

### The heart in *Star Trek*



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*Star Trek (ST)* is a fictional utopian future history depicting how humanity might develop up to the 24th century. The series and movies comprise a metanarrative that encompasses 735 hours of viewing time, and thereby provides a fertile ground for analysis of various areas of critical study. In several *ST* episodes, the heart features prominently. This essay will review and classify these occurrences, and will demonstrate that this organ is featured for its biological properties along with a fair representation of the contemporary gamut of common diseases that afflict it. These are laced with exotic futuristic elements that define the genre.

#### Alien hearts

The many alien species portrayed in *ST* naturally have variations in their cardiovascular arrangements. For example, the Lurian species have several hearts (Kolbe, "Through the Looking Glass"). And it was said that "the Romulan heart itself is grey [...]. And altogether appropriate for such an unimaginative race" (Livingston, "Inter Arma Enim Silent Leges"). Furthermore, Vulcan hearts typically beat at much faster rates than human hearts, at up to three hundred beats per minute on demand (Livingston, "Flashback"). Moreover, a human crewman who experiences accelerated evolution develops a second heart (Singer, "Threshold"). The presence of a heart, in tin man fashion, has also been taken as proof of humanity, as for example when Voyager's doctor convinces himself that he has become flesh and blood during a delusional episode when he discovers that he has a heart rate (Frakes, "Projections"). However, the presence of a heart inevitably implies the possibility of malfunction and disease.

#### Arrhythmias

A crewman developed "heart flutter" after his console explodes, and he is treated with "a few drops of cordrazine," a drug which is noted to be "[t]ricky stuff," as will be shown below (Pevney, "The City on the Edge of Forever").

#### Drugs

Cordrazine is frequently used as a general stimulant, presumably affecting the brain and heart. Its overall effect seems to equate to adrenaline or epinephrine. A dose of 2ml of cordrazine was used during *ST* episodes as a neural stimulant (Badiyi, "Life Support"), and in higher doses, such as 25ml, is a drug of last resort utilized only in life-threatening situations, as used on the Klingon Worf during cardiac arrest (Chalmers, "Ethics"). Accidental injection of high doses leads to schizoid hysteria and paranoid delusions (Pevney, "The City on the Edge of Forever").

#### Heart Failure

Future humanoids in the *ST* universe are not immune to heart failure, as when a Bajoran leader is said to have died in heart failure during his sleep (West, "Shakaar").

#### Myocardial Infarction

Myocardial infarction can be induced to kill, thereby concealing murder. For example, MI can be triggered by a tailored "microvirus" in a personalized form of family vendetta, such that only persons of a particular family are assassinated (Bond, "The Vengeance Factor"). Yet another instance for potential murder is discovered when three fragrances are "combined, [...] produce a gaseous mixture that can trigger a fatal heart attack when inhaled" (Brooks, "Improbable Cause").

Outright murder can also be deliberately caused from very high stress levels during a mental simulation, "caused by the panic that accompanies a heart attack" (Rush, "The Thaw").

The canon also jocularly refers to heart attacks. For example, Dr. McCoy and colleagues find themselves climbing a very tall turboshaft, and when Kirk remarks "look at it this way, we'll get a good workout," McCoy replies "yeah, or a heart attack" (Shatner, "The Final Frontier"). And when Dr. Bashir beats the Chief Engineer at several games of racquetball, he sardonically remarks: "he was going to have a heart attack" (Livingston, "Rivals"). In addition, Dr. Bashir compares his unrequited love for the station's science officer to the sensation of having a stake driven through his heart (Legato, "If Wishes Were Horses").

Furthermore, two members of the Trill species joke that if they profess their love for each other, another Trill colleague "would probably have a heart attack" (Brooks, "Rejoined"). Moreover, when the holographic doctor asks the Voyager's chief engineer to delete his program, she sarcastically asks him are "[y]ou sure you want to do that? If you give one of your fans a heart attack you won't be able to resuscitate him" (Landau, "Virtuoso").

#### Cardiostimulator

This hand-held device is used to revive patients who sustain cardiac arrest was used for the first time in the canon on Ambassador Sarek (Spock's father) when Sarek collapses due to a "malfunction in one of the heart valves. It's similar to a heart attack in a human." Sarek had had three other such attacks and was on treatment with a drug called "benjisidrine." The cardiostimulator is used to revive him during urgent surgery, presumably as a defibrillator or an external pacemaker (Pevney, "Journey to Babel").

#### Heart Surgery and Organ Replacment

In the abovementioned episode, the doctor decides that "an ordinary operation's out of the question. [...] Because of the construction of the Vulcan heart." For this reason, it was decided to carry out "a cryogenic open-heart procedure," which is successful (Pevney, "Journey to Babel").

Picard sustains a penetrating cardiac injury from a knife while a student at Starfleet Academy, and has a mechanical pump that needs to be replaced occasionally (Landau, "Tapestry"). The heart may also be replaced if severely damaged by a massive MI, as happens to the female companion of the Ferengi leader. "She needed a new heart" and recovered with "a few days complete rest" (Siddiq, "Profit and Lace"). Cardiac replacement is undertaken using "Van Doren's technique" and has a mortality rate of 2.4% (Landau, "Samaritan Snare").

#### Suicide and Murder

Klingon ritual suicide involves plunging a sharp weapon into the heart (Chalmers, "Ethics"). And a Bajoran man kills his own clone by thrusting a "knife [...] directly between the left and right thoracic vertebrae, perforating the lower ventricle of the heart" (Lynch, "A Man Alone"). A unique heart damaging technique is used when a holographic being attempts to kill a biological humanoid by reaching through the chest wall and squeezing and perforating the heart (Billler, "Revelsion").

## Food and ritual

A targ is a Klingon version of a wild boar, and heart of targ is a traditional Klingon meat dish served on a bed of greens (Bowman, "A Matter of Honor"), since this "brings courage to one who eats it" (Treviño, "Day of Honor"). Moreover, three Klingons and a Trill swear a blood oath to cut out and eat the heart of their foe (Kolbe, "Blood Oath").

The Klingon marriage ritual is replete with references to the heart: "With fire and steel did the gods forge the Klingon heart. [...] To this very day, no one can oppose the beating of two Klingon hearts" (Livingston, "You Are Cordially Invited").

## Song and figure of speech

"Where My Heart Will Take Me" is the main title song of *Star Trek: Enterprise*. This song was written by Diane Warren and originally performed by Rod Stewart for the 1998 movie *Patch Adams*. The *ST* version is performed by Russell Watson.

"Heart of Oak" is a human song that dates back to the 18<sup>th</sup> century Earth, and describes the Ulyssean crew of a sailing ship crew who anticipate a stirring sea voyage. This song becomes popular among cadets at Starfleet Academy and an alien copy of Captain Picard sings it in the ship's recreational area (Kolbe, "Allegiance").

A megalomaniac scientist sings "If I Only Had a Heart" from *The Wizard of Oz* to Data, the *Enterprise*'s sentient android, who he compares to the Tin Man, and he explicates that this is a "plaintive lament sung by a mechanical man who longs to be human. It's his only wish. [...] He finds out he's human after all. Always was. Just worried so much, he never realised it" (Landau, "The Schizoid Man").

And finally, *Deep Space Nine*'s Operation's Centre is called its "heart and soul," acknowledging its vitality to the functioning of the station (Landau, "The Forsaken").

## Discussion

Darko Suvin defined the science fiction (SF) genre as "the literature of cognitive estrangement" (372). In these narratives, the heart is depicted in contemporary fashion along with the addition of one or more futuristic elements, which Suvin referred to as "a strange newness, a novum" (372). Thus, uniquely to the SF genre, we find alien hearts along with artificial beings who gauge their humanity through the presence of a newfound biological heart.

Heart problems are foreseen to remain with us, but the medical armamentarium will have evolved new drugs, tools and interventions, including the perfection and easy availability of an artificial heart. These technologies will also evolve and be misused in order to attack individuals via their heart.

Thus, in future, as now, the heart will still remain a central and crucial organ in biology, figures of speech, ritual and song.

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