

Crisis and Transformation: The Aftermath of First Contact in Three Mid-20th Century Science Fiction Novels

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Abstract

Despite being a hallmark of science fiction since the inception of the genre, narratives that feature first contact scenarios between humans and alien civilizations became particularly popular in the middle of the twentieth century. Critical analyses have long neglected the uniqueness of first contact narratives in this period, especially their clear ‘mentorship-like’ rather than ‘invasion-like’ nature and the invariable transformation of humanity that follows the event. This article attempts to fill this gap in the research by comparing how the aftermath of first contact is treated in novels by the ‘Big Three’ of science fiction: Arthur C. Clarke (Childhood's End, 1953), Robert A. Heinlein (Stranger in a Strange Land, 1961), and Isaac Asimov (The Gods Themselves, 1972). The article argues that the structure of first contact in these narratives is deliberately crafted to appeal to both contemporary cultural (mainly Cold War related) anxieties, and to hard-wired biological biases. In each of the novels discussed, this transformation sees humanity, through various means, become more like the aliens. This change results in a type of hyper-sociality, which can be viewed in a positive or negative light depending on the narrative context, the conflicting attitudes towards communality and individualism, and the contemporary zeitgeist of the Cold War. In addition to a close reading of the three texts, the article also employs a sentiment analysis, with the help of Matthew Jockers’ ‘syuzhet’ package, in order to uncover the emotional valence of the transformation underlying the trope.

Introduction

Fictional scenarios of first contact between humans and alien civilizations have a long history that stretches back to Antiquity. In his *True History*, written in the 2nd century AD, Lucian of Samosata takes his protagonists on a fantastical journey to the Moon where they meet the ‘Moonmen’ who, in a very human-like fashion, fight the citizens of the Sun over the colonization of the Morning Star. According to Fredericks, Lucian’s work clearly shows “interest in the strange and bizarre, and the thrill of experiencing it,” as well as aspects of “interplanetary imperialism and warfare” (1976, p. 50)—two familiar aspects of science fiction that have been constant companions of first contact narratives over the years. The first aspect is better known as the ‘sense of wonder’ or

‘sensawunda’ of classical science fiction (Knight, 1967) and has been described as an intangible sensation that invokes a feeling of awe “that short-circuits analytic thought” (Csicsery-Ronay, 2002, p. 71). The emotion of awe appears to have evolutionary origins (Keltner & Haidt, 2003, p. 306) and rests on “perceived vastness, and a need for accommodation,” as well as “an inability to assimilate an experience into current mental structures” (Keltner & Haidt, 2003, p. 297).

In first contact narratives in particular, this sense of awe owes much of its effect to “the question of whether humans are unique in the universe” (Geppert, 2012, p. 341), which has had a place in public consciousness since the time of ancient Greek philosophers (Geppert, 2012, p. 341). Contemporary science fiction and other works of speculative fiction (horror, fantasy, etc.) typically explore this question through awe-based phenomena, and partially derive their attraction from their depiction of supernatural experiences. Because the effect of these narrative elements relies on behavioral patterns hard-wired in our brains, they have managed to maintain their attraction.

A colonialist paradigm, or the second aspect of science fiction in Lucian’s *True History*, is full of cultural context and much more likely to change under external, contextual pressures. This paradigm can be thought of as a framework of thinking where both the possibility of conquering ‘inferior’ groups and the possibility of being conquered by ‘superior’ groups exist as either cultural desires or fears. It also appears in 20th century science fiction, and is provided with additional momentum by the highly popular genres of invasion and imperialist literature of the late 19th century. Science fiction adopted aspects of colonial literature, “but without, except in rare cases, questioning, critiquing, or moving beyond the colonizing impulse” (Grewell, 2001, p. 26). Hence, an optimistic, mellowed-down version of this genre, a “technologically based astrofuturism” most commonly found in the Space Operas that dominated the science fiction genre in the first half of the 20th century, continued to be “orthodoxy in the 1950s and 1960s” (Poole, 2012, p. 260). However, over the years, this sentiment subsided under the influence of anti-colonial and civil rights movements, which had major repercussions for both first contact narratives and the entire genre of science fiction. The ‘rare cases’ that challenged colonial attitudes mentioned by Grewell began to rise in number, and instead of an almighty, morally superior and conquering species, humanity was increasingly presented as immature and vulnerable.

Moreover, contemporary cultural anxieties asserted a strong influence on the science fiction genre. The term ‘cultural anxieties’ is sometimes blindly deployed by constructivist critics, who

typically ignore the actual cognitive processes behind it. Cultural anxieties can be understood as misfirings of our evolved reactions of fear and anxiety that “originate in an alarm system shaped by evolution to protect creatures from impending danger” which is “biased to discover threat” (Öhman, 2000, p. 587). Although the existential danger behind Cold War anxieties was rather abstract, and without the ‘immediate’ threat posed by a predator chasing prey, the destructive, life-threatening potential behind these anxieties was still quite palpable. Thus, the exploration of Cold War anxieties through supernatural phenomena was doubly imbued with an affective viscerality, therefore strengthening the capacity of these narratives to attract the attention of the readers.

Probably the principal anxiety of the period of interest for this article, lasting from the end of the Second World War to the early 70s, was a paranoia about a nuclear holocaust that, to some, seemed almost inevitable at the time. According to Smith, expectations of nuclear annihilation covaried with contemporary events, with incidents like the Korean War and the Cuban Missile Crisis causing spikes of nuclear fears (1988, p. 559). The Space Race was likewise in full swing and, although an ostensibly positive venture aimed at the betterment of mankind, it soon became clear that it was a clandestine way of building up ballistic rocket technology. This contributed towards a cognitive association between the two concepts and “the Space and the Atomic Ages” became “inextricably intertwined” (Geppert, 2012, p. 342).

These geopolitical realities contributed towards two developments that had a hand in shaping first contact narratives in the period. First, they increased human self-importance: although we might be newcomers to the ‘high roller’ table of the Universe, at least we are there at all. Secondly, they contributed towards the creation of ‘agency panic’: an “intense anxiety about an apparent loss of autonomy” coupled with a conviction “that one’s actions are being controlled by someone else or that one has been ‘constructed’ by powerful, external agents” (Higgins, 2013, p. 230). This was a natural reaction to a situation where existential decisions were being made on the level of superpower nation states, far beyond anything a single individual could affect or change with their own actions. Therefore, this cultural anxiety manifested itself in the form of dread, which suggested to readers that “unavowed, unknown, and perhaps concealed and inexplicable forces rule the universe” (Carroll, 1990, p. 42). This dread resembles the ‘short-circuiting’ of our reasoning powers that Csicsery-Ronay (2002) ascribed to the sensation of awe in science fiction. However, unlike awe, this sensation attributes a certain maliciousness to the grand and unknown.

Science fiction authors were not only directly influenced by these cultural anxieties and contemporary phenomena but were also under a constant pressure for innovation by a readership hungry for anxiety-laden narratives. Morth underscores the “intensive process of discussion between writers and their readership” and the “continuous feed-back process” that had a marked influence on how science fiction authors shaped their narratives (1987, p. 104). Hence, a crucial property of the creative process is “cultural selection” which “occurs as a result of competition for limited attention, memory, and expression” (Mesoudi, 2006, p. 331). In the fight for the spotlight, better reception, and success for the products of their labor, it was imperative for writers to infuse their novels with narrative elements that could best capture the readers’ interest.

When talking about cultural anxieties that influence cultural production, prior studies on speculative fiction have frequently taken psychoanalytical, Marxist, or other approaches influenced by continental philosophy. This article, on the other hand, regards the dynamics between cultural developments and cultural production through the prism of biocultural criticism and cultural evolution. This is an underutilized perspective in science fiction studies, curiously so considering the fact that many of the ideas by proponents of the field of cultural evolution and those by science fiction scholars are oftentimes remarkably convergent. For example, proponents of cultural evolution have noticed the effectiveness of minimally counterintuitive (MCI) concepts in attracting the readers’ attention (Boyer, 1994, p. 35), closely mirroring the widespread concept of “fictional ‘novum’ (novelty, innovation)” in science fiction studies, which has to be “validated by cognitive logic” if it is to suitably estrange the reader (Suvin, 1979, p. 63). According to Upal, minimally counterintuitive concepts can be better remembered than normal concepts or “maximally counterintuitive concepts that violate a larger number of intuitive expectations” (2010, p. 194). Hence, the minimally counterintuitive idea of “a book that thinks” would fare better in cultural transmission than the fully intuitive idea of “a book about thought” or the maximally counterintuitive idea of “a book that thinks and has babies” (Barrett, 2008, p. 331). Both MCI concepts and the cognitively estranging ‘novum’ suggest that it is crucial for the estrangement produced by narrative novelty to be tempered by a degree of plausibility.

Similarly, the discursive concept of the science fiction ‘mega-text’, which “works by embedding each new work” in a vast “web of interpenetrating semantic and tropic givens or vectors” (Broderick, 2005, p. 59), has an analogous manifestation in cultural evolution through the metaphor of the ‘primordial soup’ (Johnson, 2010, p. 31). For science fiction writers, the wealth

of extant narratives and cultural influences serve as a primordial soup of ideas, plots, and settings, with each of its elements acting as an ‘adjacent possible’, capturing “both the limits and the creative potential of change and innovation” (Johnson, 2010, p. 31). Crucial for both of these concepts when applied to the formation of new tropes, or novel clusters of narrative elements, is that, just like the biological evolution of new species, their formation tends to work not in leaps but in small, gradual changes. Therefore, it is only natural that, by working in the same milieu, the work of science fiction authors of the period that dealt with first contact scenarios converged towards a similar shape, that they filled the imaginative niche carved out by cultural anxieties. This new generic form was then added to ‘the primordial soup’ or the ‘mega-text’ as a unique cluster of elements, ready to be reshaped and remodeled by other authors, and thus, a new trope was born. In the rest of this article, I will refer to this trope as ‘Post First Contact Transformation’ or PFCT in short.

The already common narratives of first contact with intelligent extra-terrestrial species began to therefore shift from the scenarios of conquest, where humans either conquered or were conquered by aliens, towards more nuanced extrapolations of PFCT. Moreover, despite their variation, the novels that fit this trope depict humanity as being capable of radical change. This change can be either biological or cultural in form, and is most often triggered by first contact with alien civilizations. These narratives typically portray pre-contact humanity as on a path towards self-destruction until a miraculous first contact initiates a reversal of this path. The change of humanity in these novels is a very specific one—dictated by the extra-terrestrials but, in effect, an amplification of uniquely human traits carried over from our evolutionary past, such as collaboration, altruism, norm following, and so forth. The amplification of these traits makes the change a movement towards increased sociality, for better or worse, depending on the unique narrative context of the novels. Despite what might be understood as a latent pessimism in some of these narratives, they still contain hope in the capacity of Mankind as a species with enormous potential which it cannot fully tap itself. Thus, with the alien species as a catalyst and with the ‘old’ humanity being the principal reactant, a new, altered humanity is created.

In addition to the aforementioned cultural anxieties, there is an even more serious identity-oriented issue visible in the variations of PFCT narratives. Despite the antagonism against communists during the Cold War, fueled by tribalist crusades like McCarthyism which were striving to shut out “morally unsatisfying complexity” (Storr, 2019, p. 158), certain aspects of

communist ideology retained an attraction, at least in its pure, idealized form. Beneath the authoritarian front, which was the main target for Cold War propaganda, the emphasis on communality and equality did not go unnoticed, especially in pre-civil rights movement America, where the deep inequalities and injustice at the very core of society were starkly visible. Moreover, individual authors, in their roles as creative agents, were faced with a mental tug-of-war between the conflicting impulses of individualism and collectivism, which contributed to the vastly different takes that Clarke, Heinlein, and Asimov had on the positivity or negativity of humanity's movement towards hyper-sociality.

In order to trace the different variations of the trope, and the authors' treatment of the individualism/collectivism dialectic, this article features a computational analysis of the emotional valence of the texts. Previous sentiment analyses (Reagan et al., 2016; Jockers, 2015b) have aimed to reveal the hidden, shared patterns of the emotional arcs of different novels, claiming that there is a limited number of plot shapes in existence. However, these analyses never narrowed their scope to a single trope, despite the unique potential of the method to visualize the variation of the affective profile of the trope in different narratives that contain it. This article will utilize sentiment analysis for this very purpose, by using the 'syuzhet' package (Jockers, 2015b) in the programming language R.

The 'syuzhet' sentiment lexicon, incorporated in the package, was developed by the Nebraska Literary Lab and was crowdsourced through a survey where participants were asked to put words into two categories: positive and negative. The package parses large quantities of text and assigns sentiment values to each word of the text in accordance with the lexicon, which are then added up on the level of individual sentences. Finally, the text is divided into a hundred 'chunks' and the mean sentiment value of each chunk is plotted across narrative time. In order to test the accuracy of the package, Jockers hired several students to manually (i.e., subjectively and without the aid of the package) code the sentiment of a few novels that spanned a variety of genres and compared the results to the sentiment arc produced by the 'syuzhet' package. He found that the resulting sentiment analysis closely matches the subjective experiences of human readers, and his results were independently confirmed by several other researchers (Jockers, 2015a).

The package facilitates the literary analysis of the article by providing empirical evidence about the affective profile of the change in PFCT narratives. It is important to remember that the method

provides a ‘macro’ view on the change of the emotional valence in the text and each movement of the line chart represents a change of the mean emotional valence of a chunk containing hundreds of sentences. This limitation is relatively inconsequential in this particular use case, as the transformation of humanity in PFCT narratives is an unfolding process that makes up most of their plot. So, even though the syuzhet package cannot be reliably used in the actual close reading of the relevant novels due to the scope at which it operates, it can rewardingly supplement it, providing invaluable descriptive information otherwise only attainable by intuition and guesswork.

In the three case studies that follow, the abovementioned sentiment analysis will add to the close reading of the relevant novels. I will further flesh out the central aspects of the trope, contextualize its use against the producing authors and their cultural milieu, and reveal the ways in which it interacts with the narrative environments unique to each of the novels.

Case studies

The case studies will deal with the PFCT trope in the works of the ‘Big Three’ of mid-twentieth century science fiction, an honorary historical marker earned by their great popularity and prestige: Arthur C. Clarke (*Childhood’s End*, 1953), Robert Heinlein (*Stranger in a Strange Land*, 1961), and Isaac Asimov (*The Gods Themselves*, 1972). The ‘Big Three’ are not only selected due to the status of their works as ‘representative’ cultural narratives, a common practice in cultural studies and a staple of science fiction studies in recent times (DeKoven, 2004), but also due to their unique, canonical position in the science fiction genre.

Although working within the limitations of literary canon might be seen as perpetuating certain established hierarchies of literary value, it is their very canonical status that makes them highly relevant for the analysis. This is because the popularity and prestige of science fiction novels is dictated by a so-called ‘power law’, where a few authors have been able to accumulate considerable popularity at the expense of most other science fiction authors. Moretti qualifies this dynamic as “the perverse market logic—to those who have, more shall be given—that goes by the name of increasing returns” (2013, p. 146). The very fact that this trope was used by the most popular and prestigious science fiction authors of the period means that the specifics of the trope would trickle down to other, less popular authors (whose novels are not necessarily inferior to those of the ‘Big Three’). For example, in his *Sentinels from Space* (1952), published almost

simultaneously with Clarke's *Childhood's End*, E.F. Russell instills the same belief in the hidden potential of humanity, which is only revealed after first contact with a 'superior' alien species. Another example is *The Black Cloud* (1957), a hard science fiction novel where, just like *The Gods Themselves*, the PFCT trope is largely used to explore other scientific speculations.

***Childhood's End* (1953)**

Just like one of Clarke's other great novels, *2001: A Space Odyssey*, *Childhood's End* posits the expansion of human capacities through alien intervention, which involves a first contact event with a transformative effect on humanity. The novel opens with the United States and the Soviet Union competing to be the first nation to launch a spacecraft into Earth's orbit. Suddenly, massive alien spaceships appear over cities all over the world. The aliens soon enforce a direct supervision of human affairs, which they claim is for humanity's own salvation. Although a new 'golden age' of wellbeing and technological advancement does indeed begin, it comes at the expense of human creativity and culture. After some time, it is revealed that the 'Overlords' came to usher in mankind's transcendence: fusion with the Overmind, a vast cosmic intelligence containing the disembodied life energies of thousands of bygone alien civilizations.

This variation of PFCT was not only limited to Clarke—as mentioned earlier, in E.F. Russell's *Sentinels from Space*, humanity is similarly revealed to be at “a larva-like intermediate stage of development preceding a form of ‘cosmic butterfly’ which lives amongst the stars” (Morth, 1987, p. 95). However, unlike the transformation of humanity in Russell's novel, the one in *Childhood's End* is “not merely an evolutionary quantum leap but a true apocalypse in the double meaning of the word: revelation and destruction” (Gomel, 2014, p. 153). The novel abounds with clear references to Christian apocalyptic narrative, which is evident in Jan's pondering over humanity's end:

So this, thought Jan with a resignation that lay beyond all sadness, was the end of man. It was an end no prophet had ever foreseen—an end that repudiated optimism and pessimism alike. Yet it was fitting: it had the sublime inevitability of a great work of art. Jan had glimpsed the universe in all its awful immensity, and knew now that it was no place for man. (pp. 158–159)

Jan's thought process perfectly shows the ambiguity of the change of humanity in PFCT narratives. The positive aspect of the transformation is that, by dropping our human corporeality, we become one not only one with all humanity but all extraterrestrial alien races that can undergo

this transformation. McKee argues that Clarke himself saw this process as humanity “becoming divine,” where the Overmind is a deity that humanity becomes a part of (2007, p. 241). However, according to Gomel, Clarke’s apocalypse is explicitly anti-humanistic (Gomel, 2014, p. 154). Unlike the “apocalyptic transformation promised in the Book of Revelation,” which was meant to “repair humanity’s relationship with God without destroying its essence,” Clarke’s narrative is “the negation, rather than the fulfillment, of human history” (Gomel, 2014, p. 154). Moreover, with respect to the effect of this narrative on its audience, the working of our cognition is defined by an awareness of our corporeal humanity, which is why we tend to root for human agents in narratives, unconsciously adopting their goals (Boyd, 2001, p. 6). Clarke’s narrative is, therefore, also difficult for its readers to receive wholly positively, as humanity’s final ascendance involves a loss not just of corporeality, but individuality. The resulting ‘being’ is, literally, inhuman.

While the prevalence of religious systems, particularly Western and Abrahamic, which espouse Cartesian substance dualism would suggest that humans have a tendency toward viewing the body and soul as separate, recent research has suggested that our evolved cognition cannot help but closely associate the two. In a cross-cultural analysis of various funerary rites, religious mythology, iconography, and religious doctrine, Hodge (2008) shows that although we do have the capacity to visualize Descartes’ total separation of body and soul and understand it in an abstract sense, the vast majority of our religions and mythologies never really embraced the extremities of this idea. Bering claims that this is mostly due to the cognitive bias of ‘person permanence’ (2011, p. 117): the idea that our innate understanding that people who are out of sight still exist (and engage in various activities), gets extrapolated to their absence after death. Therefore, the embodied understanding of the afterlife is as a physical location, so the deceased who reside there retain some form of human corporality, along with their bodily functions and the ability to experience pleasure (this is why the afterlives of the virtuous are typically depicted as places of specifically hedonic rewards). Therefore, the sharpness and scope of the loss of humanity in the climax of *Childhood’s End*, where the children ascend to space as a massive beam of light, could potentially shock or unsettle the reader. This shock, in combination with the simultaneous message of salvation and ‘humanity becoming divine’, leaves the ending of *Childhood’s End* highly affectively ambiguous.

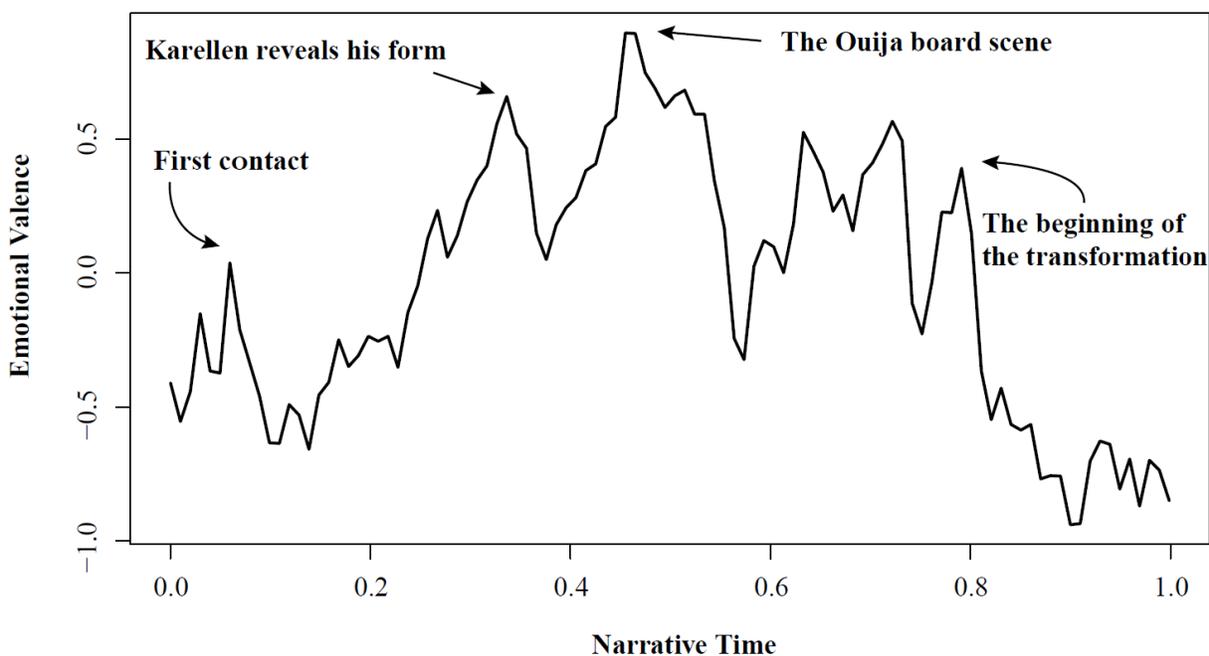


Figure 1. The emotional valence of the plot in *Childhood's End*

In the case of such ambiguity, the 'syuzhet' package can allow us to connect the affective profile of the narrative to Clarke's use of the PFCT trope by revealing the emotional valence of the text. As shown in Figure 1, the transformation of humanity in the aftermath of first contact is followed by a rise and fall or an 'Icarus' narrative pattern. The unique trajectory of the plot in Clarke's story indicates that the emotional valence of the language reaches its lowest levels in the last part of the novel. This could suggest that Clarke saw the transformation of humanity and its incorporation into the Overmind as a predominantly negative development. In addition to the first contact between humanity and the Overlords, Figure 1 has three other annotated events, all of which indicate sharp drops of the emotional valence of the text. The first one follows the reveal of Karellen's (the leader of the Overlords) true form, which is that of a demon from Judeo-Christian-Islamic mythology. This event not only decreases the emotional valence of the text, but also serves as a minimally counterintuitive concept, meaning it is more likely to assume a place of importance in a reader's experience of the narrative. Additionally, a sharp decline of emotional valence immediately follows the Ouija board scene, where the Overlords see the first signs of human psychic abilities. The final drop is after the transformation begins to manifest itself physiologically, which kickstarts the gradual loss of human individualism. According to Karellen, this

transformation

starts with a single individual—always a child—and then spreads explosively, like the formation of crystals round the first nucleus in a saturated solution. (p. 143)

This pattern, which characterizes the beginning of humanity’s transformation, is repeated in both of the other novels included in the case studies and is clearly a crucial part of the trope.

What the computational analysis cannot show is the maturation underlying the narrative, triggered by the mentor-student relationship between the Overlords and the humans. The title of the novel itself implies that we are children that must be brought up by a more mature alien race. However, this maturation is bittersweet, as the clear progress and development implied by the word are counterbalanced by a ‘loss of innocence’. The negative implications of this phrase are further highlighted by the fact that the Overlords take the shape of demons, the most extreme form of the ‘Other’ in human imaginative culture. As the ‘mentors’ in this process, the Overlords do appear to be cognitively superior to humans, but they are far from godlike. Despite their technological and intellectual supremacy, the Overlords lack the vast potential of humanity. This is brought to the fore by Karellen towards the end of the novel, when he mourns the fate of his species, which, to fulfill its role of guiding others to the Overmind, is denied salvation for itself. The Overlords are doomed to be forever locked in the physical realm, much like demons are locked in Hell in Christian mythology, and denied the ability to transcend into the Overmind.

The shape of the PFCT trope in *Childhood's End* may also be influenced by Clarke's personal beliefs about the importance of space travel for the future of humanity and the growth of our species. Clarke was a member of the British Interplanetary Society and, together with some of its other members like Olaf Stapledon, “represent[ed] a particular style of British science fiction focusing on space exploration and the anticipated positive influence of science” (Dunnett, 2012, p. 514). Clarke believed that astronautics, as a period in the development of humanity, would trigger a new renaissance, with an explosion of creative activity in its wake (Poole, 2012, p. 261), disregarding the effect of the space race on the doomsday clock. On the flipside, if humanity is robbed of this essential period in its development, as in *Childhood's End*, stagnation and a downturn of intellectual production are soon to follow. According to Clarke, “without [interplanetary travel], the human mind, compelled to circle forever in its planetary goldfish bowl, must eventually stagnate” (1961, p. 72). Therefore, the fact that first contact with the Overlords

prevents humans from undertaking space travel could be yet another contributing factor for the falling emotional valence of the text.

***Stranger in a Strange Land* (1961)**

Heinlein's *Stranger in a Strange Land* likely made the most significant impact on popular culture out of the three novels included in the case studies. It received the Hugo award in 1962, was the first science fiction novel to become a best-seller in both a hardcover and paperback form, and has never gone out of print since its release (Higgins, 2013, p. 229). Its plot is relatively simple. Prior to the timeline of the novel, an expedition is sent to Mars, but loses contact with Earth after landing. Twenty-five years later, a post-WW3 government sends a second expedition to Mars, which discovers a human born to members of the first expedition but raised by Martians. 'The Man from Mars', Valentine Michael Smith, is brought to Earth, where he gradually introduces Martian customs to humanity, forms a religion, and catalyzes a transformation of Terran culture before dying a martyr's death.

The novel quickly became "a counter-culture Bible" (Heer, 2014) that appealed to many different groups. It was revered by the burgeoning hippie movement, which used it "as a blueprint of sorts to experiment with communal relationships and religious practices" (MacFarlane, 2007, p. 92), but it was also "one of the few novels . . . that Charles Manson allowed the members of his 'family' to read" (Higgins, 2013, p. 229). Most importantly, *Stranger in a Strange Land* spawned a religious movement of its own—The Church of All Worlds, named after the church that Smith formed in the novel (Possamaï, 2002, p. 204).

This is not the only time that aspects of science fiction religion "were transmuted from fiction to absolute truth" (Gomel, 2014, p. 152). In a cultural landscape riddled with existential fears, people were quick to embrace the alternative spirituality offered by science fiction, and many real life religions or cults have delved into the "cultural reservoirs" (Possamaï, 2002, p. 204) of science fiction for inspiration. Several such examples are L. Ron Hubbard's still widespread Scientology, the New Age UFO cult Heaven's Gate (whose members committed mass suicide in order to ascend and join a superior alien race, a turn of events eerily reminiscent of that in *Childhood's End*) and Aum Shinrikyo, a doomsday cult that carried out sarin attacks in Tokyo in 1995 (Gomel, 2014, p. 152). In addition, certain North American Spiritualist movements have adopted aliens as "spiritual

guides” since the beginning of the UFO phenomenon (Porter, 1996, p. 337). All of these cults or religions are a part of a “spiritual revolution” influenced by “the massive subjective turn of modern culture” where instead of a “life lived in terms external or ‘objective’ roles, duties and obligations” people “turn towards life lived by reference to one’s own subjective experiences (relational as much as individualistic)” (Motak, 2018, p. 130). However, despite this emphasis of the subjective, all of them function in tight groups or societies that nurture some forms of communality.

This same mixture of individualism and communality, as well as the entirety of the religious sentiment in *Stranger in a Strange Land*, is encapsulated in the phrase ‘thou art God’, which frequently recurs in the novel. This dictum implies that all living beings are both independent units and spiritually interconnected. The almost Spinozan pantheism of the phrase is moderated by the influence of the ‘subjective turn’ mentioned by Motak—the hidden truth behind ‘thou art God’ allows every individual that accepts the tenets of The Church of All Worlds (the one in Heinlein’s novel, not the real-world imitation) to unlock their hidden potential.

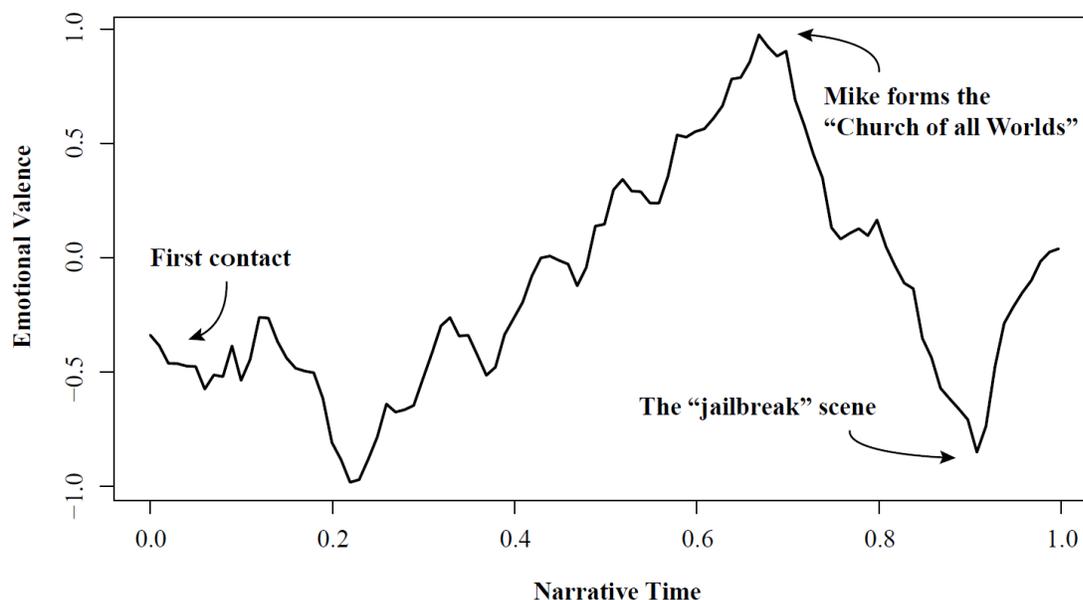


Figure 2. The emotional valence of the plot in *Stranger in a Strange Land*

The emotional valence of the novel shows a rise and fall pattern with a sudden increase towards the end, where the events leading to Smith’s self-sacrifice and the act itself are shown to have positive emotional valence and are hence seen as positive developments. Albeit bittersweet due to Smith’s death, the end of the novel implies that humanity is on the cusp of salvation. Moreover, the improvement of humanity in this novel is more palpable than the one in *Childhood’s End*, as

humanity both retains its anthropomorphic features and is on the verge of gaining super-human powers to manipulate the external world for its benefit.

In shaping the outcome of the PFCT trope, certain peculiarities of Heinlein's personal life made him quite susceptible to the conflict between individualism and communality. In his youth, he had strong leftist views and relied on welfare himself, but "later in life, as a libertarian, he would rail against 'loafers' and the welfare state" (Heer, 2014). Moreover, the socialism that he espoused in his early days was distinctly American, "bred on Looking Backwards and the Bellamy Club tradition rather than the new Marxism that was entering America along with new immigrant groups" and had close ties to cooperatism, an ideology best described as "a collective business ethic" (Mendlesohn, 2019). Heinlein's collectivism was a collaborative interaction between the individual wills of different people, which in his view was quite different than the form of socialism espoused by the Soviets, which he heavily criticized, going so far as to call it "Red Fascism" (Heinlein, 1949 cited in Mendlesohn, 2019). Heinlein also wrote explicitly anti-communist works like *The Puppet Masters*, where space slugs from Titan invade Earth. The slugs, serving as explicit analogues for Soviet communists, take over individuals' minds, turning them into soulless drones. Thus, his antagonism is towards a communalism that rejects any semblances of individualism (a breed that probably only existed in his head).

In *Stranger in a Strange Land*, Heinlein's agenda continues in the same vein, but is much more subtle. The culturally superior Martians have a highly social culture, maintaining very close social relationships with their 'water brothers'. The link is formed through the sharing of water, which is a rare resource on Mars. This relationship is highly altruistic in nature and is marked by mutual commitment and trust, and one 'water brother' is understood to never lead another into 'wrongness'. Early in the novel, Smith is surprised by the human ability to have multiple 'water brothers', which implies that human relationships, even those of literal kinship, are less stable and more transient. Moreover, Martian religion is based on the concept of 'grokking'—an understanding so thorough "that the observer becomes a part of the observed," allowing the subject "to merge, blend, intermarry, lose identity in group experience" (Heinlein, 1961, p. 287). This keystone of the Martian mindset is frequently presented in the text through providing Smith's estranging perspective of the world, which serves as a minimally counterintuitive concept. This perspective, shaped by his Martian upbringing, is extremely unusual and thus cognitively attractive and highly memorable. In addition to providing a defamiliarizing effect of mid-20th century social

norms, Smith's teachings enable humanity to gain self-possession, through tearing down the self-imposed cultural barriers that hold back the full realization of human potential.

Similarly to *Childhood's End*, the transformation is first realized through a single individual, Valentine Michael Smith, who, with his human biology and Martian culture, is a liminal character best capable of putting these events into motion. This is highlighted by Jubal Harshaw, an eccentric polymath who often serves as a mouthpiece for Heinlein's socioeconomic worldviews. Harshaw echoes Spencerian 'survival of the fittest' notions in the context of spreading Martian teachings on Earth, claiming that their inherent 'superiority' will have a spiraling effect with positive consequences for Mankind. Towards the end of the novel, he tells Smith that:

If one tenth of one percent of the population is capable of getting the [teachings about Martian spirituality], then all you have to do is show them—and in a matter of some generations the stupid ones will die out and those with your discipline will inherit the Earth (p. 567).

It is possible that the Martians' decision to allow Smith to accompany the second human expedition back to Earth is meant to send ripples through human society and make it more amenable for its improvement and future collaboration with the Martians. In fact, the Martians appear to be quite vehement in enforcing their own worldview on other civilizations. Long before the events of the novel they "had encountered the people of the fifth planet, grokked them completely, and had taken action" (Heinlein, 1961, p. 124), annihilating their world and forming the Asteroid Belt in the process. At one point, Smith claims that:

by their standards, [humans] are diseased and crippled—the things we do to each other, the way we fail to understand each other, our almost complete failure to grok with one another, our wars and diseases and famines and cruelties—these will be insanity to them. (Heinlein, 1961, p. 560)

Their complete disapprobation of the frailties of humanity might even make them resort to "mercy killing" (Heinlein, 1961, p. 560) in order to preventatively deal with a dangerously aggressive and imperfect humanity. Therefore, releasing Mankind from these cultural constraints even has existential significance, and the salvation behind the transformation is quite literal.

The Gods Themselves (1972)

Asimov's *The Gods Themselves* differs from both *Childhood's End* and *Stranger in a Strange Land* in many ways. Despite its name, it does not deal with religion to quite the same extent as

either of the other two novels. Moreover, the PFCT trope is not the narrative bedrock of *The Gods Themselves*, as Asimov came up with the story after being dared by Robert Silverberg to write a story about the fictional ‘plutonium-186’—an element that cannot exist in our physical reality (Asimov, 1980, p. 552). The novel opens in the aftermath of a catastrophic global energy crisis, spurring the search for new methods of energy generation. To this end, a scientist, aided by extradimensional aliens, discovers how to tap into the energy of a parallel universe via an ‘Electron Pump’. Unbeknownst to him, this could turn the sun into a supernova and wipe out both humanity and the aliens of the parallel universe. Over time, and with the help of Lunarite technology (developed by the scientists of the increasingly genetically and culturally divergent Lunar colony), a safe way of using the method is discovered, which would destroy neither of the two universes.

The Gods Themselves is not only an outlier in the case studies but also in Asimov’s oeuvre. The novel was written after a fifteen-year hiatus from writing serious science fiction. Moreover, although Isaac Asimov rarely wrote about aliens, this novel, which is largely considered as one of his best, even by Asimov himself (Asimov, 1995, p. 225), presents the entirety of the novel’s middle, eponymous part, ‘...The Gods Themselves...’, through an alien point of view. Unlike the other two novels featured in this article, *The Gods Themselves* does not feature direct contact between the humans and the ‘enlightened’ alien species, but communication is effectuated through interdimensional energy transfer. Such indirectness of first contact is not something entirely new. For example, *Lumen* (1872), by French ‘proto’ science fiction author Camille Flammarion, also lacks a direct first contact scenario, as the existence of extraterrestrial life forms is revealed to its protagonist by a benevolent cosmic spirit, who acts as an intermediary. However, the real inspiration behind the specifics of first contact in the novel seems to be the increased funding and research in the early 70s towards SETI style projects, which hoped (and still do) to achieve contact through information transfer rather than through actual encounter with aliens in the physical world.

In *The Gods Themselves*, some of the main benefits of the ‘syuzhet’ method are nuanced due to certain peculiarities of the formal composition of the novel. Each part deals with different characters and ‘races’ (Terrans, aliens, and Lunarites), each having their unique features and perspectives, which skews the emotional trajectory of the plot. The fact that each part of the novel has different characters with unique idiolects and immersed in a completely different cultural or even biological context, should caution against an overreliance on the produced graph. However, the graph does provide one unmistakable insight into the nature of the transformation itself—its

clear positivity.

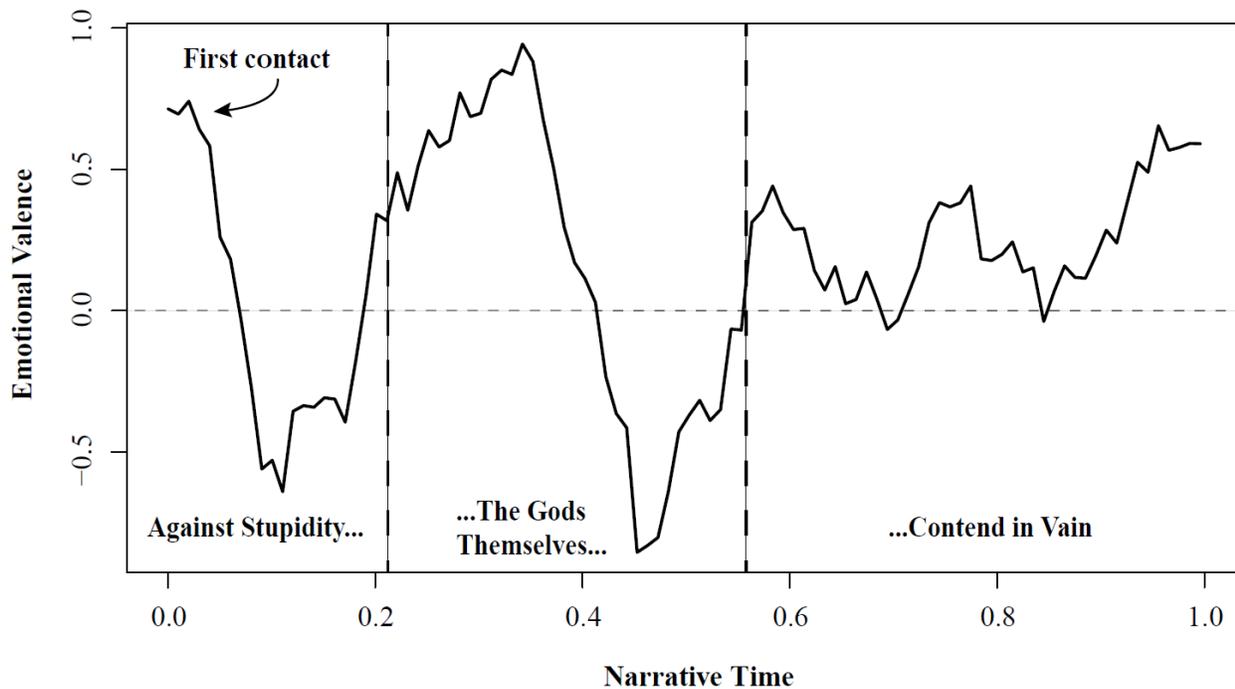


Figure 3. The emotional valence of the plot in *The Gods Themselves*

Like a typical representative of ‘hard science fiction’, *The Gods Themselves* has a reduced density of religious topics, which are replaced with an ‘idolatry’ of science and technology. Therefore, a good deal of the transformation of humanity is done through mimicking the aliens’ technology. This is typical of the genre where the belief of a supernatural universe where salvation could only be divine is typically redirected “toward a much more acceptable belief in a natural universe where technology saves” (Peters, 1977, p. 20). This makes the student-mentor relationship between humans and the aliens more literal than in the other two novels. However, the aliens do not necessarily have the moral high ground, as the ‘hard ones’ (the final stage of maturation for their species) seem to lose some of the altruistic tendencies present in their adolescent forms, especially the stage referred to as ‘emotionals’, and seem indifferent to the idea of obliterating an entire universe to save their own. Just like in the other two novels, aliens do not grow or learn in the aftermath of first contact and remain inert, while the exact opposite happens on the human side.

In addition to technological progression, humanity seems to advance morally and culturally. For most of the novel, humans are shown to be extremely selfish and self-centered, especially in the first part (perhaps aptly named ‘Against Stupidity...’), where most of the motivation behind

the actions of the characters seems to be dictated by self-serving impulses. However, later things change. For example, in the third part of the novel, Denison, a cynical scientist turned businessman, is able to overcome his selfish impulses and professional jealousy against Hallam (the person credited with inventing the ‘Electron Pump’) and, by working with the Lunarites, manages to make the novel’s crucial breakthrough. The message is clear—apocalypse can be averted, and utopia achieved, only through increased collaboration and overcoming selfishness. Moreover, it is frequently emphasized that the aliens are not necessarily more intelligent than humans, only more technologically advanced (despite the seeming implications of the novel’s title), which emphasizes the inherent potential of humanity.

Moreover, the aliens in *The Gods Themselves* are not as counterintuitive as they may seem at first: despite their bizarre appearance, their cognition is not that different to that of humans. Therefore, the inclusion of an alien POV is a minimally counterintuitive rather than a maximally counterintuitive concept, which interferes with our immersion in the narrative in a much more superficial way than might be expected. Even the middle, most outlandish part of the novel is quite immersive, despite focusing entirely on the aliens. After all, it is told through the perspective of the ‘emotional’ Dua, whose clear empathy makes her cognition the most human-like among the aliens.

The final transitional form of humanity in the novel are the Lunarites (or the ‘Moonmen’) who fully embrace technology as a means for salvation. They engage in space exploration, reject the restraints of Terran social norms, and live in a tighter, more communal society than Earth-based humans, embracing technology for the improvement of humanity. Most importantly, Lunarites are open to genetic engineering (a taboo topic for the Terrans), which albeit being transformative, does not quite go to the posthuman extremes of Clarke’s *Childhood’s End*, wherein the entirety of Mankind dissolves in a beam of light and departs the Solar System. Hence, the transformation of humanity in *The Gods Themselves* and its crowning achievement—the departure of Lunarites into deep space with the newfound propulsion energy afforded by the Electron Pump—are unequivocally progressive for humanity, and hence positive.

Conclusion

Post First Contact Transformation, or PFCT, is a common trait of mid-twentieth century science

fiction novels, mostly due to the Cold War related cultural anxieties that were reaching their peak during this period. While variations within the trope exist, they all feature a large-scale transformation of humanity in its narrative fabric, and occasionally an accompanying transformation on a micro level that mirrors the former.

One of the main sources of variation within the trope is related to the materialism of the transformation. It appears that in narratives where human corporeality and agency are eventually abandoned, the transformation is imbued with a negative emotional valence, and in those narratives where humanity retains its anthropomorphic traits, the transformation has a more positive emotional valence. This is due to our innate anthropomorphic bias, which makes us see the loss of human features in a negative light. Moreover, in all these narratives, humans are shown to be capable of transformation while alien species are not, either because of their higher position on the cosmic hierarchy or due to internal limitations that make them inferior to humans in some way. The aliens remain inert and are not changed by the first contact event which has such a transformative effect on humanity.

After the mid-70s, the PFCT trope lost much of its popularity and it becomes near impossible to find science fiction novels that feature all of the components of the trope. This decline of popularity could be attributed either to the weakening of the surrounding cultural anxieties that played such a crucial role in the formation of the trope, or to the ‘ebb and flow’ dynamic that speculative fiction, with its heavy reliance on the novelty of ideas, is particularly susceptible to. After an idea rises to popularity, the market tends to become oversaturated with it, after which it is dethroned, subverted and satirized. However, *Childhood’s End*, *Stranger in a Strange Land* and *The Gods Themselves* have all managed to live on, despite the decline in popularity of the trope itself. This may be due to the prestige of their producing authors, but must also be influenced by the novels’ heavy use of narrative elements that appeal to our hard-wired biological imperatives, whose effects remain unvarying even with a changing cultural context. Moreover, the three novels feature a vast array of ideas, contradictions, and novelty, which have a high capacity for eliciting continued thinking about both the intradiegetic and the extradiegetic world. By remaining in the consciousness of the readers for a longer period of time, the chances of the novels for being recommended, or ‘transmitted’ to others, increase. The resulting discourse surrounding the novels drives positive feedback loops of popularity that further contribute towards their ‘canonical’ status. Finally, all the novels feature a large proportion of alien-related counterintuitive biases, making

the novels more memorable and hence more likely to 'stick' in cultural transmission (a crucial aspect of the abovementioned feedback loop of popularity).

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