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<http://www.popmatters.com/feature/future-technology-in-the-star-trek-reboots-tethered-and-performative/>

PUBLISHER

PopMatters

VERSION

SMUR (Submitted Manuscript Under Review)

PUBLISHER STATEMENT

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REPOSITORY RECORD

Wilson, Carl, and Garrath T. Wilson. 2019. "Future Technology in the 'star Trek' Reboots. Part I: Tethered and Performative Technology". figshare. <https://hdl.handle.net/2134/22988>.

Future Technology in the ‘Star Trek’ Reboots.

Part I: Tethered and Performative Technology

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Keywords – Star Trek; Reboots; Justin Lin; J.J. Abrams; Future Technology; Star Trek Beyond; Star Trek Into Darkness; Tethered Technology; Performative Technology; Complex Technology; Gene Roddenberry.

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Introduction

If space is the “final frontier”, then the technology that facilitates this adventure is also one of the central mechanisms by which we can learn new things about ourselves and our society.

As human beings, we are constantly developing, and exploration is one of the ways in which we can expect to know ourselves better, grow and evolve in directions hopefully of our own choosing, and exert ourselves outwardly towards boundaries and borders in an attempt to better understand and shape the societies and cultures within which we are situated.

Likewise, with Captain Kirk’s (William Shatner) opening staccato from *Star Trek: The Original*

Series (Roddenberry, 2007) - a mantra which is repeated across the *Star Trek* reboot films - the focus is also on exploring “new” horizons, as in “new worlds”, “new life”, and “new civilizations.” This interest in newness is a reflection of the USS Enterprise crew from the fictional future(s); the time at which the show and its various franchise permutations were created in the past; and ourselves, watching and considering *Star Trek* in the present. While all of our notions of what constitutes “new” may vary, this desire for expansive and novel discovery is a consistently integral part of the allure for those that have come together on the intrepid voyage, either as a fully-fledged bridge-crew member or as a disposable red-shirted viewer.

“But aren’t the *Star Trek* reboots all about the ‘pew-pew’ laser explosions?” you may well ask. Although this is certainly a factor, especially in the reboots - *Star Trek* (Abrams, 2009), *Star Trek Into Darkness* (Abrams, 2013), and *Star Trek Beyond* (Lin, 2016) - where Hollywood action plays a significant box-office role, Science Fiction, the genre at the heart of *Star Trek*, has been defined as “a contemporary mode in which the techniques of extrapolation and speculation are utilized in a narrative form, to construct near-future, far-future, or fantastic worlds in which science, technology, and society intersect” (Thacker, 2001, p.156). So, the inherent deeper appeal of the “new” within the *Star Trek* reboots is not, we would suggest, necessarily derived from a single-minded surface focus on sexy new alien races or new technology purely for the sake of spectacle (although we’re quite fond of these things too), but to borrow once more from Kirk’s classic monologue, if space is the “final frontier”, then the technology that facilitates this investigative endeavour is also by extension one of the central mechanisms by which we can learn new things about ourselves and our modern society.

Tethered Technology

Even if the future world of *Star Trek* is near, far, and/or fantastic, it is always uncannily tethered to our own understanding of basic human impulses and actions. In *Star Trek* creator Gene Roddenberry’s Writer/Director’s Guide for *Star Trek: The Next Generation*, it is explicitly stated (in capital letters for emphasis) that “BELIEVABILITY IS EVERYTHING”:

“Would I believe this if it was occurring on the bridge of the battleship Missouri?” If you wouldn’t believe it in the twentieth century, then our audience won’t believe it in the twenty-

fourth.

Especially the people must be believable – just as believable as if they were living in the 20th century. [...] They have been selected for this mission because of their ability to transcend their human failings.

[...] We often get our best STAR TREK by showing how real human beings cope with fantastical situations.

[...] The ship is not just a vehicle – she is the touchstone by which all of our characters demonstrate who they are and what they're up to in the universe.

(Roddenberry, 1987, p.9)

This outline, in which human agency is placed front and centre, is not only a central aspect of the *Star Trek* franchise (which we will certainly return to later), it also explicitly states that the believability of diegetic action - that is, action within the fictional reality of the story - is connected to future technology (the Enterprise, in this example) and that it must also feel somehow real.

This is why the concept of the bureaucratic United Federation of Planets is so critical as a sociological placeholder in *Star Trek*: it's a vanilla backdrop against which science, technology, and society can not only intersect with, but also rub against, argue with, and test each other out. While the Federation is vaguely and abstractly futuristic enough to make world peace, hunger, and capitalism appear to be plausibly obsolete as a plot device, it's also a notionally comprehensible playground of moral liberal idealism, hierarchy, and governmental control against which the equally human constants of ego, avarice, revenge, and violence can also be agitated, kindled, projected and magnified - often from within. It's significant then, that in a franchise predicated on outward exploration, Nero (Eric Bana), Khan (Benedict Cumberbach), Marcus (Peter Weller), and Krall (Idris Elba) are all directly connected to the evolving history of

the humanistic Federation and all use future/advanced technology—even for the period—to test the crew of the Enterprise.

To understand how future technological developments can be tethered to reality for dramatic effect in the *Star Trek* reboots, one only has to look at the sequence from *Into Darkness* where Thomas Harewood (Noel Clarke) agrees to bomb his place of work in order to potentially save Lucille (Anjini Taneja Azhar), his dying daughter. When London is first presented to the viewer, St Paul's Cathedral (consecrated in 1697) is still clearly visible, and the skyline is clearly augmented by buildings that have been built leading up to this century as well as the fictional future centuries leading up to the 23rd century, where the *Star Trek* reboots are set. It's not only realistic that old buildings would still be standing and inhabited in the future, much as they are today, but this visual continuity of history grounds the historiographic narrative. This leads to the place where Harewood's daughter is being treated for her degenerative medical condition, which is an equally augmented pre-modern '20s mansion (incidentally, located in California, not London), sympathetically populated with the fantastic future technologies of the 23rd century. Except, they're not so "fantastic" as his daughter's illness is incurable until Khan steps into the frame. For all of the lauded achievements of the Federation, not all illnesses can be cured, and by extension, the flashing and blinking future technology in this scenario is largely for naught. The film props may as well also be intradiegetic set-decoration. This failure by science and technology, where it has been relied upon and has come up short at the critical moment in a personal narrative, sets the scene for believable human motivations and actions: that a father might do anything for his daughter; something that feels as true today or of the 17th century, as it might do in the 23rd century.

While the terrorist act, in apparently blowing up the Kelvin Memorial Archive, would appear to be a transgressional desecration of the noble history of the Federation, it transpires that the Archive was actually an advanced research installation for the secretive intelligence organization Section 31, inviting the following questions (which has parallels with our own modern realities): If their money was spent on inwardly developing research and technology to help benefit and save the lives of people, such as Harewood's daughter, instead of outwardly seeking to create instruments of war (under the guise of being an advanced race that has already solved most

social problems), could they, as a human race, have achieved more by this point in the future?

Furthermore, if Khan is from the past, and his blood has miraculously curative properties enhanced by eugenic selection and genetic manipulation, then does this imply that the future population of the Federation have become biologically weaker, and if so, are they weaker by choice (as the ruling elite also have Khan's knowledge and bloodwork at their disposal) or is it a biological consequence of their allegedly worry-free existences? It's certainly a grey area that we are being asked to peer in to: do we build on the errors of the past and use the technological/scientific knowledge garnered from them to move forward, or do we forge a separate direction that may prove equally compromised? *Star Trek* excels in asking these kinds of realistic moral questions, and one would imagine that all of the answers lie somewhere between these two poles, depending on who you were to ask.

Conversely, if we compare *Into Darkness*' depiction of London to the Yorktown Starbase in *Beyond*, despite the jaunty-angled skyscrapers, transporter booths, and monorails of the future (bizarrely reminiscent of *The Simpsons*' fourth season episode "*Marge vs. the Monorail*" (Moore, 1993) which also features a guest appearance by Leonard Nimoy), McCoy (Karl Urban) is understandably apprehensive about the solidity of the place, saying that it "looks like a damn snow globe in space waiting to break." Unlike the depiction of a techno-futuristic London, the problem with Yorktown as a believable location for the viewer is that it does look more like a CGI toy from *Inception* (Nolan, 2010), to be turned upside down, shook about, and played around with, than it feels like a truly habitable physical location.

While the curved spherical streets demonstrate a future solution to a particular problem (space stations that have evolved past the International Space Station type habitable, pressurized tin cans), and is evocative of standardized models of an atom (surely the ultimate retro-Sci-Fi symbol turned into a metaphor for the scope and scale of human existence), the novel spectacle potentially outweighs the tangible tethering to terra firma reality as we understand it. Instead, referring back to Kirk's (Chris Pine) opening monologue, that "It can be a challenge to feel grounded, when even the gravity is artificial", we are shown a faltering reality with compromised universal rules, where the literal tethering of the engineered gravity systems fails Kirk and Krall

as they fight each other like encircling and combative protons and electrons in the nucleus of the Yorktown.

Engaging with “Performative Artifacts”

This collision of the old, modern, and futuristic technologies is expressed more sympathetically within the hulls of the spaceships themselves. The USS Kelvin’s engine room, with its dark confining spaces and industrial utilitarian aesthetic was shot on location at Long Beach Power Plant, California, which was built in the ‘30s. By contrast, the Enterprise’s machine room, weapons bay, power house, and several corridors, were all shot on location at the Anheuser-Busch Brewery in Van Nuys, California, built in the ‘50s with a faintly Modernist aesthetic (look at the cross beam corridors), where beer vats and taps are still on display within the frame and stainless steel shiny pipes dominate the futuristically adorned mise en scène. Furthermore, while the Kelvin was designed to have a semi-Cold War submarine aesthetic that plays on the duality of peaceful explorative travel and potentially militaristic confrontation (when the aforementioned travel becomes complicated) from the earlier days of Starfleet, “The Starfleet shuttle departure bay [in San Francisco] was set in a World War-II era hangar” (Vaz, 2009, p.54). The most futuristic looking spaces aboard the Enterprise that come by way of contemporary shooting locations are from the Lawrence Livermore National Laboratory’s National Ignition Facility: home to the world’s largest laser system and requiring of the US Department of Energy’s permission to film. Even though the laser, which is capable of “simulating the conditions in the interior of stars and giant planets like Jupiter” (Bishop, 2013) sadly isn’t fired, the gridded walkways are evident within *Into Darkness* when the crew are tangling over the new torpedoes brought aboard the Enterprise, and the NIF’s target chamber (looking like a giant techno-futuristic piece from a game of Jacks) sets the scene for Kirk’s fatal(ish) warp core heroism.

Even when shining future examples of modernity overshadow and surpass the archaic relics of the (future) past, by necessity they cannot entirely discard the accumulated sedimentary layers of human history in the pursuit of innovation; in *Star Trek* this is shown through strongly paralleling and echoing our own times and recent past - a past with both positive and negative resonances, with which we constantly re-engage, re-appraise, and re-write in order to understand it better. Roddenberry’s technological “touchstones”, then, are not only critical for an

understanding of the characters, but the way in which the characters move around these “enhanced” realistic spaces allows a viewer to invest more in the reality of the diegesis even if they can’t quite place how the scene feels familiar or why one futuristic ship feels more advanced than the next, and it may also help them to understand the context of their own times more clearly.

One might then argue, for example, that Captain Edison becomes the severely mutated alien Krall in *Beyond* not because of his explicit rejection of the Federation’s peaceful notion of co-existence, but because he separates himself from what is familiar to the viewer both in terms of technology and societal aspirations. Unable to reconcile his own fractured psyche, and leaving his own emblematic “touchstone” - the USS Franklin - behind, the tether has been severed and the new and strange artifacts become the litmus test that creates an unrecognizable “Krall”. In a sense, at this point in the narrative it no longer matters how Krall was developed (which is just as well, given how murky the relevant exposition is), because he is no longer relatable: he is alien to the viewer and so is his technology. It’s only once Edison’s tragic backstory is expanded upon, through the use of “old” yet entirely relatable future technology such as the video logs aboard the Franklin, that the character begins to regain a sympathetic fraction of his hollowed-out humanity. While Krall is distancing himself through adapting to the equally old, yet incredibly advanced equipment that was left behind by an alien race of “Ancient Ones” (which has the appearance of something naively primitive, but conversely, is evidence of an advanced and complex biomimetic technology), the former crew of the Enterprise take control of the archaic “horse and buggy” Franklin, not only in order to do battle, but to show how differently they are able to handle the desperate situation compared to Edison/Krall.

Krall argues that the “Federation has taught you that conflict should not exist, but without struggle you will not know who you truly are.” In this regard, his exegesis is only partially correct. Krall fails to recognize that the Federation is not only a moral anchor of liberalism, but that it often also encourages (albeit in a way that often appears to be unwitting) the individual to look beyond themselves to find solutions that protect the Greater Good. So while the Enterprise was destroyed, the crew rely on human innovation, expressed through their technological capabilities, to escape their situation. Despite how ridiculous the contrivances that are employed

may appear to be, it feels more preferentially aspirational, and so more in line with contemporary human ideals, to overcome adversity through technological struggle and scientific experimentation, rather than to simply give up.

Performative Technology

Star Trek's space-age McGuffins and pulp-adventure-story machinations might seem artificial to a viewer, with them appearing to be “diegetic prototypes” or artificial things that wouldn't exist in the real world. But crucially, they are still “performative artefacts”, that is, they are technological objects that can teach us about how both a future and contemporary society reacts to, and engages with, external stimuli and pressures. What is more, as we have seen, it is through this prism that it is possible to use *Star Trek* to critique a relationship between technology and modern society (Kirby, 2009, Abstract).

While *Star Trek '09* opens with the destruction of a Starfleet vessel from a far superior technology, perforating the cocooned reality of the idealistic Federation, both *Into Darkness* and *Beyond* invert this dynamic to present two short scenarios in which the Enterprise is the superior force. Across both of these preambles, the unforeseen uses of technology still threaten to overcome the integrity of the ship and its crew. *Into Darkness* opens with Kirk and McCoy being chased by a relatively unevolved indigenous population. They use a cold-fusion device to neutralize the threat from the active volcano, but in the process they violate the Prime Directive (of non-interference with other cultures and civilizations), unwittingly causing the Enterprise to become a deity to be worshipped, while old religions are literally seen to be tossed aside; foreshadowing and paralleling from a differing perspective, Krall's rejection of the Federation in the following film and his unhealthy obsession with the Ancient One. In *Beyond*, Kirk works as an ambassador between two alien-nations, offering a fragment of some ancient technology as a symbolic peace gesture. However, it is quickly discovered that the artifact is actually one part of an ancient weapon, causing a very sudden and violent breakdown in communications (which is also enacted through a wilful visual miscommunication of the size of the aliens—if they are physically smaller does it make them less significant?). Both of these scenarios could be seen as metaphors for contemporary and historically played-out political attitudes towards assisting “smaller” nations with lesser technological capabilities, and the unforeseen consequences of

using technology, even it may seem safe or benign. The glib certainty of recognizably modern, Westernized self-assurances is at once partially justified (they saved a nation!) but also deeply interrogated (they might cause interplanetary war!), and no solution seems entirely suitable or quite correct.

Even though these two scenes are played primarily for laughs and action-adventure, they further serve to frame the narratives of all three reboots. When Spock (Zachary Quinto) exclaims in reaction to a mere (Borg-enhanced . . .) mining ship that “we are technologically outmatched in every way” (a refrain that echoes throughout the trilogy to such an extent it should be the tag-line for the franchise), we should have a greater appreciation of the unevolved species from the future, because that is the position we are constantly invited to inhabit as viewers from the past, but are now also sharing with the crew aboard the Enterprise.

If we look at Admiral Marcus’ USS Vengeance from *Into Darkness*, the Enterprise is similarly outmatched. As Khan explains, the ship is "Dreadnaught class. Two times the size, three times the speed. Advanced weaponry; modified for a minimal crew. Unlike most Federation vessels, it's solely built for combat." Yet, beyond just being a pretext for a large scale conflict in space, enthusiastically presented on the big screen (got to get those Hollywood explosions in somewhere), the reasons for the Vengeance’s existence are also wrapped up in the type of militaristic rhetoric that one might find behind contemporary drone strikes, especially when they are also “developing defence technology” through the creation of their own new long range torpedo, with them being necessary to “respond to an uncivilized threat in a civilized time” and other Dr. Strangelove type double-think. Bearing in mind that this is coming from within the Federation, the advanced technology is an effective deconstruction of the potential ideological abuses that can be enacted by an allegedly morally developed culture. Of course, whether in the fictional diegesis or in reality, technological and moral advances are not equivalent, nor are they synonymous, and the Enterprise crew thrive on challenging that assumption; there’s a reason why the “good guys” seem to always be chastised from all quarters for making the “right” decision (from within their own radical Liberalist framework).

In fact, the most threatening and seemingly advanced threats come from a technology assisted

past, either by accident or design. As Carol Marcus (Alice Eve) points out, the most “advanced” technology from *Into Darkness* is “not advanced, [as] that cryotube is ancient”, but the reason the human popsicles are beyond the faculties of McCoy et al., is because “we haven’t needed to freeze anyone since we developed warp technology.” Furthermore, Khan and his technology come from a time of “savagery”, which quite pointedly would make his history a closer future to the viewer than the present depicted within the films, with the Federation apparently evolved beyond, or even in response to, the degenerative trajectory that we are currently taking, it is implied.

As an excellent comparison to the literal and symbolic threat of Khan’s slumbering army emerging from a shadowy past, there is also the bioweapon created by the Ancient Ones in *Beyond*, which has a grand sci-fi (Marvel films) narrative of being split into two and scattered across the cosmic winds of the uncaring universe. Yet while Khan can be outwitted after a series of cunning stratagems, the apocalyptic device, capable of destroying entire civilizations at the push of a button, ends up literally being flushed out of an air-lock. Problem solved. If ever there was an example of technology only being as capable as the user controlling the device, this is it. Although this is one of the more Hollywood contrivances employed within the reboot canon, the way that the weapon works, by releasing a multitudinous cloud of synchronized micro-drones to destroy the human body, is entirely comparable to the macro bee-like drones that are used to attack the apparently defenceless “body” of the Federation. In a narrative where the changing attitude of the state affects the changing populous within it (literally and symbolically transfiguring Edison into Krall, a sorry echo of Khan and Nero who also both rejected [and felt rejected by] the Federation), the weapon, as ridiculous as it might seem, can still offer an opportunity for contemporary reflection.

As we have seen, when performative technology is tethered to a readily comprehensible diegetic reality within fiction, a space is created whereby exploration can take place in a manner that echoes the continuing voyages of the crew of the Enterprise. Through looking at future cultures and locations, brimming with advanced, shining examples of gadgetry, one might grasp how future technology doesn’t necessarily reflect a better way of living, or a more sophisticated culture: it merely enables those literal or figurative possibilities of what we, as a species, might

become and what we might have to endure or aspire towards to make it happen. Roddenberry wanted *Star Trek* to show “how real human beings cope with fantastical situations”, so that they could “transcend their human failings”, and while Marcus, Khan, and Krall/Edison are technologically aided markers by which one could come to understand more about their own place within society and the governing ideological structure of the society itself, in our second article, Future Technology in the ‘Star Trek’ Reboots. Part II: Complex Future(s), we shall look more closely at the plurality of those futures that *Star Trek* invites, the development of technology within those hypothetical parameters, and the way in which the crew of the Enterprise approach their potentially lethal barrage of “fantastical situations”.

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