

EXPLORING THE INTERSECTION
OF CULTURE AND TECHNOLOGY.

PERSPECTIVES

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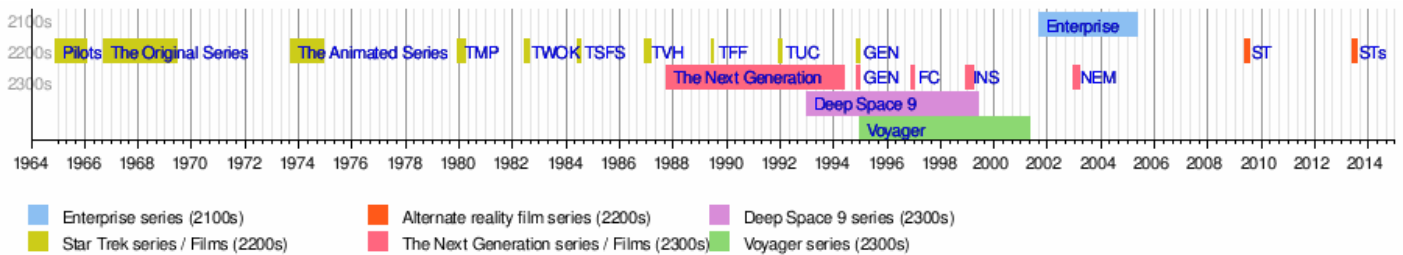
Original illustration by Joshua Scott JS



From the Editor... Live Long and Prosper

It's hard to overstate the impact the show *Star Trek* has had on American culture. A show that only lasted for three seasons in its original run, it's had a 40-year-long impact on how we think about the future, space travel and technology. As *Perspectives* transitions from a publication that simply focuses on technology to one that explores the crossroads of culture and technology, we couldn't think of a better way to do that than exploring the impact that *Star Trek* has had. Like a good episode of *Star Trek*, this edition brought some interesting surprises for each of us personally.

I will begin by admitting that I'm a Trekkie; not a costume-donning Comic-Con Trekkie – but a Trekkie nonetheless. I grew up on *Star Trek* reruns and seeing the movies in the theatre, and my family talks about Leonard Nimoy being a cousin. *Star Trek: The Next Generation* came out when I was in high school, and I even got to work with Patrick Stewart during my career in theatre. All this is part and parcel of my personal, emotional connection to *Star Trek*. I find that most Gen-Xers, Boomers, and those in the Silent Generation also have personal connections to *Star Trek* and find that it's part of their cultural foundation.



Graph Source: http://en.wikipedia.org/wiki/Star_trek

What we discovered through preparing this issue of *Perspectives* is that there is a HUGE generation gap around *Star Trek*. While it's foundational for Gen-X and up – it's not for Gen-Y. If you look at the chart above, it makes sense. The last popular *Star Trek* show went off the air in 2001, but to care about that show you probably already had to be emotionally invested in the franchise. Even the recent reboot with the JJ Abrams film in 2009 didn't have the same impact on my Gen-Y colleagues as it had on Gen-X and Boomers.

This issue of *Perspectives* is written by those who are both hard-core Trekkies and also several *Star Trek* novices. For those of us with deep roots in *Star Trek* it gave us a chance to explore the impact it had on American culture in new ways. For those who really didn't have a *Star Trek* "vocabulary," it gave them a chance to better understand this phenomenon that is so important to three generations of Americans, and how it helped to build the world they live in now.

We invite you to explore with us the surprising and not-so-surprising impact that *Star Trek* has had over the past 40 years. It may leave you asking the same question it left us asking: *If Star Trek helped define today – what is defining tomorrow?* That is what we'll tackle in our August edition, but for now – sit back, relax, and enjoy this exploration of how *Star Trek* influenced the world of today!

Live Long and Prosper!

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Table of Contents

From the Editor.....1

The Prime Directive: A Social Engagement Lesson from Star Trek.....3

VISOR, the Original Google Glasses.....4

I’ll Meet You on the Holodeck...5

Hypospray to the Rescue!6

Tricorders: The Next Generation.....7

Memory Alpha and the Power of the Crowd.....8

Star Trek’s Replicator: The Last Thing You’ll Ever Buy.....9

Every Man a Captain: 6 Leadership Principles of Captain Kirk.....10

The Embodiment of Modern Medicine.....11

The Universal Translator: 2012 Edition.....12

Commercial Space Travel – Finally Meeting the Final Frontier.....13

In Defense of Violence.....14

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The Prime Directive: A Social Engagement Lesson from Star Trek

Summary: In the fictional world of *Star Trek*, the “Prime Directive” limits Starfleet personnel from interfering in the internal development of alien civilizations. A lucrative source of plot foils, costume changes and interstellar philosophical debate, the Prime Directive actually has a simple message we all should remember when first trying to participate in a new community: Watch and listen first to understand how your participation could change the discussion and determine your long-term plan.

Alexandra Beneville

SVP/Group Account Director
Account Management

Unabashed science fiction nerd. Also a mom, traveler, marketer and avid cook. Live long and prosper.

Key Information

On *Star Trek*, the Prime Directive is Starfleet’s General Order #1. It is the guiding principle of the United Federation of Planets and it allows them to send ships out into space to “boldly go where no man has gone before,” without interfering with the civilizations they meet along the way. While sometimes dealing with involvement in social and political issues, the crux of the order focuses on restricting the exposure of less-developed worlds and civilizations to advanced technology and interstellar space travel. It is referenced, debated and sometimes ignored throughout the *Star Trek* franchise.*

It is the fallout from the application or disregard of the rule that is usually the central plot line in a Prime Directive–inspired episode. Inevitably a shield fails, revealing a Starfleet observation team, and the crew must negotiate how to present themselves, how to engage and what their escape options are. More dramatically, a ship will come across a dying planet and must debate whether or not to save its inhabitants, who have no idea there is a spaceship orbiting their world or that their planet is about to implode. In any such scenario the Starfleet crew must wrestle with some basic questions we as marketers ask ourselves also:

- Who do we reach out to?
- When do we reach out?
- How can we ensure a positive exchange?
- What do we want to share?
- What will we do if things go horribly wrong?

We know that in marketing the way in which we make first contact can make all the difference to the long-term relationship and the outcomes for our brands. This is particularly true when it comes to engaging in social media, and it is here that we can learn from *Star Trek*. There are communities, new worlds to be explored by our brands, but they may have little knowledge or interest in knowing of our existence. If we abide by the tenets of the Prime Directive, we can plan a social media strategy that is informed and fully developed.

Implications

Steps to exploring that final frontier:

- **Watch and listen first.** Then check to make sure your shield is still up and watch and listen some more. Make sure you understand the dialogue so you can appropriately gauge where you fit in and what is important to the existing community.
- **Know your own boundaries.** Social governance planning will ensure you have a consistent behavior and reaction determined across your brand and through all levels of your organization. Your own brand Prime Directive.
- **Have an escape plan.** From watching and listening you should have a good idea of the potential pitfalls of joining the dialogue. Make sure you have a plan in place and you can implement it quickly if something goes horribly wrong. This will help you limit the damage and maybe return for another visit later. All *Star Trek* fans know that sometimes you have to sacrifice the Ensign to save the ship.

* With the notable exception of *Enterprise*, set before the existence of the Federation and the Prime Directive.



VISOR, the Original Google Glasses

Summary: Google may soon release Google Glasses, eyeglasses capable of acting like a computer. While they do not improve eyesight, Google Glasses provide information not naturally available to humans. This is not a new idea—Lt. Commander Geordi La Forge sported VISOR glasses on *Star Trek: The Next Generation*, which allowed him to function at a heightened level of awareness and efficiency. Likewise, Google Glasses will improve humans' daily reality, and will likely include an advertising model. Marketers can prepare for this by considering their audiences' behavior and their business model.

Sara Collis

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Digital Integration & Innovation

Years of planning, prodding & implementing digital stuff. Philadelphia born 'n' raised. Geeky, athletic and green. Go Big Red!

Key Information

Geordi La Forge, a character from *Star Trek: The Next Generation* and its feature films, sported a device across his eyes known as a VISOR. The VISOR gave La Forge, who was naturally blind, heightened sensitivity beyond that of a normal human eye and an ability to detect movement and monitor things like mood, temperature and heart rate. It also provided visual data through infrared and microscopic levels of energy. The result was an augmented awareness about his surroundings and a level of acuteness that made him excellent at his job as helmsman aboard the USS Enterprise-D.

While not exactly the same thing, the pending release of Google Glasses¹ sparks images reminiscent of La Forge's VISOR. Google Glasses will seek to augment the power of human eyes in similar ways as the VISOR. Google Glasses essentially act like a computer and will likely include a built-in camera, GPS features, facial recognition software, and eventually a marketing platform for time- and location-based advertising.² Like the VISOR, this type of technology will improve a user's experience in the moment.



Implications

The VISOR and Google Glasses are similar in two important ways: 1) both provide sensory and location-based information, and 2) both make users more efficient in their daily lives. As such, Google will, no doubt, create a platform for marketers to tap into the experience, in order to monetize the opportunity. In preparation for technology like this, marketers can start considering what their approach might be. To do this, marketers should brainstorm on the following topics:

- **Audience technology preferences.** Are your customers early adopters of technology and will they be comfortable with ads in their face (literally)? When is the best time to reach them and what offers will be most compelling?
- **Coupons and flash sales.** Do your users redeem coupons and respond to flash sales? Do these offers improved your customers' loyalty or do they only appeal to one-time shoppers?
- **Geo-targeted and location-based information.** Does your product or brand offer geo-based services? Will your sales improve if you can intercept users at the point of sale?

¹ <http://www.youtube.com/watch?v=9c6W4CCU9M4>

² www.nytimes.com/2012/02/23/technology/google-glasses-will-be-powered-by-android.html; http://en.wikipedia.org/wiki/Geordi_La_Forge



I'll Meet You on the Holodeck...

Summary: The Holodeck, a virtual reality simulator introduced in *Star Trek: The Next Generation*, foreshadowed this generation's immersive games and gaming systems. Its ability to simulate environments that stimulate our five senses was laughable in the '80s, but is the reality today. The Nintendo Wii, PlayStation Move, and Xbox Kinect are all a testament to the fact that if we can dream it, we can build it. Eventually.

Justin Kohut

Planner

Insights and Innovation

Where everyone else sees a white wall, I can't take my eyes off the red speck in the corner.

Key Information

Thank you, *Star Trek*, for introducing "The Holodeck." Because of you, I have been able to enjoy an entire generation of immersive videogames. Trekkies will tell you that the Holodeck was used for entertainment purposes — in one case, baseball. If you think about it, the Holodeck is the ultimate in simulator technology. It simulates and stimulates every sense humans are capable of — sight, smell, touch, taste, and sound. From the time I started playing videogames (Super Mario on Nintendo), I looked at distant technology such as the Holodeck with awe, saying to myself, "Wouldn't it be cool if..." In 2006, "if" happened.

The Nintendo Wii, Xbox Kinect, and PlayStation Move are all nearly capable of emulating the immersive characteristics of the Holodeck. They stimulate our sense of sight, whether through beautiful HD graphics or 3D projection (PlayStation Move) that blur the line between what's real and what isn't (minus the Wii, which doesn't have either of these capabilities). These immersive gaming systems also please our ears through the latest in Dolby Digital technology, producing sounds so crisp and clear that we sometimes look around to make sure they aren't real. Add surround sound to the mix, and our ears really start to get confused.

Our immersive games of today start to stumble when we get to the sense of touch. All we can touch is the controller itself, which, while versatile in design and slightly realistic in its ability to vibrate during action sequences, isn't the same as literally feeling the brick wall our avatar is touching, or sheathing the sword after a battle. The Xbox Kinect is an enigma because your body is the "controller," but the same challenges as above apply. Smell is the one sense video games haven't even come close to implementing. Is it possible? Yes, absolutely. Just ask Glade or Febreze. But to produce the array of "smells" required for each individual game is impractical with today's technology. Maybe the next generation in hardware will attempt this feat.

Implications

Before we pass judgment on our friends dressing up like Spock and Captain James T. Kirk, let's remember that their "silly" obsession has driven our view of entertainment technology as we know it.

- **If we can dream it, we can build it... eventually.** The laughable technologies presented by *Star Trek* at its inception are now becoming real, especially in the world of gaming.
- **Gaming technology has its foot on the accelerator at all times.** The leaps and bounds in gaming technology we'll see in the next 30 years — particularly in animation and immersion — will dwarf our progress over the past 30 years.
- **As gaming gets more immersive, data flows.** When data flows, opportunities arise for marketers.



Google Holodeck by Duncan Hull
Photo used by CC-A Permission



Hypospray to the Rescue!

Summary: *Star Trek* introduced the consumer world to jet-injection technology, better known as hypospray, on the popular science-fiction television series. Jet injectors were first employed by governments to combat infectious disease epidemics in the 1960s. Today, single-use disposable-cartridge jet injectors provide a needle-free administration of liquid medication, without the risk of disease transmission. This technology may improve the quality of life for many patients in the future.

Remy Wainfeld

Intern

Digital Integration & Innovation

DC Hoya in a New York state of mind.

Entertainment enthusiast. Food lover. Pysch nerd. Spanish wannabe.

Key Information

The second season of *Star Trek* begins with an exciting yet unexpected fight to the death: Captain Kirk finds himself pitted against friend and partner First Officer Spock in a valiant battle over Spock’s betrothed fiancée T’Pring. Soon after the fight begins, Kirk falls victim to the Vulcan atmosphere, struggling and gasping for air and unable to hold his own against Spock. Aware of Kirk’s inherent disadvantage, Dr. McCoy comes to his captain’s defense: He whips out a metal syringe — hypospray — from his holster, and exclaims, “I can compensate for the atmosphere and the temperature with this! At least it will give Kirk a fighting chance!” He rushes over to Kirk and presses the hypospray against his sleeve, injecting Kirk with tri-ox compound.



Hypospray currently exists in the form of jet injectors. While *Star Trek* introduced the consumer world to jet-injection technology, scientists had actually developed the technology in the private sector decades earlier, in the 1940s, prior to the TV series’ debut.¹ Powered by compressed air or spring technology, a jet injector syringe uses a high-pressure stream of liquid medication to penetrate the skin and deliver a subcutaneous or intramuscular injection, rather than using a needle. Capable of delivering up to 600 injections per hour, jet injectors were adopted by the United States and other governments in the 1960s to deliver mass vaccinations, immunizing against small pox, measles, mumps and hepatitis B. However, due to increased risk of disease transmission in consecutive vaccinations, the U.S. Department of Defense and the World Health Organization have outlawed the use of multi-use jet injectors.² Scientists have since developed single-use disposable-cartridge jet injectors, which avoid the risk of disease transmission. Recently, the FDA released a statement warning doctors against using jet injectors to administer the influenza vaccine, only supporting its use for the Measles, Mumps, and Rubella (MMR) vaccine.³ The current most common use of this improved technology is to inject insulin, providing patients with an alternative to needles, pens and pumps.⁴



Implications

Jet-injection technology, featured as hypospray in *Star Trek*, enables pharmaceutical companies to offer patients a needle-free, easy-to-use and relatively painless alternative to the traditional syringe administration of liquid medication. Companies such as Bioject⁵ and PharmaJet⁶ produce handheld disposable-cartridge jet injectors that relieve patients of the painful and sometimes complicated experience of needle administration. The ongoing development of this technology can further improve the quality of life for patients with conditions like diabetes and rheumatoid arthritis who seek an alternative treatment.

¹“Real World Technology and *Star Trek*,” <http://bit.ly/HZ3ZCI>
² “Safe Injections,” <http://bit.ly/Jm0iNL>; “Immunizations and Chemoprophylaxis,” <http://bit.ly/lq6FLU>
³ “FDA Updated Communication on Use of Jet Injectors with Inactivated Influenza Vaccines,” <http://1.usa.gov/l74qi9>
⁴“Insulin,” <http://1.usa.gov/IBNU6K>
⁵ Bioject, <http://www.bioject.com>
⁶ PharmaJet, <http://www.pharmajet.com>



Tricorders: The Next Generation

Summary: In the 23rd century, the time of *Star Trek*, tricorders are standard operating equipment (aka props) for Starfleet personnel. These multifunctional handheld devices are used for scanning, data analysis and data recording. Over the last 50 years, handheld technology like the tricorder has advanced at warp speed, providing users with fast, increasingly accurate data. The question now is how this data will be used and for what purpose.

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Key Information

In *Star Trek: The Original Series*, which debuted September 8, 1966, tricorders came in three main variants: standard, medical and engineering. The standard tricorder, shown in the photo to the right, is probably the most well-recognized tricorder, which was used to scout unfamiliar areas, make detailed examination of living things, and record and review technical data. The medical version was used by Dr. Leonard McCoy to diagnosis diseases and collect bodily information, and came with a detachable handheld body scanner. The third tricorder was used by starship engineers, such as Montgomery “Scotty” Scott, to aid them in their assessment of the ship’s engine. As *Star Trek* moved into the 24th century and beyond, tricorders went through multiple designs and iterations, including, most recently in *Star Trek: Nemesis*, a flat version with a flip-open touchscreen interface. Sound somewhat familiar?



In 1996, the Vital Technologies Corporation developed and sold a portable tricorder-esque device that featured a thermometer, barometer, colorimeter, light meter, clock and timer;¹ the company sold 10,000 of these devices before going out of business. Nevertheless, the drive to develop tricorders has continued, with NASA, universities, research laboratories, and Silicon Valley startups throwing their weight behind various portable, scientific analyzers.

Implications

The yet-to-be-invented technology of the *Star Trek* series, movies and spin-offs challenged innovators to create not only specific devices like the tricorder, but also inspired them to think innovatively when designing new products. Today, much of the technology around us may have indeed been influenced by this drive and motivation to innovatively and creatively solve problems.

- **Portable, precise and passive medical devices.** In the world of *Star Trek*, the medical tricorder made diagnosing and treating injured crew members in the field fast and accurate, and rendered the giant MRI and x-ray machines we use now obsolete. Medical and health-related devices will not only continue to decrease in size as we move toward the 23rd century — they will also take on more diagnostic functions, collect more information without need for manual data entry, and provide real-time analysis. Imagine a pedometer that not only tracks your steps but your heart rate, pulse, cholesterol and blood sugar, while also providing proactive diet recommendations in response to that data. Or imagine a thermometer that not only takes your temperature, but reads your white blood cells to determine if you have a cold, the flu, a virus, an infection, etc.
- **Augmented reality makes data meaningful.** The data points collected by tricorders, whether they are environmental or medical, will need to translate and relay information to users in a meaningful way. One way of doing this is to overlay the collected data points over images of the actual subject matter. Doing this would create an augmented reality containing data that is otherwise invisible to the naked eye.

¹ <http://en.wikipedia.org/wiki/Tricorder>



Memory Alpha and the Power of the Crowd

Summary: In the *Star Trek* universe, Memory Alpha is the cultural and scientific archive for the Federation and acts as a neutral center for academic learning and knowledge gathering. Unshielded, unguarded and serving the galactic populace, this concept draws a powerful connection to how successful brands that serve a community can exceed the reach and market share of brands that only serve their audience.

Lian Han

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Digital Integration & Innovation

DC transplant with a love for new media and art. Trekkie-in-training.

Key Information

In the third season of *Star Trek*, the neutral planetoid that houses the Federation’s knowledge archive is assailed by the corporeal Zetarians. In an epic struggle of intergalactic love and freedom, the Zetarians are expelled from the planet by the *Enterprise* and are left to float away in the galaxy. Perhaps the most interesting plot device in this episode was the setting. Memory Alpha, the vulnerable and idealistic outpost for unified intelligence, is the galaxy’s glorified library, hosting, in rotation, the greatest intellectual minds across solar systems. The knowledge at Memory Alpha is collated, stored and accessible to everyone within the federation and represents the culmination of different cultures, planets and nationalities working together for the common good.



In creating Memory Alpha, the Federation capitalizes on collective thinking to improve society. In real life, companies like Starbucks have found a way to do the same, through consumer crowd sourcing. For example, Starbucks has created a site called My Starbucks Idea, which leverages public knowledge and creative thinking to improve their product, and their coffee “society.” My Starbucks Idea is an open platform for consumers to leave suggestions for the ubiquitous coffee chain. Starbucks relies on this online platform to continually innovate and improve the brand. This site mimics Memory Alpha: With My Starbucks Idea, the everyday coffee drinker is empowered to control their Starbucks experience through an open crowd-sourcing tactic.

Implications

Both Memory Alpha and Starbucks recognized that collective reasoning often yields better outcomes than closed systems. Companies have already proven the power of community content as a powerful awareness tactic, but sometimes it’s difficult to know where to start. Marketers should consider the following recommendations in order to build a loyal, happy audience.

- **Convey collectivity.** Be clear about your intentions to your audience and to the community. When creating an open forum or feedback tactic, highlight transparency and openness as the central objective and be sure to show follow-through when your brand is looking for a crowd-sourced solution to a particular issue or problem. Use these tactics as they were intended: to benefit your consumers before they benefit your brand.
- **Consider your competition.** Don’t be afraid to plug your competition. When creating a community resource, it’s always a sign of good faith to keep a dialogue open between friends and competitors. This will not go unnoticed by your consumers and will generate an enormous amount of goodwill for your brand.
- **Room to grow.** The greatest advantage to a community or crowd-sourced tactic is the ability to change and adapt the tactic as time goes on. Kick off your tactic with the intent of using feedback as testing for future opportunities, and allow something as simple as a message board to grow into its own self-sustaining community. Be proactive about reward structures for participation and focus on improving functions and infrastructure for your community space.





Star Trek's Replicator: The Last Thing You'll Ever Buy

Summary:

Star Trek presents us with what is quite possibly the ultimate technology: the replicator. It rearranges subatomic particles into tangible goods. Because it brings most marginal costs to \$0 and renders labor unnecessary, it blurs the line between tangible and intellectual property. And it could be the most transformative invention ever.

Nick Runyan

Senior Digital Strategist
Digital Integration and Innovation

Nick works at the intersection of technology and culture to help brands and consumers connect in meaningful ways.

Key Information

So many novel gadgets are touted as "The last X you'll ever have to buy!" It's probably never true, but there is a gadget from *Star Trek* that really would be the last thing anyone would ever buy. It's called the replicator and, if it were real, it would have an unparalleled impact on economics and culture.

The replicator works by rearranging subatomic particles into molecules that are then arranged into physical objects. So to make water, the replicator would use subatomic particles to make hydrogen and oxygen, and then combine them in a 2-to-1 ratio until the desired quantity was reached. With this method, the replicator can make anything from spaceship parts to dinner.

Because the replicator can create almost anything with minimal input, it brings marginal costs, or the costs associated with producing one more unit of a good, to zero or near-zero. And this is huge! When marginal costs equal \$0, actual costs will likely also become \$0, making wage labor pointless, as there's nothing to spend money on.

With the need for labor rendered unnecessary, people are free to fly around in spaceships exploring the universe. In fact, the world described in *Star Trek* would probably not be possible without the replicator. More than any other piece of technology, the replicator is responsible for the sort of economic entropy that the moneyless socialist economy portrayed in *Star Trek* is based on. It's a world where the concept of ownership has been fundamentally altered for both tangible and non-tangible property.

Star Trek assumes that access to tangible property is equivalent to ownership. For example, owning a set of dinner plates is pointless when you could just replicate a set whenever you're ready to eat. But when it comes to non-tangible property like intellectual property, the blurring of ownership and access becomes more problematic. Once an original thing is created, it can be replicated and become ubiquitous without any acknowledgement given to its creator. And this is where the future portrayed in *Star Trek* becomes unlikely.

Implications

Digital technology gives us an early peek at how replicator technology might impact economies and cultures. Once digitized, music, books, movies and photos all become zero-marginal-cost goods. Making one more copy of an mp3 requires practically no labor or resources.

To protect ownership rights and to incentivize the future creation of zero-marginal-cost goods, regulatory bodies create artificial scarcity through complicated intellectual property regulations. And as more and more consumption shifts to zero-marginal-cost goods, more IP regulation will become necessary.

And it's this vision of the future, not *Star Trek's* socialist utopia, that's important for businesses. If anything a company makes can be replicated by any consumer, how can companies continue to add value and justify their existence?





Every Man a Captain: 6 Leadership Principles of Captain Kirk

Summary: Captain Kirk, the first and most famous *Star Trek* Captain, is more than just the dashing hotshot that is his stereotype. He is a role model that is nearly unmatched by any real person. But that doesn't mean we can't learn about leadership from him.

Dave Greene

Senior Vice President/Director
Project Management

Living in the shadow of the great Captain Kirk can be tough... and a little dark. But it's sure worth trying.

Key Information

James Tiberius Kirk, the captain of the *USS Enterprise* on the original *Star Trek*, is one of the greatest fictional characters ever created. He is the male ideal in absolute form: courageous, honorable, handsome, a respectful ladies' man, a student, a warrior and peacemaker and an explorer. But first and foremost he is a leader. If it's possible to learn principles of leadership from a fictional character, this is the one.

Implications

Let's look at some of the core command tenets of Captain Kirk and think about how they can be applied to our lives.

Cherish it. If you don't love being in charge, you shouldn't be. And there are only so many leadership positions in any given organization — sometimes the fewer the better. If you have earned a leadership position, you should cherish it, or you should leave it. Because if you don't love it, it will show, then bleed into your team and end in failure.

Exercise command at the front. It's a running joke that the ship's captain is the first to beam down to an unknown planet, and there is some good reason to question it. But in principle it's a mark of a true leader. It can't be overstated how much it means to people, and not just in hazardous conditions, to see the boss there with them; and certainly it is noted when they are not.

Look the part. This has little to do with physical appearance; it's about stature, body language—exuding authority. Kirk is actually seen far more often walking the bridge interacting with the other officers than sitting in his famous command chair. Yet a rookie viewer would need mere seconds to identify who is in charge. A leader is active, engaged, not hovering — though watching carefully, their presence felt and seen. If you're the boss, it should be obvious.

Choose your team wisely. When Kirk finds himself in an alternate universe, a crew member helps him avoid an assassination attempt. Moments later Kirk learns that the "red-shirt" acted out of self-interest. Kirk thanks him for his help... then decks him. He has no tolerance for someone who's not a team player. A poor leader surrounds themselves with sycophants, or only those that strictly share their opinions and beliefs. This leads well into the next principle...

Solicit varied opinions. Kirk is the center of *Star Trek's* "holy trinity," the all-important bridge between the logic of Mr. Spock and the passion of Dr. McCoy. Kirk benefits from selecting advisors and friends with opinions and instincts different from each other, and his own. And the benefits are abundant. They serve to center him, for purity in a single way of thinking leads to stubbornness, which is destructive to a leader.

Oh, and one last thing...

Save the Earth. Do it a lot!



The Embodiment of Modern Medicine

Summary: *Star Trek* has provided us with a vision for medical care that is as much technology-based as it is human, transforming the experience of visiting a doctor into a seemingly magical world of scanners, voice-activated computers and data-driven treatment. This sci-fi vision is already informing ways to enhance the patient-doctor relationship.

Alyson Hardy
 VP/Account Director
 Account Management

Marketer, pharma nerd, art fanatic, history geek, sci-fi fan and proud mom.

Key Information



Dr. McCoy: In *Star Trek: The Original Series*, Dr. McCoy, the Chief Medical Officer, was often seen on away missions with a handheld device, called a medical tricorder, monitoring vitals of injured crew, capturing data and diagnosing appropriate action before they were transported back to the ship. This device gave him the ability to quickly analyze data and share that information with his team.

Currently, we are seeing the rapid adoption of telecommunications technologies into medical treatment for similar purposes — commonly referred to as *telemedicine*. One such program, “Care Beyond Walls and Wires”¹ by the Flagstaff Medical Center in Arizona, utilizes this approach of remote monitoring of patients with chronic conditions living in rural areas. Utilizing smartphones connected to health-monitoring equipment, doctors can monitor patients from their clinic and intervene quickly, transporting the patient to the hospital if required.



Dr. Beverly Crusher: In the series *Star Trek: The Next Generation*, Dr. Crusher was often seen in sickbay, an on-ship clinic where she used voice commands to access data from the ship’s computer and dictated to an electronic medical log with ease. Today, with the use of electronic medical record-keeping (EMR) in healthcare, the foundation for voice-assisted medical care is already being set. And as discussed at the recent Healthcare Information and Management Systems Society (HIMSS)

Annual Conference, current voice-recognition technology could pair with “collaborative intelligence tools,” creating a platform that can “listen” to a doctor’s information and alert her to implications of new data in real time,² much as the ship’s computer often does.



The Emergency Medical Hologram: In the later series *Star Trek: Voyager*, the ship’s doctor is a hologram, fondly referred to as the Emergency Medical Hologram or “EMH.” This “doctor” leveraged a database of over 2,000 medical sources and the experiences of 47 doctors, making his seemingly human face a mere interface to a completely data-driven approach to medical care. He says, “I am not just a doctor... I am the embodiment of modern medicine.” This ability to treat a patient case by comparing it to an expanse of

medical information is similar to the approach of leading-edge hospitals, where staff monitor a large volume of patients from behind a computer panel, with access to other specialists, and sometimes using robotics for complex procedures.³

Implications

The 24th-century vision of medical tech in the *Star Trek* series is becoming real and may reveal new opportunities for marketers:

- **Technology in the doctor’s office.** It may provide the opportunity to integrate professional and patient educational tools, such as goal trackers, into the platform, enabling digital enrollment and sharing data with patients over time.
- **Telemedicine.** The use of mobile devices could facilitate a feedback loop between patients and their healthcare team in between doctor visits. This could be particularly useful in persistency programs to help patients adopting a new therapy.
- **Data-driven medical processes.** They will empower doctors to access health information at their fingertips and more quickly share it with other specialists and patients. Marketers have the opportunity to facilitate this for both professionals and patients so they can function like an integrated team.

¹ Congestive Heart Failure - In Home Monitoring, <http://www.flagstaffmedicalcenter.com/OurServices/Telemedicine/Programs/CHF>

² Healthcare IT Goes Star Trek <http://www.informationweek.com/news/healthcare/EMR/232601419>.

³ Hanson, Dr. William *Smart Medicine: How the Changing Role of Doctors Will Revolutionize Health Care*. Palgrave Macmillan, June 7, 2011.





The Universal Translator: 2012 Edition

Summary: The Universal Translator was used in *Star Trek* to seamlessly communicate with aliens from distant galaxies. Is it possible that today's translation technology has progressed further than *Star Trek* predicted? Google, Microsoft and the U.S. military have developed technologies that make instant global translation possible, accessible and more advanced than *Star Trek* thought possible.

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Key Information

The Universal Translator debuted in *Star Trek* in the year 2151. This handheld device resembled a remote control and enabled instant spoken translation between the Enterprise crew and the beings they encountered in space. Today there continues to be a need for easy cross-cultural communication tools.

Google Translate, a free online tool and mobile application, is the leading translation tool for the average online user. Through this Web tool, you can translate text into 58 languages and personalize your account by saving commonly used phrases. A new mobile feature launched in early 2011 called Conversation Mode enables you to speak a phrase into a mobile device and have it translated back to you both orally and in writing. Conversation mode is currently available for 44 languages and is the most used free translation tool in the market.¹

In March 2012, Microsoft announced software that “translates your spoken words into another language while preserving the accent, timbre, and intonation of your actual voice.”² The tool is capable of translating words and phrases into any of the 26 languages on their platform. The technology requires users to complete one hour of training so that the system can create a personal sound database.³ This is the first tool that uses the user's own voice to generate translations, making communications with “aliens” less robotic and more like a conversation.

Lastly, the U.S. military is developing a translation tool for its troops in Afghanistan. It is working with SpeechTrans to develop technology that is capable of recognizing military terminology, local dialects and slang. This will provide troops with instant spoken translations, empowering more accurate communication and dialogue with locals.⁴ The SpeechTrans tool will be the first translator with the ability to recognize dialects, the lack of which was the main drawback to *Star Trek's* Universal Translator.

Implications

How will global communications change with the development of these tools? It will be easier to accomplish international work when these tools are automatically implemented into phone calls and emails. You can already enable the Google Translate bar in Chrome and get instant translations of the entire Internet. By targeting dialects, global reach will expand and the need for human translators will be all but eliminated. For some, these translation tools will decrease the demand for foreign language education. For others, these tools will motivate a trip that previously seemed unattainable due to a language divide.

¹ <http://translate.google.com/about/>

² <http://www.extremetech.com/extreme/122083-microsoft-unveils-universal-translator-that-converts-your-voice-into-another-language>

³ <http://www.dailymail.co.uk/sciencetech/article-2114379/Star-Trek-reality-Microsoft-unveils-Universal-Translator-turns-spoken-English-26-languages.html>

⁴ <http://www.theworld.org/2011/04/machine-translation-military/>



Commercial Space Travel – Finally Meeting the Final Frontier

Summary: Space, the final frontier. These words have captivated audiences for almost 50 years, letting the youth of the 1960s grow up dreaming of a world where humans travel the stars and intermingle with different beings. Soon after *Star Trek* premiered, man set foot on the moon for the first time. But never before has there been widespread, easily accessible space travel like that of Starfleet. Now, in 2012, commercial space flight is finally a possibility.

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Key Information

In the 1960s *Star Trek* was part of a movement in entertainment toward stories about space travel. Today, two innovative and ambitious billionaires, Elon Musk of SpaceX and Richard Branson of Virgin Galactic, have set their sights on making sci-fi space travel a reality. Reservations for seats on these craft still cost about \$200,000, so only those with the deepest pockets can fly, initially. While it doesn't look like we'll be seeing refugees fleeing to colonies on the moon or military personnel preparing for interplanetary exploration for a while, both Musk and Branson want to have their projects ready for the public sometime between 2013 and 2015.



Both Virgin and SpaceX have their eyes on the heavens, but the goals of their projects are very different. Richard Branson can be seen as the real-world version of *Star Trek's* young, impulsive Captain James T. Kirk, focusing on the thrill of in-space tourism. Virgin lets passengers see the Earth fading below them, hear the complete silence, and free themselves from gravity. Elon Musk is more along the lines of a Mr. Spock with a more practical mission. Musk believes that with the rate our population is growing and the amount of resources we use, Earth won't be a sustainable planet much longer. He sees a multi-planetary society as essential to the survival of humanity. Musk wants SpaceX to colonize new planets to take some of the burden off of the Earth.

Implications

As we inch closer toward letting everyone explore the stars, what do we, as marketers, need to consider? One day in the future, like Kirk and Spock we might become ambassadors and friends of other interplanetary beings, but for now, the implications still apply solely to humanity. How will our lives change as we jump between planets in the same way we jump between states? Think about the following points, and I bid you, "Live long and prosper":

- **A shift in culture.** A new home for humans will likely result in some interesting changes in "humanity." On the one hand, people will be excited for a new, futuristic and exotic home to colonize and respond to messaging that instills a sense of adventure. On the other, people will start to feel nostalgia for their home planet. Marketers must be conscious of this struggle and must balance their messaging and products to meet these conflicting emotions.
- **Human identity.** What will travel off-planet mean for people's identities? On Earth, we perceive ourselves as individual ethnicities and races, but on new planets how will that change? Brands will have to adapt their approaches to cultural marketing; space travel may create "Martians," or more broadly "humans" who think and behave differently from the traditional cultural models of Earth.
- **New forms of engagement.** Digital is "now," but what comes next in the space travel age? Marketers must find a way to take advantage of the sights, sounds and feeling of space. How can zero gravity be turned into a branded experience? With space travelers enduring long flight times, there is huge opportunity in making space travel more than just a journey. Whether it's branded space suits or soda fountains that shoot liquid spheres, brands across a number of industries will have the chance to integrate themselves and their products in solving space traveler boredom.



In Defense of Violence

Summary: *Star Trek* has inspired an abundance of video games that invite young players to act out conflict scenes from the movies. Child advocates have cited violent game play as being detrimental to children, but recent research has started to unveil a slightly different story. Fictional violent play has been shown to help children experience control in an environment where they are powerless, a critical stage in child development. Marketers should leverage learnings about violent gaming behavior to market to children and even adults.

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Key Information

Star Trek has inspired an abundance of interactive video and computer games challenging players to venture to new territories, overcome challenges and return safely home. The in-game scenarios closely align with the *Star Trek* plot, treating young players to a glimpse of the violence portrayed in the adult-targeted *Star Trek* films. Violence in video games such as these has caught the attention of child advocates in recent years. Advocates link violent play to increases in aggression and addiction and decreases in pro-social behavior and empathy. However, recent psychology research has started to unveil the potential benefits of violent game play for children. Evidence now suggests that children experience such play differently than adults, and that violent play actually fulfills an essential developmental need for children.¹ While the jury is still out on extreme violence like that seen in *Grand Theft Auto*, it is now seen as possible that the type of violence in *Star Trek* video games could be beneficial to children.

Violent play fulfills a developmental need in two ways: It helps children to cope with fears *and* real-world violence (e.g. bullies). Giving children power in a make-believe world, they gain coping mechanisms for their real world. Interest in violent play is therefore not about the act of violence itself, but rather, “The child’s fascination with mayhem has less to do with the fighting and more to do with how the action makes her feel.”² In this way, violence in video games (in appropriate doses and with adult supervision and conversation) can help children pass through a critical stage in development. We can thank *Star Trek*-like video games for providing players with the comfort of fictional power, which in turns provides skill sets and coping mechanisms that empower children in their real lives.

Implications

Understanding benefits from fictional violent experiences can provide insights for professionals marketing to children and even adults. Marketers can seek to fulfill the same developmental needs that are fulfilled in violent game play by offering children and even adults a sense of control in their lives. To do this, marketers should consider the following:

- **Incorporate elements of control into advertising for children**
 - Children are drawn to video games because they allow them to simulate power. When selling video games to children, consider the reason they are drawn to such games and seek to fulfill that need.
 - The trailer for EA’s game *Crisis 3* challenges players to take on the role of Prophet as they recapture NYC. The tagline: “The hunted [powerless] becomes the hunter [powerful].”
 - The child’s need for fictional control can be fulfilled outside of violent game play as well. Marketers can consider creating environments where children take the lead.
 - My Baby Alive Doll and its marketing messages put the child in control of caring for the baby, giving young children the opportunity to have “play” authority with a fictional being.
- **Marketers can benefit from understanding adults’ need for the perception of control**
 - Children aren’t the only ones living in an uncontrollable reality. Adults experience the same angst. They too want control. Keeping in mind that adults experience violence differently than children, marketers should consider alternative ways to allow adults to regain control or the illusion of control.
 - Nutella ads depict a chaotic scene as three kids struggle to get ready for school. When the mother introduces the chocolaty hazelnut spread, the room is brought to order as the kids sit calmly together eating breakfast. The mother has used Nutella to gain control of the chaos.

¹ Jones, Gerard. *Killing Monsters: Our Children’s Need for Fantasy, Heroism, and Make-believe Violence*. New York: Basic, 2003.

² Wilson, Eric G. “The Allure of Disaster.” *Psychology Today*, April 2012: 52-53.