The Importance and Relevance of *Star Trek* in The *Big Bang Theory* 101

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THE BIG BANG THEORY portrays scientists who identify closely with characters and the lifestyle portrayed in Star Trek (ST). The latter is in turn used to highlight their nerdism. This paper classifies references to ST as those of simple viewing of films and episodes, passing allusions to ST in ordinary conversation, the obsessive collection of ST memorabilia, the direct interaction with ST actors, intimate knowledge of the fictional Klingon language, the deliberate introduction of ST elements into real life, using ST as metaphor for real life, mental identification with Spock, and ultimately acting out ST roles. The scientists' uneven enculturation is emphasised through ST to humorous effect. Conversely, a blonde female waitress constitutes the representative non-scientist viewing public, an overt observer and a surrogate judge of the antics that our eccentric scientists indulge in. This paper will also demonstrate that there is bidirectional flow of information, with our waitress gaining knowledge from her friends since they seem to inspire her to achieve a higher level of education, while she encourages them to cope realistically with life. ST is thus utilised to provide both textual and visual cues about character and stereotype.

Introduction

THE BIG BANG THEORY (BBT) is a sitcom which premiered on September 24, 2007. *BBT* is owned by the Columbia Broadcasting System (CBS), the company which also own the *Star Trek (ST)* television franchise.

"In *The Big Bang Theory*, the most relevant social identity [...] seems to be that of the nerd or geek" (Bednarek 203). Indeed, the four principal male characters in *BBT* are ultimate science geeks and prototypical nerds, skinny postdocs working at the California Institute of Technology. This accedes to the notion that the frank depiction of geeks and nerds is akin to the "freak show discourse of stylizing people as 'the other." (Engelhart 3)

Such gender bias is unsurprising as Steinke et al. have shown that "male scientist characters were found to be both more prevalent than female scientist characters" in this type of media depiction (2). Physical frailty, nerdiness and geekiness are equally expected as "[m]ale scientist characters were more likely to be shown with the masculine attributes of independence and dominance, but not athleticism" (2).

Sheldon is the principal character, a theoretical physicist who obtained a PhD at 16 years of age and went on to acquire a Doctor of Science degree. While his knowledge of theoretical physics is unparalleled, his lack of interpersonal skills is equally breath-taking, leading to him being referred to as "the crazy guy across the hall" (Cendrowski, "The Staircase Implementation"). Jim Parsons, the actor who reprises the part, has won both an Emmy and a Golden Globe (Bednarek 202). Sheldon shares an apartment with Leonard, an experimental physicist who is much more humanised but is shy and unlucky with women. Raj is an astrophysicist with selective mutism, able to speak to women only while under the influence of alcohol. Howard is the only non-PhD, possessing a masters degree in engineering. His approach to women is the exact opposite to Raj's, coming over too aggressively for any reasonable chance of success.

Penny is an attractive, blonde, would-be actress who lives across the hallway from Sheldon and Leonard. Her level of education is very poor compared with the boys, but in terms of language and diction, she serves as a foil, contrasting sharply with Sheldon. Penny is a representative of the non-scientific/nerd/geek public, who Sheldon rejects as "muggles" (Cendrowski, "The Robotic Manipulation"), a term derived from the Harry Potter series referring to individuals who lack magical ability. Her role is clear. "[N]ot only are audiences interested in televisual characters; they also engage with them interpersonally" (Bednarek 201). Indeed, it is almost as if Penny stands in as an extreme example of the general public, a member of that group which in popular culture is not considered to be "the brightest pixels in the plasma screen: dumb blondes," thereby constituting yet another stereotype (Inness 2).

BBT constantly refers to *ST* and this paper will categorise and analyse these references in an attempt to identify the points that the directors endeavour to make. These are mainly that nerdy and geeky scientists can successfully interact with non-scientists, and vice-versa, both within the show and with the covert audience that diated and actively fostered using ST since of all of the movie and television franchises that are referenced in the show, ST is mentioned most often.

References to ST in BBT can be classified into six types. In increasing order of obsession, the boys constantly watch ST, they frequently allude to and quote from ST in passing conversation, and they avidly collect ST memorabilia. Within the show, they directly interact with past ST characters and display an excellent knowledge of the fictional Klingon language. The show goes on to introduce ST elements into real life and explains life through metaphors derived from ST. Our characters, particularly Sheldon, identify with ST's Spock and they readily act out ST roles. Since dialog projects a particular social identity, drawing on stereotypes and shared knowledge with the audience" (Bednarek 199), direct quotations will be used.

This paper will show that *ST* is heavily alluded to in BBT, and these references are used as "textual cues that give rise to information about character" (Culpeper 163). These clues have been shown to be both explicit (167) and implicit (172), as will be shown in BBT. The scripts also "prove to be a masterpiece play on words to create humor and fun, with mystic science terminology, ingenious use of rhetorical devices, and individualistic expressions" (Yin and Yun 1221), with ST references being among the majority. ST is also used to highlight "the stereotypical nerd's interest in science and [...] identity as an (intelligent) 'scientist'-nerd" (Bednarek 214).

Watching ST

THE BOYS ARE GREAT FANS of the franchise and regularly re-watch ST films and episodes such as the "Deep Space Nine/Star Trek The Original Series Trouble With Tribbles crossover episode" (Cendrowski, "The Hofstadter Isotope"; West, "Trials and Tribble-ations"). Their knowledge of ST is encyclopedic. New films are avidly awaited and speculated upon. It is mentioned that they waited in line [...] for 14 hours to see the midnight premiere of Star Trek: Nemesis" (Baird, Nemesis; Cendrowski, "The 21-Second Excitation").

Even the ST reboot was eagerly expected, with conjectures about it, such as "a scene depicting Spock's birth." The reply is that there would be more interest "in a scene depicting Spock's conception." Almost inevitably, as scientists the cast wonders that, since "his mother was human, his father was Vulcan, they couldn't just con-

watches the show, and that this interaction can be me- ceive." Speculation continues: "maybe they had to go to a clinic. Imagine Spock's dad in a little room with a copy of pointy ears and shapely rears." They naturally also wonder, again as scientists, "how come on Star Trek everybody's private parts are the same. No alien lady ever told Captain Kirk, 'hey, get your thing out of my nose" (Cendrowski, "The Bat Jar Conjecture").

To Sheldon, ST episodes are so important that as part of his "emergency provisions," should a disaster befall his apartment, he includes "season two of Star Trek: The Original Series on a high-density flash drive," along with "an eight-day supply of food and water, a crossbow." When asked "what if there's a disaster that destroys all the USB ports?" Sheldon rejoins, in all seriousness, "then there's really no reason to live, is there?" (Cendrowski, "The Plimpton Stimulation").

With such experts, criticism about new films inevitably ensues. Sheldon remarks "it amazes me how you constantly obsess over fictional details when there are more important things in the real world to worry about. For example, why wasn't William Shatner in the new Star Trek movie?" (Cendrowski, "The Pants Alternative;" Abrams, "Star Trek")

Interfilm quality is also a topic of contention:

Raj: Yeah, Star Trek V, worse than I.

Sheldon: Okay, first of all, that's a comparison of quality, not intensity. Secondly, Star Trek I is ordersof-magnitude worse than Star Trek V. Raj: Are you joking? Star Trek V is the standard against which all badness is measured.

Sheldon: No, no, no. Star Trek V has specific failures in writing and direction, while Star Trek I fails across the board, art direction, costuming, music, sound editing. [...]

Raj: Star Trek V!

Sheldon: All right, will you at least stipulate that Star Trek IV: The Voyage Home is inarguably the best? Raj: I have three words for you. Wrath of Khan. (Wise, Star Trek: The Motion Picture; Meyer, Star Trek II: The Wrath of Khan; Nimoy, Star Trek IV: The Voyage Home; Shatner, Star Trek V: The Final Frontier; Cendrowski, "The Lizard-Spock Expansion")

Similarly, Sheldon notes "Did you see Star Trek: The Motion Picture? [...] Don't. It's terrible (Cendrowski, "The Alien Parasite Hypothesis").

Characters in ST films are not immune to denunciation, such as when Sheldon asks Leonard for his personal preference when judging whether Leonard would make a suitable roommate: "Kirk or Picard?" To which Howard marries, Sheldon paraphrases "Boldly go, How-Leonard replies "Oh, uh, well, that's tricky. Um, well, uh, Original Series over Next Generation, but Picard over Kirk" (Cendrowski, "The Staircase Implementation").

Most other SF series are judged inferior to ST. "I don't want to watch Saturn 3. Deep Space Nine is better" (Cendrowski, "The Lizard-Spock Expansion"). This is important to such dedicated fans:

Amy: That'd be my boyfriend. Happier playing his dopey Star Trek game with his friends than hanging out with me.

Penny: Wars.

Amy: What?

Penny: Star Wars. They get all cranky when you mix the two up.

But to an outsider who is not an SF fan:

Amy: What's the difference?

Penny: There's absolutely no difference. (Cendrowski, "The Weekend Vortex")

Not allowing someone to watch *ST* is considered a punishment. "I could not be allowed to go to the opening of the next Star Trek movie" (Cendrowski, "The Fish Guts Displacement;" Abrams, Star Trek Into Darkness).

Asking someone unfamiliar with the francise to watch ST is also seen as a sufficient explanation for the illustration of a difficult point, such as when Sheldon gifts a girl with the complete Next Generation DVD box set. "Star Trek DVDs? Why would I want this?" and Sheldon replies "get ready for 130 hours of I told you so" (Cendrowski, "The Habitation Configuration").

Passing Allusions to ST in Ordinary Conversation

SINCE THE BOYS ARE intimately familiar with all aspects of ST, it is to be expected that they frequently refer to ST and quote directly from specific episodes or films. It is typical that "dialogs are full of jargons and rhetorical devices, unfolding the geeks' unique language style before spectators' eyes" (Yin and Yun 1220). Some of these allusions are listed hereunder.

Leonard remarks that Howard's zero-gravity toilet for the International Space Station will allow its crew "to boldly go where no man has gone before" (Cendrowski, "The Classified Materials Turbulence"), referring to the opening credits of The Original Series. Similarly, when

ard Wolowitz" (Cendrowski, "The Countdown Reflection").

Supraluminal travel (travelling at warp speed) is frequently alluded to as a metaphor for haste. For example, Leonard squelches the boys by telling them that his amorous approach to Penny is to deliberately take "things slow. Which, by the way, compared to you guys approaches warp speed" (Cendrowski, "The Bad Fish Paradigm"). Similarly, Penny receives a text message from "Leonard. He says they're on the road and headed for Bakersfield at warp speed" (Cendrowski, "The Bakersfield Expedition").

A superlative comparison in the franchise is to refer to William Shatner (Captain Kirk in Star Trek: The Original Series). "I am the William Shatner of theoretical physics" (Cendrowski, "The Pants Alternative"). "He reminded me of a young William Shatner" is a compliment (Cendrowski, "The Habitation Configuration").

When a Star Trek actor jumps the line to see Raiders of the Lost Ark (Spielberg), Sheldon invokes Patrick Stewart, "as Captain Jean-Luc Picard once said, the line must be drawn here! This far, no farther!" (Cendrowski, "The 21-Second Excitation;" Frakes, Star Trek: First Contact)

When arguing with a lawyer, Sheldon pithily retorts "you may have gone to Cambridge, but I'm an honorary graduate of Starfleet academy" (Cendrowski, "The Agreement Dissection").

The street address of the actor Wil Wheaton's house is 1701, the registration number of the Starship Enterprise (Cendrowski, "The Russian Rocket Reaction").

"Live long and prosper" is a traditional oral Vulcan salute that is regularly used in BBT, mostly by Sheldon, sometimes accompanied by the traditional Vulcan hand salute consisting of a raised hand, palm forward, with the fingers parted between the middle and ring finger, and the thumb extended (Cendrowski, "The Russian Rocket Reaction").

Sheldon also paraphrases the traditional incantation that Vulcans invoke when telepathically linking with others. In this instance, Sheldon refers to a bowling ball. "I am the ball. My thoughts are its thoughts. Its holes are my holes" (Cendrowski, "The Wheaton Recurrence").

"Resistance is futile" is the customary greeting of the Borg, a fictional cyborg race who assimilate all others, and are therefore "our most lethal enemy" (Frakes, First Contact). This expression is used by Sheldon to attempt to win an argument before its commencement (Cendrowski, "The Precious Fragmentation").

When Penny's friend Zack asks how the boys are sure

that they will not blow up the moon with a laser experiment, Leonard facetiously replies that the laser is set "to stun". Sheldon then initiates the experiment with Captain Picard's famous order to "make it so" (Chakos, "The Lunar Excitation").

And finally, Sheldon states that "the appropriate ranking of cool modes of transportation is jet pack, hoverboard, transporter, Batmobile, and then giant ant" (Cendrowski, "The Wheaton Recurrence").

Collecting ST Memorabilia

SUCH ARDENT FANS are expected to collect ST memorabilia. These include items such as "black market phasers, your screen-worn Lieutenant Uhura panties" (Cendrowski, "The Precious Fragmentation").

Companies that produce such merchandise naturally pander to fans. In fact, Sheldon comments "I don't care Direct Interaction with ST Actors for novelty editions of Monopoly. I prefer the classics, regular and Klingon" (Cendrowski, "The Boyfriend Complexity"). Even the classic Battleships game has a ST themed version (Cendrowski, "The Boyfriend Complexity"). Sheldon and Leonard are seen playing threedimensional chess (Cendrowski, "The Pancake Batter Anomaly") from The Original Series, and this is later modified by Sheldon to sport a "transporter pad," an instantaneous matter transporter (Cendrowski, "The Wildebeest Implementation"). This leads Sheldon to declaim "welcome to the exciting world of 3D chess" (Cendrowski, "The Hofstadter Insufficiency").

ST related props are strewn around their apartments. For example, a Next Generation tricorder is seen on display on a bookcase (Murray, "The Rhinitis Revelation"). Indeed, the apartment was once referred to as "nerdvana" (Cendrowski, "The Nerdvana Annihilation").

Most such collectibles are kept in their original packing: "they're mint in box. [...] They're Collectables. [...] Once you open the box it loses its value" (Cendrowski, "The Transporter Malfunction"). The threat to open such an item is very effective. This is witnessed when Leonard menaces Sheldon by threatening an action figure:

Okay. I did not want to do this but, I have here the rare mint condition production error Star Trek: The Next Generation Geordi LaForge, without his visor in the original packaging. If you do not get out of my way, I will open it. (Cendrowski, "The Nerdvana Annihilation")

One such box is actually opened on one occasion. "An original mint-in-package Wesley Crusher action figure" is given to Sheldon by a ST actor and another actor exclaims "oh, wow. I haven't seen one of these in years. (Rips open action figure packaging) Remember how we used to make these things look like they were masturbating?" Sheldon is mortified: "what have you done? That was an original mint-in-package Wesley Crusher action figure signed by my close personal friend, Wil Wheaton" (Cendrowski, "The Russian Rocket Reaction").

Collectibles from other SF movies and franchises are also collected, such as a bat-signal, the light device that is used in Batman films to alert the hero to trouble brewing in Gotham City (Cendrowski, "The Pancake Batter Anomaly").

SEVERAL ST ACTORS have made appearances on the show as fictionalized versions of themselves. The first such actor to appear in BBT is reverently referred to as "THE Wil Wheaton [...] aka Ensign Wesley Crusher on Star Trek: The Next Generation is going to be participating in your tournament?" The answer is yes, since he "lives around here. Big gamer."

Sheldon is intensely adversarial and gives us an insight into his childhood obsessions, continually spicing his commentary with quotes from Khan, the engineered posthuman in Star Trek II: The Wrath of Khan (Meyer).

You don't understand. Growing up, I idolized Wil Wheaton. Wesley Crusher had an eidetic memory just like me. [...] I was such a fan that in 1995, I travelled ten hours by bus to a sci-fi convention in Jackson, Mississippi, wearing my Star Fleet Academy cadet uniform in order to meet Wil Wheaton and get him to autograph my mint in-package Wesley Crusher action figure. [...] My arduous journey, however, was for naught. Although advertised to appear, he did not show up. It was at that moment, I vowed eternal hatred for Wil Wheaton. [...] In the words of Khan Noonien Singh in the immortal Wrath of Khan, 'he tasks me, he tasks me and I shall have him. [...] From hell's heart, I stab at thee.'

Later, he continues to gripe, once again quoting Khan. "Look at him. Wil Wheaton, my old friend, I have chased you round the moons of Nibia and round the Antares maelstrom and round perdition's flames!"

Sheldon finally confronts Wheaton himself in the tournament and when Sheldon is tricked and loses, the camera zooms out and away from him to a scene above the Earth in a parody of a famous *ST* movie scene (Meyer, *Star Trek II: The Wrath of Khan*), with Sheldon cying out "Wheaton! Wheaton! Wheaton!" (Cendrowski, "The Creepy Candy Coating Correlation")

In a later episode, Sheldon insults him by greeting him tion"). "well, if it isn't Wil Wheaton, the Jar Jar Binks of the *Star Trek* universe" (Cendrowski, "The 21-Second Excitation"). He also continues to insult him in a film queue he arr by remarking that "this is Indiana Jones, not *Star Trek*. and le There should be no value to his pseudo-celebrity here. And even at *Star Trek* conventions, they only let him in if he helps set up" (Cendrowski, "The 21-Second Excitation").

Wheaton is also faced in a bowling contest, and Sheldon names his team

the Wesley "Crushers" [...] Wesley Crusher was Wil Wheaton's character on *Star Trek* [...] It's a blindingly clever play on words. By appropriating his character's name and adding the S, we imply that we'll be the crushers of Wesley.

During the same episode, Howard confesses to Wheaton: "Hey, I just wanted to tell you I'm a big fan [...] I'm sure you're probably sick of *Star Trek* questions, but, Whoopi Goldberg, you ever hit that?" (Cendrowski, "The Wheaton Recurrence").

In a later episode Wil Wheaton throws a party at his house, which has a painting of him as Wesley Crusher in uniform and a USS Enterprise-D model. Raj remarks that he just met [the] gynaecologist of the "beautiful actress who plays the Borg Queen in First Contact," Alice Krige (Cendrowski, "The Russian Rocket Reaction;" Frakes, *First Contact*).

Sheldon furthers his insults: "enjoy the accolades now, Wil Wheaton, but like your time on *Star Trek: Next Generation*, your smug self-satisfaction will be short-lived (Cendrowski, "The Wheaton Recurrence"). Sheldon attends a party and attempts to snub Wheaton by informing him "well it was either this or another hot tub party at George Takei's house" (Chakos, "The Stag Convergence"). The two eventually bury the hatchet (Cendrowski, "The Habitation Configuration").

George Takei (who reprised Hikaru Sulu, *Star Trek: The Original Series* starship Enterprise's helmsman) appears in one of Howard's dreams when he is accused of

having "latent homosexual tendencies." Howard has an Enterprise D starship model in his room and Takei appears to be wearing his costume from *Star Trek IV: The Voyage Home* (Nimoy).

Takei offers "Oh, my. Can I help? [...] So you say. Yet, here I am. [...] It's difficult. You try and stretch as an actor, do Strindberg, O'Neill, but all they want is, Course laid in, Captain" (Cendrowski, "The Hot Troll Deviation").

LeVar Burton, the *Next Generation* engineer is invited by Sheldon over to his apartment via *Twitter*. But when he arrives, he finds three of the boys singing karaoke, and leaves, saying "Oh, I don't think so. I am so done with Twitter" (Cendrowski, "The Toast Derivation").

"Brent Spiner, Mr. Data himself" also makes an appearance (Cendrowski, "The Russian Rocket Reaction"). In the background during a party, we also witness *ST* writers D.C. Fontana and David Gerrold (Cendrowski, "The Russian Rocket Reaction").

Brian George and Mark Harelik are also *ST* actors, but they appear as Raj's father and the CalTech physics department chairman respectively. Other actors that occasionally appeared in both *ST* and *BBT* include Keith Carradine and Pavel Lychnikoff. Iris Bahr had appeared in *ST* and also in the original unaired pilot for *BBT*. Cast member Kaley Cuoco (Penny) also played William Shatner's daughter in Priceline.com commercials.

Knowledge of Klingon

THE BOYS'S ARCANE KNOWLEDGE of *ST* includes the fictional Klingon language, both spoken and written, to the extent of being able to play Klingon Boggle, and the ability to write and pronounce words such as "kapla [...] pokh [...] potl [...] pukhpa [...] chorrr [...] nekhmakh [...] qochbe [...] lokh, makh, and cherrrkh" (Cendrowski, "The Panty Pinata Polarization"). Indeed, Howard claims to speak five languages, "six, if you count Klingon!" But Leonard remarks that "girls don't count Klingon" (Cendrowski, "The Creepy Candy Coating Corollary").

When Penny asks Sheldon whether he thinks that Leonard would eventually become bored with her were they to date, Sheldon assess her by asking three things, one of which refers to *ST*: "Do you have a working knowledge of quantum physics? [...] Do you speak Klingon? [...] Do you know any card tricks?" (Cendrowski, "The Bad Fish Paradigm").

This language, belonging to a fierce, fictional warrior

race, is used by Sheldon to threaten Wheaton "bortaS bIr jablu'DI' reH QaQqu' nay," who asks "did that guy just say revenge is a dish best served cold in Klingon?" (Cendrowski, "The Creepy Candy Coating Corollary").

At one point, Howard Sheldon's request to introduce him to Stephen Hawking is met with the comment "you don't seem to be understanding the English word no. Maybe a different language will help. Russian, nyet. Chinese, bu. Japanese, iie. Klingon, qo. Binary coded Ascii, 0110111001101111" (Cendrowski, "The Hawking Excitation").

When Bernardette prepares to marry Howard, her wedding invitations are mentioned. "I'm so glad you talked Howard out of having your wedding invitations in Klingon," to which Bernardette replies "turn it over. I'm hoping my relatives think it's Hebrew" (Cendrowski, "The Vacation Solution").

During the wedding, Sheldon tries to give the wedding speech in Klingon. "I'll do it, provided I can perform the ceremony in Klingon," but Bernardette refuses. When he tries "Daq tu' taH Daq yIn tlhej ghajtaH" Bernadette furiously stops him: "Sheldon! I told you no Klingon." He laconically replies "fine, I'll do it in English, but it loses something. [...] The Klingon would have made you cry." However, toward the end, after the customary "by the power vested in us, by the state of California," Sheldon interjects "and the Klingon High Council" (Cendrowski, "The Countdown Reflection").

Introduction of ST Elements into Real Life

WHEN ELEMENTS OF *ST* intrude directly into *BBT*, this provides an interesting variation of metalepsis, often for humorous effect. For example, Sheldon plays the theremin (not very well) by way of attempting to annoy the rest, saying "I've loved the theremin from the first moment I heard the original *Star Trek* theme" (Cendrowski, "The Bus Pants Utilization").

He also carries a bat'leth, a prop of a Klingon hand weapon, with him to the house of the person who hacked his online *World of Warcraft* account, claiming "no weapon strikes more fear into a man's heart than a Klingon bat'leth" (Chakos, "The Zarnecki Incursion").

Sheldon introduces a *ST* version of rock-paper-scissors, a hand game that is used as a choosing method similar to coin flipping or throwing dice. He claims that this is because

anecdotal evidence suggests that in the game of rock-

paper-scissors, players familiar with each other will tie 75 to 80% of the time due to the limited number of outcomes. I suggest rock-paper-scissors-lizard-Spock. [...] It's very simple. Look, scissors cuts paper. Paper covers rock. Rock crushes lizard. Lizard poisons Spock. Spock smashes scissors. Scissors decapitates lizard. Lizard eats paper. Paper disproves Spock. Spock vaporizes rock. And as it always has, rock crushes scissors.

The symbol for Spock in this version of the game is the Vulcan salute, and all of the participants invariably hold out the symbol for Spock (Cendrowski, "The Lizard-Spock Expansion"). Interestingly, we learn that "Rock-Paper-Scissors-Lizard-Spock was created by Internet pioneer Sam Kass as an improvement on the classic game Rock-Paper-Scissors. All hail Sam Kass" (Cendrowski, "The Rothman Disintegration").

Sheldon's predilection for this choosing method is such that a rival scientist has him explain the method three times in rapid succession (Cendrowski, "The Rothman Disintegration"). He also challenges this rival to "a trivia contest, and you may choose the field of battle. *Star Trek* trivia, *Star Trek: Next Generation* trivia, *Star Trek: Deep Space Nine* trivia, *Star Trek: Voyager* trivia" (Cendrowski, "The Rothman Disintegration").

Sheldon compares one of Leonard's dates, Dr. Stephanie Barnett, with Dr. Leonard McCoy in *Star Trek: The Original Series*:

Look, if you fail at this relationship, and history suggests you will, then we risk losing the medical officer that our landing party has always needed. [...] You're Kirk, I'm Spock, Wolowitz is Scotty, Koothrappali is the guy who always gets killed, and now we've got McCoy.

Sheldon also gives a Vulcan salute when he notices her observing the conversation (Cendrowski, "The White Asparagus Triangulation"), and his personal diary is annotated à la *ST*: "Sheldon's log, stardate 63345.3" (Cendrowski, "The Adhesive Duck Deficiency").

Dreams are also laced with *ST*. In one dream, Sheldon finds an alien "Gorn sitting on the couch" (Cendrowski, "The Apology Insufficiency").In another dream, Sheldon is guilty of stealing a *ST* toy from Leonard. He finds himself on an alien planet: "oh dear. Two suns and no sunscreen." A Spock action figure speaks to him with Spock's voice as a surrogate conscience:

Hello again, Sheldon. [...] I am very disappointed in you. You broke your toy and switched it with Leonard's. You should be ashamed of yourself. [...] If I told you to jump off the bridge of the *Enterprise*, would you do it? [...] You must right your wrong, Sheldon. [...] I am unhappy. [...] Now do the right thing. (Cendrowski, "The Transporter Malfunction")

Sheldon attempts to present a television program

Welcome to Sheldon Cooper Presents Fun with Flags. [...] Now this week we have a very special episode where we explore the flags of the popular entertainment franchise, *Star Trek*. And to help me, I'm pleased to introduce Internet personality, former star of *Star Trek: The Next Generation*, and the only guy I know lucky enough to be immortalized in one sixteenth scale. Set phasers to fun for my friend, Wil Wheaton. (Cendrowski, "The Habitation Configuration")

The boys are so hopeless with matters that directly relate to life that when Penny asks several questions pertaining to the real world, the boys are only able to provide *ST*-like answers, such as the sexiest man alive being Patrick Stewart, who reprises Captain Picard in *Star Trek: The Next Generation* (Cendrowski, "The Bat Jar Conjecture"). This works both ways, and when Penny is asked who Stan Lee was, her first guess is that "he was on *Star Trek*" (Chakos, "The Excelsior Acquisition").

Sheldon also tries to get his way with Leonard by quoting *ST*: "pursuant to Starfleet General Order 104 Section A, you are deemed unfit and I hereby relieve you of your command." Leonard retorts that this "does not apply in this situation. [...] because this is not *Star Trek*" (Cendrowski, "The White Asparagus Triangulation").

ST as Metaphor for Real Life

CONSTANT REFERENCES TO *ST* influence even non-Trekkies. For example, by the end of the second season of *BBT*, Penny has become so accustomed to *ST* allusions that she defends the boys' naivety by referencing *ST*:

Oh, let's see, how can I explain this, um, they don't know how to use their shields. [...] Yeah, you know, like in *Star Trek*, when you're in battle and you raise

the shields? Where the hell did that come from? Anyways, um, you know how guys like this are, so, please don't take advantage of them. (Cendrowski, "The Dead Hooker Juxtaposition")

Later in the series, Penny attempts to explain to Sheldon why the other boys had faked his discovery of magnetic monopoles in order to help him "to deal with a difficult situation. [...] Remember that scene in the new *Star Trek* movie when Kirk has to take over the ship, so he tells Spock all that stuff he knew wasn't true, like saying Spock didn't care his mom died?" (Cendrowski, "The Electric Can Opener Fluctuation"; Abrams "*Star Trek*").

When his friends attempt to set up a date, Sheldon questions the necessity, and they explain to him that "even Spock had a date once every seven years." Sheldon corrects them "he didn't date. It was pon farr. His blood boiled with mating lust." Howard retorts "okay, well, why don't you start with a cup of coffee, and you can pon farr Amy Farrah Fowler later" (Chakos, "The Lunar Excitation").

Spock's dying words are quoted in order to induce Sheldon to accede to the majority's request to participate in a physics bowl. The Benthamite quotation is "The needs of the many [...] outweigh the needs of the few. [...] Or the one." (Cendrowski, "The Bat Jar Conjecture"). And Sheldon accedes.

Sheldon himself acknowledges, invites and creates such comparisons in order to understand life. When faced with the inevitable, when "sometimes you can't win," he compares this to "facing Starfleet Academy's unwinnable command scenario, the Kobayashi Maru. [...] Captain Kirk won." Penny retorts "Kirk cheated," leading the bemused Sheldon to remark "impressive that you know that. It's hard to believe I'm actually having this conversation with you. [...] Kirk beat the Kobayashi Maru by reprogramming the simulator." (Cendrowski, "The Apology Insufficiency").

When a girl attempts to seduce him, she observes "Let's look at this logically. I have a stomach, I get hungry. I have genitals, I have the potential for sexual arousal." Sheldon is unimpressed and replies, referring to the fictional Vulcan ritual of Kolinahr which purges all emotions:

A cross we all must bear. You know, in difficult moments like this, I often turn to a force greater than myself [...] *Star Trek: The Motion Picture* [...] in it, we learn that when Spock finds himself drawn off the path of logic by feelings bubbling up from his Alien Parasite Hypothesis")

Sheldon also comments that he is tired of being reminded that whenever he complains about change, the fortuitious replacement of Leonard Nimoy by Zachary Quinto as a Spock replacement is brought up. Leonard sums this up: "relax, sometimes change is good. Uh, you were worried about Zachary Quinto being the new Spock, but you wound up liking him." Leonard protests

Every time the topic of change comes up, you throw Zachary Quinto in my face. I'm upset the mailman has a new haircut, Zachary Quinto. I'm upset that daylight saving time started, Zachary Quinto. I'm upset daylight saving time ended, Zachary Quinto. I'm saying this for the last time, Zachary Quinto was a weird, wonderful, unrepeatable event. So stop using him against me. (Rich, "The Love Spell Potential")

Sheldon also explains his coping strategies for being around people. "I used to be uncomfortable around people, but then I learned a trick. I pretend everyone I meet is a beloved character from Star Trek" (Cendrowski, "The Bon Voyage Reaction").

and his new Indian girlfriend

what happened to the alien, played by talented character actor Frank Gorshin, in the Star Trek episode "Let That Be Your Last Battlefield?" [...] Captain Kirk activated the self-destruct sequence and threatened to blow up the Enterprise and kill them both unless he gave in. [...] Computer, this is Dr. Sheldon Cooper. Activate self-destruct sequence. Code 1-1-A-2-B. [...] when it counts down [...] unless Leonard signs the new agreement in the next 41 seconds, this computer will send an e-mail to your parents in India saying that you're in a secret relationship with the whiter-than-marshmallow-fluff Leonard Hofstadter. (Cendrowski, "The Agreement Dissection;" Taylor, "Let That Be Your Last Battlefield")

Other individuals also refer to *ST* as a metaphor for life. When Leonard shares a bed with Penny, he calls "the middle here the Neutral Zone. [...] *Star Trek*. You know, the Neutral Zone between the Federation and the Ro-

human half, he suppresses them using the Vulcan mulan Empire. [...] Of course, sometimes the Federamental discipline of Kolinar. (Cendrowski, "The tion and the Romulans would enter the Neutral Zone to negotiate a temporary truce." To which Penny replies "sweetie, let me put this in a way you'll understand. From the waist down, my shields are up" (Rich, "The Love Car Displacement").

Mental Identification with Spock

ALL OF THE BOYS are scientists and mentally identify with Spock, the scientist in The Original Series. However, the person who identifies with Spock most is Sheldon, as has already been noted in this essay. This is because

Newtonian science offered men power because it brought order, rationality, and hence optimism to a universe that had seemed arbitrary and chaotic. Mr. Spock in the Star Trek series epitomizes this: he is rationality, and he brings order that often saves the Enterprise. (Haynes 247)

Indeed, Sheldon's obsession with Spock led to the issuance of a "restraining order from Leonard Nimoy" (Chakos, "The Excelsior Acquisition"). Some more specific examples will be given here.

In a version of twenty questions wherein others have He also indulges in blackmail and reminds Leonard to decide which ST character Sheldon is, Raj immediately guesses with his first question "Are you Spock?" Later in the same episode, when playing the game once more, Penny fruitlessly uses up her twenty questions, Sheldon informs her "Fine. I was Spock" (Cendrowski, "The Vegas Renormalization").

> When trying to get Sheldon to drive faster, Penny instructs him, "warp speed ahead, Mr. Spock," to which Sheldon replies "Mr. Spock did not pilot the Enterprise. He was the science officer" (Cendrowski, "The Adhesive Duck Deficiency").

> A recurring joke is Sheldon's "Vulcan hearing," a reference to the superior hearing of the Vulcan species (Cendrowski, "The Electric Can Opener Fluctuation").

> Sheldon moves to Bozeman, Montana, where the fictional human starship Phoenix had been built and launched, reaching warp speeds for the first time (Frakes, Star Trek: First Contact). He gives the Vulcan salute in a farewell video and states "live long and prosper" (Cendrowski, "The Bozeman Reaction").

At Christmas, Penny gives Sheldon an autographed napkin: "to Sheldon, live long and prosper. Leonard Nimoy. [...] he came into the restaurant. Sorry the napkin's dirty. He wiped his mouth with it." Sheldon exclaims, in tion;" Lucas, "The Enterprise Incident"). all seriousness "I possess the DNA of Leonard Nimoy? [...] Do you realize what this means? All I need is a healthy ovum and I can grow my own Leonard Nimoy! (Cendrowski, "The Bath Item Gift Hypothesis").

Sheldon's admiration for Spock leads him to order a "life-size cardboard Mr. Spock [...] I know he wouldn't care for an outburst of human emotion, but, oh goodie, oh goodie, oh goodie. Commander Spock requesting permission to be unfolded. [...] Oh, no! They sent the wrong Spock! Live long and suck it, Zachary Quinto." His disappointment is due to the fact that to him, "this is a disaster. I distinctly ordered the Leonard Nimoy Mr. Spock cardboard standee. Why would I feel safer with Zachary Quinto at the foot of my bed? [...] No, can't do it. Sorry, Quinto, you're going back" (Cendrowski, "The Recombination Hypothesis").

Acting out Parts

Star Trek uniforms often feature in the series. The earliest example in the series is when for the purposes of a physics bowl, Sheldon has his team wear uniforms based on Star Trek: The Original Series uniforms (Cendrowski, "The Bat Jar Conjecture").

Leonard says to his Indian girlfriend that he owns "just two. Everyday and dress" ST uniforms from The Original Series. He then asks her "hypothetically, if I had access to a Lieutenant Uhura uniform, would you wear it?" (Cendrowski, "The Prestidigitation Approximation"). She later accommodates him, donning a Uhura uniform that belongs to her brother, somehow enacting one of Leonard's sexual fantasies as he gleefully remarks (off camera) "You look beautiful, Lieutenant Uhura. Now prepare for inspection [...]. Open the landing bay doors, shuttle craft approaching" (Cendrowski, "The Roommate Transmogrification").

When the boys return from an expedition to the North Pole, Sheldon sports a goatee, a reference to Spock in an alternate universe (Cendrowski, "The Electric Can Opener Fluctuation"; Daniels, "Mirror, mirror").

The willing suspension of disbelief is taken even further when the boys purchase a time machine prop from the movie The Time Machine (Pal), and they decide that it would be fantastic to pretend to travel to "the future and obtain a cloaking device. [...] Captain Kirk will steal a cloaking device from the Romulans on Stardate 5027.3, which will be January 10th 2328 by pre-Federation reckoning" (Cendrowski, "The Nerdvana Annihila-

Sheldon and Penny act out a fan fiction story that he had written as a child wherein he is taken to the 23rd century, with Penny playing Spock. Sheldon explains that it "took the liberty of adapting a Star Trek fan fiction novella I wrote when I was ten into a one-act play [...] "Where No Sheldon Has Gone Before." It's the story of a young boy who is transported from the ignorant backwoods of East Texas to the 23rd Century, where his genius is not only appreciated, but celebrated. [...] in this pivotal scene, Sheldon's mother, played by you, argues with an emissary of the United Federation of Planets, Mr. Spock, the role I will bring to life" (Cendrowski, "The Thespian Catalyst").

Sheldon dresses up as Spock, complete with ears and make up, uniform and a tricorder prop at a medieval fair, and quotes Spock: "Captain, I'm getting an unusual reading" (Cendrowski, "The Codpiece Topology"). We also learn that Sheldon has a long history of wearing "a Star Trek ensign's uniform," even as a child, unwisely, during a "Texas State Fair" where he was "trotted out and shown off like a prize hog" (Cendrowski, "The Benefactor Factor").

Sheldon and Amy are witnessed "playing doctor. Star Trek style" with Amy dressed in a Sciences division blue Original Series women's uniform, and a medical tricorder prop (Cendrowski, "The Launch Acceleration").

And finally, all of the boys dress up for a photoshoot while driving to the Bakersfield, California Comic-Con, and stop at "Vasquez Rocks [...] they shot a lot of Star Trek episodes out there." Sheldon dressed as Data, Raj as Worf, Howard as a Borg and Leonard as Captain Picard. "We're Starfleet officers and a member of the Borg Collective." They "begin with a classic Star Trek fight scene [...] some sexy glamour shots." In the excitement, their car is stolen from under their noses (Cendrowski, "The Bakersfield Expedition").

Discussion

ROMAN NOTES THAT "[t]elevision programs and characters have a unique ability to become an intimate part of a household and family" (130). This is more so with series such as BBT, which "can capture an audience's involvement in a way equalled by few contemporary media" (Creeber 4). Bednarek notes that in TV series, over the years "viewers build up a particularly close and intimate relationship with characters [...] perhaps knowing more about them than they do about many people in the 'real' world" (Bednarek 201). This also holds true for our BBT scientists and ST since Sheldon et al. know far more about the characters in ST and other And, since BBT is a sitcom, these awkward moments realms of fiction and fantasy than they do about real life.

BBT portrays the boys as scientists who identify closely with ST, and ST is used to highlight the extreme level of nerdism that they have attained. All four boys are "constructed both through explicit and implicit cues in [their] own and others' dialogue, drawing on shared stereotypes of 'nerdiness'" (Bednarek 199). More specifically, "Sheldon's repertoire provides insight into how and when linguistic deviance constructs nerdiness in contrast to other social identities" (Bednarek 199), and this is highlighted by constant references to ST.

Bednarek has pointed out that "[...] nerds are also frequently shown as young [...] and they can be linked to obsessive-compulsive or Asperger-like behaviour" (204), traits amply displayed by Sheldon. These include difficulty with empathising and interacting with other individuals, struggling to understanding humour and sarcasm, a dislike for any form of change from established routine and an obsession with ritual, including an extreme reluctance to do anything that might modify the status quo of "the Sheldonian calendar" (Cendrowski, "The Cruciferous Vegetable Amplification"). For example, at one point, Sheldon observes "I'm still not comfortable. Of course. There's too many people here" (Cendrowski, "The Staircase Implementation").

To a greater or lesser extent, all four identify with Spock, a role model for intelligence, knowledge and logical thinking, all prized traits within the scientific community. However, as already intimated, Sheldon most closely identifies with Spock as he himself perceives his mental characteristics as overlapping with those of the unemotional and logical Vulcan character.

Indeed, when dressing up in a The Next Generation uniform, in the absence of Spock in this part of the series, he chooses to appear as Data, the emotionless android, an individual who, like Sheldon, is "unevenly enculturated, grasping some points of expected social behavior or cultural understandings suitable to a given framework while missing others completely" (Lundeen and Wagner 58). Such behaviour

brings him closer to characters such as Seven of Nine in Star Trek: Voyager (Mandala 2011) or Data and Spock in other Star Trek series, characters who appear to damage others' face unintentionally because of their partial 'alienness' and seem willing to learn more about 'normal' human conventions."

(Bednarek 221)

are vital to the show, given that "quirky, inadvertent departures from cultural protocol have a way of breaking down our familiar frames of reference and providing the sort of unexpected dislocations that make for good jokes" (58), creating an exception to the observation that "our society does not find much to laugh about in science" (Weingart et al., 286). Bednarek has also observed that

Western audiences (and media) stereotypically associate geeks and nerds with the following traits: intelligent, studious; an interest in, obsession with, or knowledge of, all things technological or scientific, especially as relating to computers; an interest in scifi and fantasy and related activities; socially inept/ awkward, loners/outsiders, reclusive, unsociable, having only online friends, often socially isolated or ridiculed, no conversational skills; unattractive, e.g. in terms of weight (either very skinny or overweight), with glasses, weird clothing; frequently white males [...]; physically awkward or unfit, uninterested in sports; sexually inactive/virgins (203).

This paper has shown that our scientists clearly accede to all facets of this stereotype. Moreover, Haynes notes that

[t]hroughout Western culture, the master narrative of the scientist is of an evil and dangerous man. This [...] mythology [...] arises from fear of the power and change that science entails, leaving many people feeling confused and disempowered. [...] the number of recurring stereotypes is small. (243)

While all four scientists are gauche, nerdy and quirky, Sheldon constitutes the classical embodiment of the mad scientist prototype, a particular category defined by Haynes.

European romanticism, provoked in part by reaction against the scientific materialism of the Enlightenment, generated perhaps the most enduring scientist stereotype: that of the inhuman researcher who has sacrificed his or her emotions and human relationships in an obsessive pursuit of scientific materialism. (Haynes 248-9)

This and other "archetypes are the continuing folklore potential advances and benefits that future scientific and of our time. Like all myths, they appear simple but in fact represent complex ideas and suppressed fears that transcend time, place, and race" (Haynes 253).

Indeed, it is Sheldon who feels most out of place and time, and most embodies the yen for the ST future, identifying with this fictional universe from an early age, fantasising as a child that he would be swept off to a happier tomorrow by Federation agents from the future. In fact, he once vehemently states "if I got on the bridge of the Enterprise, I would never, ever leave" (Cendrowski, "The Transporter Malfunction"). Sheldon also wistfully confesses "what I want is to be departing starship Enterprise in a one-man shuttlecraft headed to the planetoid I rule known as Sheldon Alpha "(Cendrowski, "The Maternal Congruence"). He grieves for this future, noting

at best I have 60 years left. [...] I need to get to here [...] the earliest estimate of the singularity, when man will be able to transfer his consciousness into machines and achieve immortality. [...] I'm going to miss so much, the unified field theory, cold fusion. [...] In order to live long enough to fuse my consciousness with cybernetics, I need to change my diet.

When he is accused of wanting to become "some sort of robot? [...] Didn't you already do that?" he sighs "flattering, but sadly, no" (Cendrowski, "The Cruciferous Vegetable Amplification"). This yen for the future is echoed by his friends, to the extent that when Leonard first signs the roommate agreement with Sheldon, he seriously acknowledges a clause which states "section nine, miscellany. [...] if either of us ever invents time travel, we agree our first stop will be this meeting today in precisely five seconds." Both look around and when no one materialises in the room, Sheldon remarks "well that's disappointing" (Cendrowski, "The Staircase Implementation").

Any suggestions contrary to the philosophies and usages depicted within ST is anathema. When Sheldon is confronted with the question "are you suggesting we live our lives guided by the philosophies found in cheap science fiction?" he exclaims "cheap science fiction?" and resorts to the fictional calming Vulcan ritual of "Kolinar to suppress my anger at that last comment" (Cendrowski, "The Alien Parasite Hypothesis").

This is probably because scientists are fully cognizant of the enhancements that science and technology have made to everyday quality of life, and are aware of the

technological innovations will bestow upon humanity. The ST future is thus so loved by our characters since it accedes to this vision. "This optimism offers solace in the promise of a brighter and better future" (Grech, "Picard" 22).

Penny constitutes the non-scientist representative in BBT, an overt observer, the audience's gauge and surrogate judge of the antics that our eccentric scientists indulge in. In extremis, there are occasions when even the easy-going Penny loses her patience with her nerdy friends: "my God, you are grown men, how could you waste your lives with these stupid toys and costumes and comic books and... and now that... that... [...] time machine" (Cendrowski, "The Nerdvana Annihilation").

This occasionally leads the boys to begin to come to their senses. Leonard once almost eschews all of his collectibles.

I'm packing up all my collectibles and taking them down to the comic book store to sell. [...] no more toys or action figures or props or replicas or costumes or robots or Darth Vader voice changers, I'm getting rid of all of it. [...] I think it's time for me to get rid of this stuff and ... you know ... move on with my life. (Cendrowski, "The Nerdvana Annihilation")

Sheldon also simulates such intentions. "I think I've kind of outgrown Star Trek. You know, stock characters, ludicrous plots, beam me up. What a load of hooey." And when someone gives him a Vulcan salute, Sheldon retorts "yeah, even that. You look like a dork" (Cendrowski, "The Russian Rocket Reaction"). But all this is just pretence and the collectibles are retained and added to.

This is not to say that there is no insight in the show by the scientists with regard to the sometimes overwhelming nerdiness that they display. With great insight, Howard the engineer once notes "okay, make your little jokes, but of the four of us, I'm the only one making any real-world contribution to science and technology" (Cendrowski, "The Classified Materials Turbulence"). On another occasion, he points "let me explain the difference between you and me. You watch Star Trek. I live it" (Cendrowski, "The Launch Acceleration").

However, the ultimate statement with regard to their outlook toward life is made by Sheldon:

Leonard, all our lives we have dreamed of finding ourselves inside one of the fantasy worlds we love.

Star Trek landing party stranded in an alien and un-science. forgiving environment, relying only on our wits, our fortitude and our moxie. As long as we have those things, nothing can stop [us]. (Cendrowski, "The Bakersfield Expedition")

It must also be noted that Penny, the non-scientific public's champion, also gains knowledge through her engagement with scientists, an osmotic process that promises the public the chance of also acquiring scientific knowledge. Indeed, the scientists are occasionally completely overwhelmed to the point of incredulity by her lack of even the most rudimentary and fundamental scientific knowledge, with an occasional overreaction that constitutes harsh berating.

This is a typical example of Lorenzo-Dus's "double articulation," an interaction not only between the actors, but also between the actors and viewers (161). Penny is so changed that she finds herself unable to meaningfully engage with boyfriends of her previous ilk, mindless and uneducated hulks, a metamorphosis that she does not totally appreciate.

Damn you, you rat bastard. [...] Zack was a perfectly nice guy, and then you ruined him! [...] in the olden days, I never would've known he was so stupid. [...] You have destroyed my ability to tolerate idiots. (Chakos, "The Lunar Excitation")

Indeed, she even returns to college. She confesses to her educational inferiority with a degree of reticence and clear embarrassment that she had

been thinking about going back to school for a while now. So a couple months ago, I started taking a history class at the community college. [...] I don't want [...] to make a big deal out of it. [...]. Look, I didn't finish college, so I thought I would give it a try. [...] I'm not embarrassed. (Cendrowski, "The Extract Obliteration")

In conclusion, this paper has clearly shown that ST is heavily utilised by four scientists in BBT in everyday life to provide textual and visual cues about character and stereotype. It also shows that nerdy scientists can engage with the general public as represented not only by the viewers, but also by characters within BBT. Moreover, information flows bidirectionally, from scientists to non-scientists and vice-versa, with Penny and the audi-

And look at us. At this moment, we are, in fact, a ence educated not only about SF and ST but also about

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