

# For Medicine, Are We Living In That Galaxy Far, Far Away?

By Nicholas Staropoli — December 15, 2015

A long time ago in a galaxy far,  
far away...

A huge Star Wars fan am I so [despite what other fans enjoy](#)

[doing regarding the "prequel" film trilogy](#), [1] I don't waste too much energy being critical. To me the story of the rise, fall and redemption of Anakin Skywalker (a.k.a. Darth Vader) is entertaining enough that I am able to tune out Jar Jar Binks and Hayden Christensen and just enjoy the ride. Plus *A New Hope* (the original *Star Wars* - called *episode four from 1980 On*) and *The Empire Strikes Back* (*episode five*) remain incredible movies even without the context of the whole Star Wars Universe.

But there is one objection to the Star Wars universe I do have: When is this all supposed to be going on? Is it in the past? It says it is a long time ago right in the text at the beginning. But it seems like the future. Has the future become the present, even in this galaxy? For medicine, it just might be. The Star Wars universe appears to be parsecs(\*) ahead of us in medicine and public health, but a Jedi-trained eye can pick out some places where modern medicine is on par with quasi-futuristic space medicine.

**Hand Replacements:** Interestingly, other than *The Phantom Menace* (the fourth movie, but called Episode One) [every Star Wars movie has a moment when a character loses a limb](#) [2]. In the original *Star Wars*, its merely the bipedal 'droid C3Po but major hand losses occur to major protagonists Anakin and Luke Skywalker throughout the series. In *The Empire Strikes Back*, Darth Vader removes Luke's right hand during the emotionally charged scene when the young Jedi's lineage is revealed. In *Attack of the Clones* (episode two), Anakin Skywalker loses most of his arm from the elbow down while in *Revenge of the Jedi* (episode one) he pretty much loses the rest of his body. In *The Phantom Menace* a much less mortal battle kills Liam Neeson's character, presumably because he was not whisked away to an Imperial M.A.S.H. unit quickly enough.

The Star Wars universe does not seem to think much of biology, instead the protocol is replacement with a robotic prosthesis in both Rebel outpost and Imperial facilities.

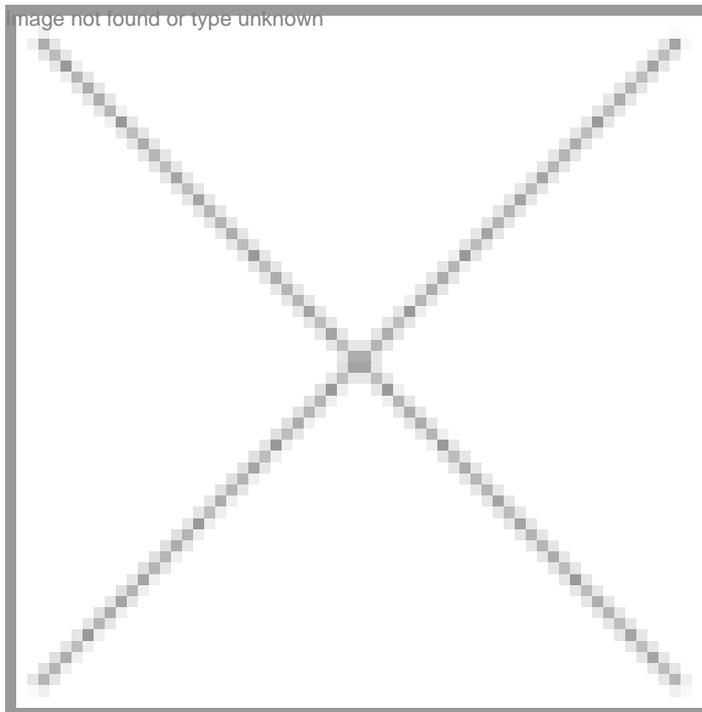


*Credit: Disney*

If you saw *The Empire Strikes Back* in the theaters during its original run in the 1980s this may have felt very futuristic but [today we do much better; hand transplants](#) <sup>[4]</sup> are becoming more and more common. The first hand transplant occurred in America in 1999 and the recipient is still doing well today.

Why wouldn't they think of that, or even growing replacement hands from a patient's own stem cells ([we even do it with organs now](#) <sup>[5]</sup>)? Maybe the greedy Empire medical was in cahoots with Big Robot.

**Robots Running Medicine:** Almost every medical procedure in the Star Wars saga is preformed by a 'droid. From the reattachment of severed limbs to the birth of the twins Luke and Leia Skywalker, robots run the hospitals and clinics. Robots aren't walking around the E.Rr or O.R. in our galaxy but they are having an increasing presence here. Many surgeries are now preformed by human controlled robots and many computer algorithms have been developed to aid in the diagnosis of patients. Most hospital labs are run by robotic instruments that analyze patients samples and provide a potential diagnosis to a physician.



*Credit: Florida Hospital Nicholson Center*

**The Making of Darth Vader:** At the end of *Revenge of the Sith* (Episode Three) we learn how Anakin Skywalker went from being a troubled youth to the symbol of pure evil. Then his teacher and friend, Obi-Wan Kenobi, cuts him in half and leaves his burnt, deformed corpse alongside a river of lava. Judging by Episode One, where Kenobi's master dies from a much less severe wound, that would seem to be the end of it, but Anakin's secret master, the malevolent Emperor Palpatine, is able to bring what's left of his apprentice's body to the hospital where he is saved but confined to that infamous mechanical suit for the rest of his life.

Robot replacement had improved a lot in basically 10 years.

In the original *Star Wars*, Kenobi remarked that Vader is "more machine now than man," but in our

galaxy he might not have been resigned to this fate. Two techniques, a [hyperbaric chamber](#) [6] and the [skin cell gun](#) [7] which sprays stem cells onto burn victims as a way to regrow skin, might have healed Skywalker's body enough to keep him out of the suit. He would have still have needed the prosthetic legs, but our prosthetic legs are good enough to help South African sprinter Oscar Pistorius qualify for the Olympics. I'd like to see Darth Vader do that!

### **Some Things Are Still Far, Far Away**

We don't have landspeeders, Cloud Cities, lightsabers or blasters, and [the Obama administration](#) [8] recently said investing in a Death Star was an expense this country cannot take on, but in many ways we are rapidly catching up - and surpassing - the universe George Lucas created. And who knows how far we'll have advanced by the time they decide to make movies 10 through 12.

NOTE:

(\*) ha ha

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#### **Links**

[1] [http://www.slate.com/blogs/quora/2015/05/03/star\\_wars\\_why\\_does\\_everyone\\_hate\\_the\\_prequels.html](http://www.slate.com/blogs/quora/2015/05/03/star_wars_why_does_everyone_hate_the_prequels.html)

[2] <http://www.starwars.com/news/every-limb-lost-in-the-star-wars-films>

[3] <http://acsh.org/wp-content/uploads/2015/12/luke-hand.jpg>

[4] <http://www.handtransplant.com/TheProcedure/HandTransplantHistory/tabid/96/Default.aspx>

[5] [http://www.science20.com/science\\_20/not\\_science\\_fiction\\_road\\_map\\_organ\\_transplants\\_no\\_waiting\\_list-82675](http://www.science20.com/science_20/not_science_fiction_road_map_organ_transplants_no_waiting_list-82675)

[6]

[http://www.hopkinsmedicine.org/healthlibrary/conditions/physical\\_medicine\\_and\\_rehabilitation/hyperbaric\\_oxygen\\_ther](http://www.hopkinsmedicine.org/healthlibrary/conditions/physical_medicine_and_rehabilitation/hyperbaric_oxygen_ther)

[7] <http://phys.org/news/2011-02-skin-cell-gun-drastically.html>

[8] <https://petitions.whitehouse.gov/response/isnt-petition-response-youre-looking>