

MARS OR BUST: HOW SCIENCE FICTION FILMS WILL PROMOTE MARS COLONIZATION REALITY

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ABSTRACT

This paper explores Mars colonization portrayal in film and literature from Gene Roddenberry's perspective that science fiction 'allows people to look directly at important subjects.' The work postulates that colonizing the red planet is necessary for the survival of the human species and illustrates how science fiction stories, particularly sci-fi feature films, will promote human colonization of Mars. 'Either we must leave the Earth or we will perish,' wrote Michio Kaku. Mars has all of the resources needed to support life. Yet, terraforming the 4th planet from our sun is costly, and perhaps a near-impossible, dangerous, hard-to-sell endeavor. Abraham Maslow argues that humans are innately curious, yet it will take more than inquisitiveness to get humans to explore and settle Mars; it will require human settlers and volunteers with the courage and resilience to do whatever it takes, despite hardships. Still, a Mars settlement fulfills Abraham Maslow's hierarchy of needs pyramid from both ends, from the most basic human physiological needs to the highest need of self-actualization. Via interstellar travel, humanity might, as Star Trek creator Gene Roddenberry wrote, 'go where no man has gone before.' Good science fiction stories, games, books, television or movies, can excite, inspire, and influence the collective consciousness with an empowering sense that the fantastic is or could be fact. This seeding of humanity's awareness is necessary to prepare humans for spacefaring and the brutal off-world colonization processes which lie ahead. Given global warming, ongoing species extinction, and other planetary challenges, interplanetary colonization is the best insurance for humanity's survival. Science fiction can drive the possible future and support making a Mars colony fantasy a reality. This paper explores the crucial role that science fiction genre films will play in addressing these issues.

INTRODUCTION

'Earth is the cradle of the mind, but one cannot live in a cradle forever,' said Russian-Soviet rocket scientist Konstantin E. Tsiolkovsky. Planet Earth is a fragile entity with increasingly reduced resources. Apocalyptic shadows encroach upon humanity. Human extinction or evolution into an unrecognizable form may not be avoidable. Visionaries, Elon Musk, Robert Zubrin, Richard Branson, Jeff Bezos, and others, banking vast intellectual and other resources, powered by passion and dazzling drive, have lucidly dreamt a new human destiny. Humanity will colonize Mars. In bygone times, people looked to the glimmering stars and planets of the night sky as a form of wonderlust. As Red Planet colonization becomes possible, wonderlust rapidly becomes wanderlust. Despite the cost, the near-impossibility of the likely dangerous, hard-to-sell, formidable venture, colonizing the glowering red planet, seemingly, is feasible. If this is so, then how can this possible future be made believable, if not inevitable, to all humanity? Global imaginations must be sparked and set on fire through the mesmerizing power of story. Cutting edge Mars colonization mythologies can transform

and inspire the collective psyche (Jung, 1959), and thus take humanity beyond the moon and stars to a new earth on the Red Planet.

BACKGROUND: RED PLANET SIREN CALL

As ancient human records and narratives reflect, the fiery red ball has long mesmerized Earthlings. “Mars has become a kind of mythic arena onto which we have projected our Earthly hopes and fears” argued astronomer and Pulitzer Prize-winning author Carl Sagan in his book *Cosmos* (1980). Mars science fiction, whether laughable or idealized, has so far included xenophobic fears of Martian invaders, sole survivor fantasies, or idealistic notions of highly-advanced technologically and otherwise enlightened Martians in E.T. utopian paradise. Then there is the grand literary vision of Mars as a human colony. The Red Planet does have all of the resources needed to support human life. Yet, if humanity is to colonize Mars, how will the human race get there from here? “From a childhood vision to a space-age reality,” said character Tom Chen in the film *The Space Between Us* (2017). Played by Gary Oldman, the character’s words are a cinematic summing up of modern Mars mythopoetic power and potential to rewrite reality. Consider the historical evidence that science fiction transmits visions with the power to transform and better human lives and reality.

FROM CHILDHOOD VISIONS TO SPACE-AGE REALITY

Imagine a small, freckle-faced red-headed boy born circa 1866. At age ten or eleven, he reads *Twenty Thousand Leagues Under the Sea* by Jules Verne. From then on, the inventive, scrappy little boy, dreamt “of making voyages under the waters” (Lake, 1938). His name is Simon Lake. He drew his first plans for a submarine with a diving compartment around age fifteen, then grew up to design, build and successfully test increasingly sophisticated submarines. Prototypes, the *Argonaut Junior* and the *Argonaut*, were seaworthy in 1894 and 1897 (Lake, 1938). The child became the man and fulfilled his boyhood vision of becoming a “sub-aqueous pioneer” much like the *Twenty Thousand Leagues Under the Sea* story hero who sparked his imagination as a child (Lake, 1938). The astonishing journeys author—Jules Verne himself—sent a congratulatory cable when *Argonaut* successfully voyaged. In Lake’s own words, “Jules Verne was in a sense the director-general of my life” (Lake, 1938).

“It’s alive! It’s alive!” uttered Dr. Frankenstein in the 1931 film (Fort & Faragoh, p. 32) adaptation of Mary Shelley’s novel *Frankenstein, or the Modern Prometheus* (1818). Those electrifying words led Earl Bakken to his destiny. “My favorites were those incredible science-fiction films . . . in which electricity, usually applied by a “mad” scientist, rendered someone supernaturally strong, invisible, or in some other astonishing way changed. Foremost among those films was *Frankenstein*, the unforgettable story of the learned doctor who, through the “magical” power of electricity, gives life to a collection of inanimate body parts” wrote Bakken in his memoir (1999, p. 28). Bakken describes seeing the 1931 film *Frankenstein* at the age of eight, “what intrigued me the most, as I sat through the movie again and again, was not the monster's rampages, but the creative spark of Dr. Frankenstein's electricity. Through the power of his wildly flashing laboratory apparatus, the doctor restored life to the unliving” (1999, p. 28). Bakken grew up to co-found medical technology company Medtronic Inc., and himself give life to those who might otherwise be unliving when he created the first wearable, external, battery-powered, transistorized pacemaker in 1957 (Bakken, p. 29, 1999). Medtronic devices have since helped untold numbers of people.

The name Sikorsky is synonymous with helicopters and the technological advances and prowess of the armed forces. Reading science fiction as a ten or eleven-year-old boy stirred Igor Ivanovich Sikorsky, like Simon Lake, to create his remarkable reality. Jules Verne's 1886 novel *Robur The Conqueror*, also known as *The Clipper of the Clouds*, inspired Sikorsky to build a helicopter (Ryan, 1995). In 1923, he founded Sikorsky Aircraft Corporation and built both fixed-wing aircraft and later helicopters. The aeronautic engineer's boyhood flying machine fantasy became a reality years later when he flew the Vought-Sikorsky 300 helicopter in 1939 (Ryan, 1995). Igor Sikorsky's son Sergei shared his father's words that the "helicopter-like vehicle" in *The Clipper of the Clouds* and a Jules Verne quote "imprinted" on his mind inspired his dream of inventing a helicopter (Ryan, 1995). The quote Sikorsky remembered was 'Anything that one man can imagine, another man can make real.' The word-for-word quote, from Verne's book *The Steam House*, is, 'All that is within the limits of possibility may and shall be accomplished' (1881, p. 6). Good sci-fi facilitates possibility thinking and directed imagination, or inventiveness. Science fiction is alchemical, it changes minds, and inspires humans to make real whatever they imagine.

REAL OR IMAGINED: WE CAN REMEMBER IT FOR YOU WHOLESALE

In *Total Recall*, the 1990 film based on Philip K. Dick's *We Can Remember It for You Wholesale*, Douglas Quaid dreams about the red planet repeatedly then tries to get a Mars virtual vacation memory implant. Quaid increasingly cannot tell the difference between fantasy and reality. Curiously, in reality, humans have a similar inability to distinguish between the imagined and the real. Whether due to the mind-body connection and the function of neural patterning, whether wiring or rewiring, the human brain does not seem to distinguish between fantasy and fact. Whether an experience is virtual or actual, imaginary or real, it impacts the human organism. Pascual-Leone et al. scanned the brains of study participants either playing notes on the piano or imagining doing so and found brain changes of statistical relevance for both groups (1995, pps. 1037-1045). A control group, who neither played piano notes nor imagined doing so, had no corresponding brain changes.

THE ORIGINAL PURGE: YOUR EMOTIONS ON STORY

Well-created content in any genre creates a portal for a narrative consumer, a film or television viewer, story reader or game player, to participate in a transformative rite of passage, enter a liminal space similar to a dream state. Therein, upon identification with characters leading to a satisfying narrative result, the viewer or reader ultimately experiences Aristotle's 'katharsis' or purification (B.C.E. 332). This common-knowledge vicarious purging of emotions is one reason that many humans love narratives. Ultimately, Aristotle's narrative catharsis transforms the content consumer. Modern stories are meant to entertain and often make people think and feel. In Ed S. Tan's words, "In general, narration may be seen as the systematic evocation of emotion in an audience, according to a preconceived plan. Narration by means of film is one way of doing this" (1996, p. 250). As Tan's book title *Emotion and the Structure of Narrative Film: Film as an Emotion Machine* suggests, a film is a feeling-making device. Neuroscience evidence suggests how this may function in humans.

TRANSFORMATION THROUGH STORY

Think of a whole being and whole brain alteration methodology as transformation through story. Narratives can be designed and written to cultivate awareness generally, or promote any other authorial point of view, as well as to specifically prepare humans for spacefaring and the brutal off-world colonization processes which lie ahead. One may devise a story as a compelling rite of passage, or neural-net creating ritual, a virtual somatic journey, with the subliminal potential to inspire and influence society's collective unconsciousness and consciousness (Jung, 1959). A successful sci-fi or other narrative is thus a vicarious experience which communicates that a fantastical experience is or could be a fact. The liminal in combination with the subliminal becomes supraliminal or conscious and thus real. What does a person experience while consuming such content? Understanding the power of story to drive human reality requires that one consider the human brain and whole being on narrative.

HAVE SCI-FI —WILL TRAVEL: FICTION AS PORTAL OR GATEWAY

Neural or brain nerve cell wiring and re-wiring is the way that the human brain processes information. The brain creates neural associations or neuronal networks as part of processing and understanding experience, including stories. Good consumer content involves suspension disbelief, both literal and figurative. Compelling stories act as a threshold, or doorway, between the worlds of fantasy and reality. Think of reality as the middle world and a narrative as an actual gateway to the upper or lower worlds of non-ordinary reality. In consuming content, one crosses the threshold, enters and traverses a fictional liminal or Bardo state, undergoes initiation, and thus vicariously experiences an actual mission to or colonization of Mars. Once the film, book, game or other content ends, liminality transcended, the trance ended, the individual awakens into and returns to ordinary reality. In this way, a feature film serves as a neural-net creating somatic ritual with the potential to rewire and transform brains and humanity.

YOUR MIND ON STORY: FROM FANTASY TO REALITY

Science offers evidence of the movie-mind connection. In the *PsyArt* article “This is your Brain on Culture: Your Brain on Movies”, Dr. Norman Holland summed up the Weizmann Institute findings: “Specifically viewers' brains behaved alike (high ISC) in the primary visual areas of occipital and temporal cortex, Heschl's gyrus (auditory region), Wernicke's area (language processing), some limbic areas (emotion), the fusiform gyrus (face recognition), and the association cortices that partially integrate primary sensory data” (2012). Holland explains that viewers get “lost in” movies as passive viewers who surrender or give “over control” to the film (2012). Holland explains it thus. A movie-goer's brain yields “control to the movie projector,” shutting off “reality-testing,” and then they enjoy what he terms the filmic version of Mihaly Csikszentmihalyi's flow state (1990). An interconnection between the psyche and cinema is not surprising. Indeed, in Jungian terms, a human experience, whether dream, fantasy, vision, feature film or content, is an external out-picturing of an internal individual or collective psyche experience. Ira Konigsberg indicates that “Psychoanalysis and film began at about the same time and the relationship between the two was noticed almost from the start” (2007, p. 3).

THE GOOD, THE BAD, AND THE UGLY: CINEMA AS MIND CONTROL!

Uri Hasson and Rafi Malach, with a group of researchers at the Department of Neurobiology, Weizmann Institute of Science, Rehovot, Israel, researched the neuroscience of watching movies. They had five research subjects lie in a fMRI machine—functional magnetic resonance imaging—and watch the opening thirty minutes of the movie *The Good, the Bad, and the Ugly* (1966). What researchers discovered was a high inter-subject correlation (ISC) in study participant brain activity. Some 30% of the subjects’ brain areas showed the same activity pattern. Researchers concluded that measuring brain activity during movie watching was useful for “assessing the cognitive and emotional effectiveness of a movie” (2004). Perhaps the most interesting result found by the researchers, along with the “high ISC in brain activity,” was “the same film exerted considerable control over viewers’ behavior as measured by tracking their eye movements” (2004). Many subjects, instructed merely to watch the movie, gazed at the same location at the precise cinematic moment. The movie itself directed viewer attention. This result may be perceived as quite Orwellian (1949), as narrative naturally, with or without nefarious intent, is inadvertent mind control.

NEUROSCIENCE OF STORY

It is possible to rewire the brain to rewrite reality. Mirror neurons, brain cells that fire during a human experience or when a person observes another having an experience, inform the transformation through story puzzle (Lamm and Majdandžić, 2015. p. 22). Sympathetic or shared neural activation, when a content consumer identifies with a fictional character and vicariously experiences their story journey, is a function of narrative empathy (Clay and Lacoboni, 2011). Hasson et al. speculate that “part of the mesmerizing power of movies stems from their ability to take control of viewers’ minds, and that viewers often seek and enjoy such control because it allows” deep absorption and mental engagement in a film (2008, pps. 17). Is this taking control of content consumer minds, to facilitate awareness, through motion picture or other content, a form of mind control? Despite valid ethical concerns, good sci-fi stories are undoubtedly useful to rewire the brains of the masses and forward the Mars colonization initiative. Narrative allows the collective consciousness to experience the fantastic as fact. Through topical consumer content, humankind will become comfortable with and committed to the brave new space colonization world which lies before us. We must dream a new reality, one where homo sapiens terraform, and thus green, the planet Mars.

CONCLUSION: JUST THE BEGINNING

Spacefaring and the brutal off-world processes of colonizing and making Mars comfortable will require heroic efforts, much sacrifice and perhaps the loss of many lives. Yet, the valiant human journey and cause will be worth it as, in the words of Joseph Campbell, ‘A hero, properly, is one who gives his life to something greater than himself.’ Consumer content to promote the mission to Mars enlightenment path has the power and potential to anticipate and influence humanity’s future. Topical science fiction summer blockbusters and other popular culture content, including games or television, will play a crucial role in cultivating collective human awareness and dedication to Red Planet colonization. In both fresh, new sci-fi films, games, literature, new media, and other content, and then, in reality, we must go there. To quote Hauser—from the movie *Total Recall*—humankind must “*Get your ass to Mars*” (1990). ‘And the rest is, well, it’s not history,’ as Gary Oldman’s character said in *The Space Between Us*, ‘it’s just the beginning’ (2017).

ACKNOWLEDGEMENTS

The research and related conference presentation were partially supported by the Swansea University College of Arts and Humanities (COAH). The author is immensely grateful to Swansea University Creative Writing Research Programme director Dr. Alan Bilton for his comments on an earlier version of the manuscript, although any errors are her own and should not tarnish that esteemed person's reputations. Additional special thanks to Professor D.J. Britton for distinctive research direction and to Yosemite Channel-Barry Chall Films for The Milky Way, A Journey Through The Sky Time Lapse presentation visual background.

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