



SCIENCE-Fiction Fanzine

Vol. XXVII, No. 12; December, 2015

## חדשות האגודה – דצמבר 2015 The Israeli Society for Science Fiction and Fantasy 2015

בנס "מאורות 2015 – קץ הילדות" - האוניברסיטה העברית, יום ה', 12 לדצמבר, נר רביעי של חנוכה.

[/http://meorot.sf-f.org.il/2015](http://meorot.sf-f.org.il/2015)



כל האירועים של האגודה מופיעים בלוח האירועים (שפע אירועים מעניינים, הרצאות, סדנאות, מפגשים ועוד) לקבלת עדכונים שוטפים על מפגשי מועדון הקריאה ברחבי הארץ ניתן להצטרף לרשימת התפוצה או לרף האגודה

Society information is available (in Hebrew) at the Society's site: <http://www.sf-f.org.il> בפיסבוק.

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- Leybl Botwinik (CyberCozen editor)

## HOT NEWS: SPACE HOTLINE !

### U.S., China Set Up a 'Space Hotline'

- BY [DON REISINGER](#) NOVEMBER 23, 2015 06:24PM EST



The U.S. and China have set up an emergency "space hotline." Sadly, the connection will not be used so the two countries can gab about aliens, but is instead a way to avoid a satellite-related space war, U.S. assistant secretary of state Frank Rose [told](#) the *Financial Times*.

China and the U.S. (as well as Russia) have been rapidly investing in weaponry that can take down satellites that power orbital networks used for military operations. Knocking these satellites offline could mean that ground troops are left without critical weaponry.

To read more: [http://www.pcmag.com/article2/0,2817,2495535,00.asp?mailing\\_id=1512910](http://www.pcmag.com/article2/0,2817,2495535,00.asp?mailing_id=1512910)

## What's New: For lovers of...

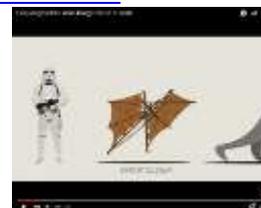
- If you like **STAR WARS** the new movie "Star Wars: The Force Awakens" is coming to a theatre near you in a few weeks from now. **Anyone interested in doing a review?**

– See the "CNET INSIDER" for more of your favorite:

<http://www.cnet.com/tags/star-wars/?ftag=CAD9f89b0c&bhid=25983503734030224049931423730627>

**Epecially:** "Ogle every single original Star Wars vehicle to scale in this video. Relive the original Star Wars movies through the eyes of an artist who illustrated all the vehicles and laid them out by size."

See at: <https://www.youtube.com/watch?v=O6nLCXvQeRg>



- If you like **Star Trek** – "**Star Trek Beyond**" is to be released in July 2016.

See this site for some related links: <http://www.comingsoon.net/movie/star-trek-beyond-2016>

There's also talk about a new **Star Trek** TV series starting in January 2017. See here:

- <http://www.startrek.com/article/new-star-trek-series-premieres-january-2017>
- and here: <http://www.hollywoodreporter.com/live-feed/star-trek-tv-series-works-828638>
- and here: <http://www.theguardian.com/culture/2015/nov/07/star-trek-to-live-long-with-a-new-tv-series>

...and here's a bonus for fashion lovers:



<http://www.theguardian.com/culture/gallery/2015/oct/27/a-history-of-star-trek-fashion-in-pictures>

## More on AI – Part VII - HUMANS (very brief look)

By Leybl Botwinik

Been busy, busy, busy (that's why this issue is appearing AFTER the first of December, and not ON it...) – so I haven't had a chance to really scrunch down on that review I promised. However, – and I'll review it first chance – I did get a look at some of the "HUMANS" episodes and can only say, very favorably, that it's worth your time. There are many interesting moments and lots of food for thought – in a very well presented story. Highly recommended!

From Wikipedia:

**Humans** (stylised as **HUMANS**) is a British-American science fiction television series... Written by the British team Sam Vincent and Jonathan Brackley, based on the award-winning Swedish science fiction drama *Real Humans*, the series explores the themes of artificial intelligence and robotics, focusing on the social, cultural, and psychological impact of the invention of anthropomorphic robots called "SYNTHS." The series is produced jointly by AMC, Channel 4 and *Kudos*. Eight episodes were produced for the first series with a second, eight-episode series scheduled to air in 2016.

NEXT UP: We'll take a look at the recent movie "*Transcendence*".

# Sheer\* Science: Gene Splicing...

(\* In memory of Aharon Sheer (א"ר) – Founding Editor)

## The Prospects of Human Genome Editing

- Prepared by: **Doron Calo, PhD** (CC Sheer Science Editor ☺)

The hottest buzzword in biomedicine today is CRISPR. This latest development in molecular biology might be truly revolutionary, both in technological and ethical terms. This tool (the full name is actually **CRISPR/Cas9**), enables scientists to manipulate DNA with unprecedented ease, and opens up exciting new venues for medicine, taking the original concept of "gene therapy" (where single defective genes could potentially be fixed in cells of human beings) to heretofore unexplored possibilities of **editing whole genomes in an attempt to prevent inherited diseases**.

This could be accomplished by "knocking out" genes found to be defective; to insert or delete nucleic acids in the DNA to fix a buggy "reading frame" (which affects the way that ribosomes use DNA to make protein); to correct mutated genes that might pose a risk to the patient; and also, potentially, to add new genes where no genes have been before. CRISPR/Cas9, along with older, more established gene editing techniques, is advancing rapidly towards clinical application in humans.

So far so good, right? "Editing" bad genes in somatic cells, that is: in cells that make up most of our body, where any change (good or bad) affects the patient alone. But what about germline cells, i.e., sperms and eggs that can form progeny? Applying changes in these cells can affect the patient, of course, but they will also affect his/her kids. This may actually be the purpose of the change – fixing mutated genes so that debilitating diseases such as Huntington's will not affect the baby. However, a growing body of scientists sees grave ethical issues here, since this kind of editing may result in a variety of unpredictable effects on future generations.

They agree that some future uses of genome editing may indeed be found unethical and potentially dangerous; but isn't the prospect of preventing devastating diseases such as sickle cell anemia worth the risk? Besides, banning technologies right at the start is never a good idea. Gene editing tools such as CRISPR need time to mature, and this could only be achieved by **rigorous, careful, and open research**. Clear laws and regulations, which unfortunately are not yet available in all countries, could help science achieve these lofty goals and ensure that genetic diseases are prevented in a safe and effective manner.

### Links:

Don't edit the human germ line

[http://www.nature.com/polopoly\\_fs/1.171111!/menu/main/topColumns/topLeftColumn/pdf/519410a.pdf](http://www.nature.com/polopoly_fs/1.171111!/menu/main/topColumns/topLeftColumn/pdf/519410a.pdf)

The landscape for human genome editing

[http://www.nature.com/polopoly\\_fs/1.18542!/menu/main/topColumns/topLeftColumn/pdf/526310a.pdf](http://www.nature.com/polopoly_fs/1.18542!/menu/main/topColumns/topLeftColumn/pdf/526310a.pdf)

Also, how can we be sure that such tools will not be used on healthy fetuses in order to "improve" them? Who should decide what counts as a legitimate target for improvement, and what isn't? Perhaps one of the gravest possible repercussions here could be the rise of **genetic classism**, where the rich and the connected could secure a genetically bright future for themselves and their families, while others, less fortunate, will be left behind. This could be like in the movie GATTACA without the happy ending. The bottom line, the nay-sayers claim, is that this technology should be banned.

A second party in this heated discussion finds these recent developments rather encouraging. It's true that this technology could be used in a negative way, but this was also said during the 1970s, when recombinant DNA technology was taking its first steps. Banning it then would have deprived science of extremely valuable tools that are used today in a wide spectrum of disciplines.

**THIS JUST IN – Just moments before going to press (i.e. publishing this issue):**

**FROM THE EDITOR (that's me - LB):**

In the news

[Gene editing: Is era of designer humans getting closer? - BBC News](#) BBC News - 3 hours ago

[A Brave New World of designer humans - although still a long way off - has moved a step ...](#)

["Improving" Humans with Customized Genes Sparks Debate among Scientists](#)

[Scientific American - 8 hours ago](#)

**... plus: a short follow-up on last month's story “Did the Kepler Space Telescope Find Aliens?” (about the possible discovery of aliens in KIC8462852)**

That sounded too good to be true, right? Super-advanced aliens building megastructures around their star, structures so massive that they partially occlude the light from the star, and are “accidentally” observed by the Kepler space telescope... Well, it was interesting enough to make the guys at SETI (Search for Extraterrestrial Intelligence) give it a closer look, using the Allan radio telescope in California.

However, I regret to tell you that **no interesting radio signals were picked up by the array**. I still think it was worth trying, however, and besides, that's just one survey. Also, don't forget that this star is about 1000 light years away, so any observation made today is actually one thousand-year-old news. Maybe an incredible alien civilization does exist over there, and in this particular window they just didn't feel like broadcasting anything our way...

Link to the SETI report:

<http://arxiv.org/ftp/arxiv/papers/1511/1511.01606.pdf>

**Just for fun:**

**... For lovers of Marvel Film and TV (+ a DC moment)**

Hey, besides SF I'm also into comics, especially Marvel, and their movies and TV shows. Of course, some are better than others, and I'm not about to go into that – at least not this time 'round (We did present you a brief look at the recent “**Avengers: Age of Ultron (2015)**” movie back in the August 2015 CyberCozen issue).

That having been said, I just saw a trailer of the upcoming Superman – Batman (and Wonder Woman) movie (July 2016?). AWESOME! And even though she gets only a few seconds worth at the end of the trailer, it looks like Gal Gadot as Wonder Woman is going to steal the show. Read and see here: <http://www.slashfilm.com/batman-v-superman-dawn-of-justice-trailer/> They should just rename the film to: “**Wonder Woman and the Two Super Dudes**”

Back to business:

Marvel has put out a lot of movies and TV series recently – with a lot more to come in the next few years. To sort out the past and prepare you for the future, see the following:

<http://www.cnet.com/au/how-to/marvel-cinematic-universe-timeline-avengers/?ftag=YHRbd38a98>

***We'd love to hear your thoughts on any of the above subjects and we may publish some of them!***

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