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At the Boundaries of Imagination and Investigation: Science in the Star Trek Franchise

ABSTRACT

In honour of the 50th anniversary of Star Trek, this paper looks back over the franchise as a whole to explore the place of science in its narratives, production, and cultural legacy. Star Trek continues to feature in larger discussions over the accuracy of science in fiction. However, such work fails to accommodate the multiple levels of interaction that exist between science and popular culture. To provide a more detailed assessment, a number of other sites of contact are foregrounded including the influence of the original series in shaping conceptions of space exploration, and the connections between science and secularism. The various incarnations of Star Trek will be analysed collectively to demonstrate the infinite diversity in infinite combinations present within the franchise itself.

KEYWORDS

Star Trek
Science Fiction
Popular Science
Popular Culture
Television

TO BOLDLY GO WITHOUT LEAVING

Images of an enthusiastic captain, a hyper-logical science officer, and a fantastic vessel traversing outer space first flickered upon television screens half a century ago. At first the images faded. In the days before on-demand viewing, binge watching and boxsets these may have seemed to many like passing moments soon to be forgotten. 50 years later that series is not ephemeral but iconographic. Moments are etched into the imagination of generations, phrases are part of the common lexicon, central cast members are household names, people routinely dress as its characters, and the series continues to generate fan memorabilia including recently released coins and stamps. So iconographic is the series that films merely evoking the names are produced to bring massive box-office rewards. These are the voyages not of the fictional starship *Enterprise*, but of the very real *Star Trek* franchise.

We now see *Star Trek* as a major entertainment property with considerable interest, but this was not always the case. The franchise almost failed to start with the original pilot needing to be dropped and several alterations made before production was given the green light. Even after its launch the original series of *Star Trek* (1966-1969), to which all other iterations ultimately owe their existence, struggled to survive. Although it garnered a dedicated fan base upon first broadcast, contemporary expectations of television “as a mass medium, a medium of nation-building, a medium that brought people together” made the original series appear a relative failure (Johnson, 2010: 36-7). “In the classic network era,” writes Pearson (2010: 9-10), “sheer number’s determined a programme’s fate” but the original series “fell short of this mark”. Even the intense letter writing efforts from fans that had secured a third season for the original series could not starve off the ultimate result of insufficient ratings.

How and why *Star Trek* would ascend to a major position in popular culture is a complex question to answer. According to Geraghty (2009: 105) the “*Star Trek* franchise has an uncanny ability to regenerate, evolve, and even rejuvenate, which is unique to television or film.” While true in spirit with the franchise being justifiably labelled unique, the level of uniqueness in terms of these listed traits is open to debate. After all, long running television series often have to regenerate within their own broadcast runs and *Doctor Who* (1963-1989; 2005-ongoing) rather famously includes a prominent regeneration whenever the title of Doctor passes hands between actors. One inarguably central facet of *Star Trek*’s ascent to pop culture mainstay was the proliferation of original series episodes through syndication. Johnson (2010: 138) argues that syndication was integral to the rise of *Star Trek* because without “syndication it would have been impossible for viewers to have re-watched episodes of the programme, effectively removing the possibility for audiences to experience and re-experience the show” something “particularly significant when one considers the importance of re-watching to fan activities and to the initiation of new fans.” Perhaps the secret to *Star Trek*’s success is a relatively simple one: the series was creative, novel, and spoke not only to its own time but the decades that followed. Dynamic narratives capable of attracting young fans (many of whom would grow into the collectors of today) and the ability to encourage and potentially reward repeat viewing laid the foundations for *Star Trek*’s success in syndication.

Syndication also made the original series’ presence transcend its initial broadcast. Kompare (2005: 142) regards *Star Trek* as “one of the most prominent series in ... television heritage”, noting it as “a rerun staple in nearly every market since the early-1970s.” The decades that followed saw so little science fiction television, and of such little of note, that

syndicated material remained prominent leading Booker (2004, 67) to comment: “if *Star Trek* was ultimately the most important science fiction series of the 1960s, it was probably also the most important series of the 1970s”. Alongside reruns of the original, the *Enterprise* crew went on new adventures in *Star Trek: The Animated Series* (1973-74). With the voices of most original cast members (excluding Walter Koenig/Chekov) and initially titled *Star Trek*, these cartoon voyages were almost like a delayed fourth and fifth season of the original. At the close of the decade the franchise moved to a new medium with its actors reprising their live-action roles in *Star Trek: The Motion Picture* (1979). Across the 1980s several more films (released in 1982, 1984, 1986, and 1989) kept Captain Kirk and his comrades alive in popular culture. In 1987 the franchise returned to television with a new *Enterprise* and a new crew in *Star Trek: The Next Generation* (lasting seven seasons to 1994). In the 1990s and new millennium *Star Trek* continued to capture new fans by expanding its catalogue with new series – *Deep Space Nine* (1993-1999), *Voyager* (1995-2001), and *Enterprise* (2001-2005) – additional films – *The Undiscovered Country* (1991), *Generations* (1994), *First Contact* (1996), *Insurrection* (1998) and *Nemesis* (2002) – and the continued availability of older content through syndicated reruns, VHS/DVD, and on-demand services. *Star Trek* would also act as an intertextual reference point for other science fiction series such as *Stargate: SG-1* (1997-2007), and an extratextual reference for the revived *Battlestar Gallactica* (2004-2009) which was framed as a kind of anti-*Trek* future. Similarly (yet also ironically), the most recent film series (2009-ongoing) shed many of the central characteristics of the franchise, such as its focus on an optimistic future, in favour of bleaker images and fairly straightforward action-adventure. Due to this and the fact these films are trying to reconceive or ‘reboot’ the narrative with recast versions of original series characters a case could be made to separate them from other instalments within the franchise. Whether the same will be true of the forthcoming *Star Trek: Discovery* series awaits to be seen. Neither will be discussed in the following analysis.

The influence and importance of *Star Trek* goes far beyond its place in television and science fiction history. Together with its 50th anniversary, the upcoming launch of the *Journal of Science and Popular Culture* provides cause to look back and assess the ways in which the franchise can act as a case study in the interrelationship of science and culture. Several facets of the science and culture interface are visible within *Star Trek* including the merging of fact and fantasy that drives the science fiction genre, the role of popular culture in public discourse about scientific exploration, and the ways that science fiction speaks to the history of science.

IT'S ONLY SCIENCE FICTION, BUT

When it comes to questioning the science in fiction most people have heard, seen, or done so themselves. Science fiction receives quite a lot of attention in this regard because the science is such a prominent part of the invented and fabricated landscape, almost so much so that we would think anything with an imagined technological or scientific (that is, naturalistic) deviation from reality is science fiction. However, a look at the myriad fictional scenarios put to the test in a show like *Mythbusters* (2003-2016) displays a healthy lack of realistic physics far beyond the purview of the science fiction genre. Similarly, shows such as *CSI: Crime Scene Investigation* (2000-2015) frequently invent technologies but unlike science fiction narratives they normalise those deviations without drawing attention to them thus leaving viewers with the implicit assumption that they are truly real.

Asking 'is it true?' of science fiction and focusing too much on mistakes in narratives risks missing the point. How would one quantify the plausibility of a twenty-third century starship? While it is certainly possible to judge on the basis of current knowledge and thereby conjecture about the plausibility of specific features, the potential and inevitable openness of 'future science' leaves the question without any final resolution in the present. However, this abstract openness does not undercut the validity of current science in its own time and cogent assessments of many of *Star Trek's* science fictional technologies including phasers, warp drives, cloaking devices, transporters, replicators and shields have been presented by Lawrence M. Krauss (2007) and Michio Kaku (2009) among others.

Including science has a range of effects both in terms of narrative composition and reception. The inclusion of science, though it may lead to "physics faux pas" provides audiences "something to look forward to talking about the morning after" and "offers a challenge to the writers and producers to try to keep up with the expanding world of physics" (Krauss, 2007: 229-230) and other fields. Use of science in fiction "creates a fundamental tension between dramatic needs and the demands of accuracy and honesty" (Benford, 1986: 83), a tension typically resolved in favour of drama. Andre Bormanis (2013: 19), science consultant for several series within the franchise tells us, "One thing that was never allowed in a *Star Trek* script is scientific exposition. Stopping the action to have a character explain wave/particle duality or some other arcane technical subject was strictly forbidden" because "exposition is the mortal enemy of drama." Lack of too much detail can potentially be a good thing – the vaguer the technobabble, the less room there is for problems and mistakes to be made then found by vigilant audiences.

INTO SPACE

With the human race poised to keep fulfilling the once science fiction goal of space exploration there is a question over whether this is best done aboard a proxy of the *Enterprise*, or through robotic eyes. Some of the arguments in favour of sending unmanned probes forth in our stead is that these do not incur the same level of cost and are without the attendant risk of causing harm or death to human astronauts. One point that continues to drive expectations of manned missions is that this is what we have come to imagine due to popular culture depictions such as *Star Trek*. According to Robert Park (2000: 85), a staunch opponent of manned space exploration, “space officials ... were convinced that a public weaned on *Star Trek* would not support a space program that did not feature humans” and this contributed to the creation of the Shuttle Program. Interestingly, Roddenberry had sought guidance in the creation of his space faring future and “initial publicity foregrounded [his] consultations with personnel from the Rand Corporation, NASA, and Caltech to obtain the latest scientific opinions on space travel and spacesuit/starship design” (Pearson and Messenger Davies, 2014: 35). Links between *Star Trek* and NASA’s Shuttle Program were further established by the first of the vehicles being re-dubbed, *Enterprise* in 1976. Unlike its fictional counterpart, this *Enterprise* would never explore space but it sits today in New York City’s Intrepid Sea, Air & Space Museum as a very physical symbol of *Star Trek*’s massive cultural influence and speaks to the feedback loop in science fiction and public discourse. Manned space exploration is an instance where science fiction, rather than predicting the future, writes the future in so far as it establishes expectations that inspire or guide those who create the reality.

FUTURE FRONTIER

The phrase “final frontier” readily conjures allusions to space. Repeating the typical conceptualization of the frontier in *Star Trek* and similar series, Geraghty (2009: 65) writes “television space operas transferred the myths of the old west onto the frontier of outer space”. “In popular American mythology,” Gregory (2000: 164) reminds us, “the frontier symbolizes both freedom and ... imagined utopia.” Space-as-frontier is a simplistic concept where, with the westward expansion across the continental United States at an ultimate end, an expansion into space is substituted to carry on the same dynamic of exploration and the search for a better life. Speaking of Edward Bellamy’s famous time travel work, *Looking Backward: 2000-1887* (1888), Gunn (2002: 277) sees a different shift of frontier at work:

[I]nstead of existing nowhere, the utopia existed in the future ... the end of the old frontier gave humanity a new frontier – the future. And in that future was another promise, equally new, that science could help usher humanity into a new world of plenty.

Star Trek's focus is less on a surrogate spatial frontier and more on the frontier that lies ahead of us in temporal terms. In a way similar to Bellamy's story, the franchise positions the future as a potential utopia. Moments where characters come into contact with real and imagined history offer direct opportunities for *Star Trek* to echo *Looking Backward* by casting the gaze of its future humanity onto their troubled past and our complex present.

Central to *Star Trek*'s famous future is an embrace of science and rationality alongside the dilution or religiosity, a combination that aligns the narrative with the process of secularisation. The term 'secularisation' has a number of different applications, however, in the sociological context it refers to the perceived incompatibility of religious faith with progressive modernisation (Lyon, 2000: 22). In a historical sense secularisation describes the gradual decline in social significance of religion within the Western world (Bruce, 2002: 3). Unlike original and simpler models, updated versions do not posit the inevitable disappearance of religion as a whole, just its retraction from public spheres of influence (Giddens, 1990: 109; and Stark and Bainbridge, 1985: 2).

While it is partially accurate within its original scope, a critical issue with the theory of secularisation is the highly evident continuation and proliferation of religion in global affairs. With regards to a world that stands in stark contrast to the imagined utopia of the Federation, Davis (2009: viii) writes:

What do we see moving forward into the twenty-first century? Instead of the rigorous application of science and reason to cope with this world of uncertainty, we see a huge increase in superstition in general and religion in particular, in North America at least. We see a major decline in human rights and a reduction of complex problems to simple – unsuccessful – solutions. In short, we see the end of the Enlightenment.

Certainly this phenomenon is not restricted to North America, or the even the Western world in general. One need only look to the latest events that have consumed several countries within

the Middle East. Of course, the future promised by *Star Trek* is not one reached overnight from where we are and when we are shown events that transpire between our present and the more utopian times of the various franchise characters they are often dark. Peter Berger (2008), a major and early proponent of secularisation in *The Sacred Canopy* (1969) who would later 'recant' in *A Rumor of Angels* (1990), subsequently argued that modernisation does not produce a secularising impact but rather a process of pluralisation. We see exactly this in the franchise where the original series has a famously (and revolutionary for its time of production) multi-national, multi-ethnic crew and even more so in the later iterations of *Next Generation*, *Voyager*, and *Deep Space Nine* especially. The emphasis on different cultures and belief systems interacting in meaningful and constructive ways underpins *Star Trek's* sense of a better future where difference need not lead to division.

CONCLUSION

Although the space of a conference paper is insufficient to go into extensive detail or cover everything, we can see that the *Star Trek* franchise exhibits several intersections between science and popular culture. Moreover, it demonstrates the powerful position that science fiction, the genre where science and culture merge, has come to occupy. 50 years from the first broadcast of its original series, *Star Trek* has only grown in strength especially in terms of reach and revenue. With a new series set to start in 2017 the franchise shows no sign of stopping. One wonders whether the much hyped series of recent years such as *Breaking Bad* (2008-2013) or *Game of Thrones* (2011-ongoing) will still retain that kind of presence (or any presence) after 50 years. Only time will tell. And history tells us that *Star Trek* is a major part of twentieth and now twenty-first century popular culture. Perhaps it will even continue its way into the real twenty-third century.

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