typical statements are, "The one who speaks for all [*Lt-Col Sheffield H Jackman?*] rests. With righteous action comes surcease from care" (130); "It is not enough to study or to do deeds which make the people frown and bow their heads. It is not enough to comprehend the nature of the sky or the sea. Only through the understanding of all can one approach wisdom, and only through wisdom can one act rightly" (130); "The one who causes another to lust for a trifle of carved wood or a sweetmeat lacks courtesy. Let him be restrained from the carrying out of wrong practices" (130); "Error lurks at every turn. [Literally: *false apparitions shout at one each time the path winds.*] Many flaws mark our carving. Observe it in silence for hours and days until the flaws become part of the work" (131). The hyperintelligent supermen produced by the test conditions choose an archaic form of Chinese as their means of communication.

Although this paper is primarily concerned with conceptions of the Chinese language, this section has sought briefly to demonstrate how those conceptions relate to a broader discourse about China as radically other. In particular, at a certain moment in time, the 1960s–1970s counterculture embraced China as a utopian blueprint for alien cultures in a way that harks directly back to the early Jesuit effusions about China as the pinnacle of civilization.

6. Chinese Science Fiction Featuring Alien Languages

In China, science fiction or scientific fiction can be traced back to the late nineteenth century, when the translation of certain key texts, notably Edward Bellamy's *Looking Backward*, many works by Jules Verne, and then slightly later works by H. G. Wells and other writers, led to the production of science fiction texts in Chinese. Interest in science fiction died down after the founding of the People's Republic of China, however, and the genre languished (along with other "escapist" literature) until the 1980s, when it again slowly gained popularity through a mixture of translation, screening of foreign science fiction films, and a new generation of Chinese science fiction writers. The recent awarding of two Hugo awards to Chinese science fiction writers and the embracing of science fiction by the government as a genre that can imagine a brighter future for China (Cheung 2017) both point to the genre's growing popularity and influence.

As a genre that was heavily influenced both at its inception and its resurgence by foreign models, the question naturally arises whether the European discourse concerning the Chinese language has influenced the portrayal of alien languages in Chinese science fiction.

To date, my research shows that it is mainly the understanding of the written language as ideographic or pictographic that appears in Chinese science fiction. An early example is Lao She's 老舍 *Cat Country* (first published 1933), which describes the writing system of the Martians as incredibly complex, with most Martians only able to master a few of the characters: "他們也有文字，一些小樓小塔似的東西，很不好認；普通的貓人至多祇能記得十來個。" ("They had written words too, funny things that looked like tiny towers or pagodas and were extremely difficult to recognize; an ordinary cat-person could only remember ten or so at the most.") (Lao 1947, 28; English translation Lao 1970, 41). Overall, the novel is a satire of Chinese society in the 1920s, with thinly veiled references to opium addiction and various other societal ills and character flaws lampooned mercilessly. That Lao She should identify the writing system as fiendishly difficult was part of a more general call for reform of the language, both in its written and spoken forms. The extent to which European conceptions of the Chinese language influenced his work is unclear; certainly the Chinese themselves have been aware for millennia that mastery of written Chinese is difficult. But much of the reform movement was motivated by contact with Europe and America and the

resulting semi-colonial position of China in the early twentieth century.

There are clear indications that the special status of Chinese as ideographic/pictographic has informed more recent Chinese science fiction. Liu Cixin's 劉慈欣 *Three-Body Problem* trilogy, for example, clearly identifies the writing system of the alien culture as ideographic, and connects this characteristic to the Chinese script:

> 智子成了他們的老師。但他們很快發現這極其困難，原因在於三體文字是一種表意文字，與人類的表音文字不同，與語言無關，直接表達含義。人類在遠古時代也出現過表意文字，比如一部分象形文字就是表意的，但後來消失了，人類的閱讀習慣完全變成了表音的習慣。(Liu 2010, 502)
>
> Sophon acted as their teacher, but they soon discovered that this was an extremely difficult endeavor because Trisolaran writing was purely ideographic; unlike human scripts, which were mostly phonetic, Trisolaran writing had no connection to their speech, but expressed ideas directly. In the distant past, humans had also used ideographic scripts—such as some hieroglyphs—but most of these later disappeared. (Liu 2016, 589)

Interestingly, the translator, Kenneth Liu, chose first to translate this passage fairly literally and then to append a footnote in which he indicates that this is a mistaken conception of the way in which the Chinese script functions:

> Translator's Note: Some Anglophone readers may raise an eyebrow at this assertion. The common description of Chinese characters—the script this novel was originally written in—as "ideograms" is inaccurate. The Chinese script is phonetic, like almost every other script still in use, though it still contains a few (very few) ideographic elements that have survived through the ages. An introduction to how Chinese characters really function may be found in John DeFrancis's *Chinese Language: Fact and Fantasy*. (Liu 2016, 589)

Similarly, Chen Zijun 陳梓鈞 in his short story "Curse" (2015) describes an alien civilization that uses light rather than sound to communicate. One of the human characters in the story notes first that this means they can transmit battle commands to troops quickly because a complete schematic picture of the battle, along with directions of what to do, can be transmitted

quickly and efficiently. He then posits that they can replace "phonetic transcription" 表音語言 with "ideograms" 表意語言 , mentioning that humanity had once used ideograms but later moved away from them. And in La La's 拉拉 "Everlasting Electromagnetic Waves" (2007), ideographic writing systems are compared to phonetic ones, with the latter being labeled as inferior.

From some of its earliest works right through the present, Chinese science fiction writers have embraced what Europeans imagined to be the unique nature of its writing system in their own imaginings of the alien.

7. Conclusion

This paper has sought to demonstrate the extent to which the European discourse on the Chinese has influenced the development of encounters with alien languages in science fiction in both English and Chinese. Portrayed as radically different from European languages, not just in degree but in kind, Chinese has functioned as the ultimate earthly "Other" to Europe and America for over four centuries, and has been bound up with the search for a universal language, the development of pidgin English, and the invention of Basic English in the early twentieth century. I have demonstrated that this holds true for both the written and the spoken language, and that its influence can be traced to a wide variety of authors, some of whom, such as Anderson, Brunner, Foster, Heinlein, and Pohl, drew upon it extensively. Furthermore, that Other has sometimes been Utopian, sometimes Dystopian, and sometimes both simultaneously, which has given science fiction writers a wealth of material upon which to draw, such as Larry Niven, whose portrayal of two radically different alien cultures in the same novel both derive from this pre-existing discourse. Science fiction writers have not, it would seem, come up with much that is truly original or alien in regards to communication with extraterrestrial life. Following the idea that science fiction is often a "thought experiment," we may say that those experiments have been built upon pre-existing concepts in an attempt to extrapolate out into the unknown. Moreover, that European discourse seems to have extended its reach even to the Chinese themselves, with contemporary Chinese science fiction writers drawing especially upon descriptions of the Chinese writing system as unique "ideographs" in what might be understood as a self-Orientalizing move or a show of ethnic pride. In either case, the stereotypes regarding the Chinese

language first established in the sixteenth century continue to inform our thinking about alien encounters today.

Notes

1 https://corpus.byu.edu/coca/. Accessed 28 February 2019.

2 http://www.oed.com/. Accessed 28 February 2019. The entry for "alien" was last updated September 2012.

3 One of the anonymous reviewers suggested that the effect I was seeing was due to orientalism as described by Edward Said (1979). I hesitate to use orientalism as the overarching "reason" behind the portrayal of racial others as aliens because first, there are important non-Asian groups such as Slavs and Native Americans who also figure in depictions of alien languages, and second, I do not think that Said's work, which describes the discourse surrounding the Middle East, applies aptly to European encounters with China. Rather, I would prefer to stick to the more general idea that alien races (whether Oriental, Asian, Native American, Slavic, or African), are all potentially models for aliens in ways that more familiar groups such as Germans are not.

4 Although within the story it is stated that the researchers cannot assume any similarities between Martian and Earth languages, in fact the characters in the story make many such assumptions, such as the fact that it is divided into consonants and vowels (and not a syllabary, such as hiragana and katakana in Japanese), that they should be read in a particular direction from left to right (because they talk about the language having suffixes) and that, most astonishingly, a magazine must be scientific or technical because "the paragraphs had a solid, factual look" (Piper 1957, 15). In general, it is the fact that the Martians as described in the story are in fact very similar to humans, to the point of having classrooms dedicated to particular subjects with something like a periodic table hanging on the wall, that allows the decipherment of the language; but that fact is concealed by the rhetoric of difference.

5 Here and later in the paper, quotations from early English texts preserve the original spelling, punctuation and grammar.

6 This last case is a good example of how the idea of alien language as musical blends into discussions of music as a universal means of communication, transcending species. When trying to imagine what sort of message humanity can use to communicate with aliens, Frederik Pohl imagines sound recordings of classical symphonies: "This Message had

been cobbled together in a hurry by God knew who—some of the big brains in the Gateway Corp, no doubt, and no doubt with Robinette Broadhead leaning over their shoulder. It didn't have any narration; the Heechee were not likely to understand any human language. Its only sound was music, first Tschaikowsky's somber 'Pathetique' in its entirety, then, to show that humans had more than one musical mood, Prokoviev's jokey, perky Classical Symphony." (2004, 45).

7 It is tempting to map these two races onto the Chinese and the Mongols/Manchus; the civilized/barbaric dichotomy between them, also split along gender lines (with the Chinese gendered as feminine/effeminate and the Mongols/Manchus as hypermasculine), can be traced back to the various translations of *The Orphan of Chao* in the eighteenth century. See St. André (2018b, 60–69 and 193) for a more detailed discussion of the relationship between North-South, male-female, barbaric-civilized discourses in the reception of knowledge about China.

8 See Luca (2016, 2–3 notes 4 and 6) for a list of articles and books between 1940 and 2013 that characterize Chinese writing as ideographic.

9 DeFrancis (1984, 140–141) notes that it was Creel's book, which sold so well, that spurred Boodberg to write his two articles (1937 and 1940) refuting what he found to be pernicious misrepresentations of the nature of the Chinese language, in particular Chinese characters.

10 In an earlier paper (St. André 2018a), I have noted that OCR error rates of even one percent may pose significant problems with longer words, because the longer the word, the greater the chance that the incorrect scanning of one letter will lead to the word not being recognized.

11 There were several numbers missing from the magazines, and because the automated OCR function of texts held on the Internet Archive has a fairly high error rate, it is likely that anywhere from twenty to fifty percent of instances (i.e., eight to twenty additional instances) may have been missed within the magazines alone. See St. André 2018a for a discussion of the problems with using ready-made electronic corpora, and specifically the strengths and weaknesses of the Internet Archive.

12 One anonymous reviewer pointed out that, although I give a large number of examples where Western (mis)conceptions of Chinese play a role in determining what an alien language looks like and the problems of translation involved, there are plenty of other examples where they do not do so. In relation to these two last examples (Brunner 1972 and Cambias 2014), an interesting development in science fiction that emerges in the 1980s is a small but growing number of works that attempt to imagine an

alien culture even more radically Other than the Chinese by extrapolating from animal life on earth to speculate how intelligent creatures who resemble a variety of animals might communicate, and whether it would be possible to translate between their languages and ours. Some of these do not seem to draw on stereotypes regarding the Chinese language. To mention two I have come across: *Footfall* (Niven and Pournelle 1985) imagines a race of intelligent elephant-like beings crossing interstellar space in search of a new home, their own planet having suffered an ecological disaster. Similar to the stories relating to Japan or the Middle East, however, the story concentrates on how a herd mentality might affect interactions between aliens and humans. There are no significant problems with the aliens learning English based on our broadcasts during their long approach to earth; rather, things like human refusal to understand that the concept of surrender for the aliens means becoming part of the alien herd, of switching identity, is the main thing that puzzles them. *West of Eden* (Harrison 1989), considers an alternate universe where the dinosaurs, instead of being wiped out by a meteor, were allowed to develop an intelligent species. Harrison imagines a language that is composed of a combination of vocal sounds, body movements, and changing patterns of skin color. When, migrating to a new continent, they come into contact with primitive humans, the humans of course cannot speak such a language because they cannot change their skin color and they lack a tail for some of the crucial body movements, but luckily the dinosaurs have developed a simplified form of speech for use in bad lighting conditions, and one human boy, captured in a raid and raised by them, learns to speak tolerably well.

13 Returning to the earlier theme of music as a potential universal, the aliens enjoy classical music, especially Bach. One of them travels with a spaceship to investigate a supernova, and Eloise, his telepath for the trip, says, "'He likes the music. He says we come closer to oneness with it than in anything else he knows about us.' [...new paragraph, still Eloise speaking] 'Maybe that isn't the right word. Peace, harmony, unity... God? ... I sense what he means, but we haven't any word that fits'" (Anderson 1969, 37–38).

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