



SCIENCE-Fiction Fanzine

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חדשות האגודה – אוגוסט 2016 The Israeli Society for Science Fiction and Fantasy

**מזל טוב!!! חגיגות 20 שנה לאגודה****- האירוע המרכזי -****Congratulations!!!****20<sup>th</sup> Society Anniversary**

אנו שמחים להכריז על האירוע המרכזי של החגיגות לציון 20 שנה לאגודה! האירוע יתקיים ב-18.8 בבית ציוני אמריקה בתל אביב. האירוע יכלול אירועים בנושא 20 שנה לאגודה, עם הרצאות של מיטב המרצים, ואירוע מרכזי הכולל חלוקת פרסים, הופעה של ההרכב המוזיקלי "הטרובדורים" והפקה מקורית של רותם ברוכין בבימוי תמר זונדינר. בנוסף, לכל חבר אגודה שיגיע לאירוע תחכה מתנה ייחודית לכבוד החגיגות. במהלך האירוע יחולק גיליון מיוחד של "המימד העשירי", כתב העת האגדי של האגודה, בעריכתו של רמי שלהבת. הכניסה לאירוע בחינם לחברי האגודה, אך יש להירשם מראש בטופס שנמצא באתר האגודה (<http://www.sf-f.org.il/archives/1294>).

**"מפגשים מהסוג הרביעי". סדרת התכנסויות במוזיאון פתח תקווה לאמנות**

בימים אלה מוצגת במוזיאון פתח תקווה לאמנות התערוכה "מדדים! מהמם! מופלא!". התערוכה מבקשת להגדיר את ביטויי החזותי של הדמיון הספקולטיבי ולהצביע על ההקשר ההיסטורי שלו. היא מקבצת יחד וממזגת פרמטרים שונים מבלי לערוך הבחנה בין מה שנחשב כאמנות גבוהה לצורות ביטוי פופולריות. אפשר לחשוב על המדע הדמיוני כעל התגלמותו של הדמיון המודרני, ממד שמשקף בעבודותיהם של האמנים שמציגים בתערוכה זו. **התערוכה פתוחה עד 28.08.16**. בחודשים הקרובים יארח המוזיאון סדרת מפגשים בנושא מדע בדיוני, כולל שיח בתערוכה ומפגש אמן/סופר.

**יום רביעי, 15 ביולי, 19:30** – עבר... הסופר שמעון אדף על האנלוגיה המפתיעה בין האנושי למלאכותי.

**יום רביעי, 6 ביולי, 19:30** – אחד פישוף, במופע פרפורמנס A Lecture on Architecture, ארכיטקטורה ומדע בדיוני.

**יום רביעי, 20 ביולי, 19:30** – יבשם עזגד בשיחה עם המתרגם עמנואל לוטם על היום שלפני והשנים שאחרי הפצצה.

**יום רביעי, 10 באוגוסט, 19:30** – חן שיינברג על סרטו האנימטי ופורץ הדרך 'המזח' של כריס מרקר (1962), ומבקר הקולנוע דורון פישלר על מסעות בזמן בקולנוע הפופולרי ומה הם יכולים ללמד אותנו על ההווה שלנו.

**המפגשים מתקיימים בחלל התערוכה, במוזיאון פתח תקווה לאמנות, ארלוזורוב 30, פתח תקווה. לפרטים ולהרשמה: 03-9286304/26, alexfr@ptikva.org.il, מומלץ לשמור מקומות מראש!**

**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 לזר האגודה

בפייסבוק. Society information is available (in Hebrew) at the Society's site: <http://www.sf-f.org.il>**Readers Write (Keep those letters coming):**

... guess people are on vacation ... haven't hardly heard a peep... but we may be getting a guest write-up next month from a writer promoting what looks to be a very interesting book.

**This month's roundup:**

Plenty of good stuff to read and look at this month ... and we're starting a new series of articles (as promised) on the topic of: Duplicates / Clones/ Twins/ etc. (see "Intro" below).

We will continue to update on the 50<sup>th</sup> anniversary of Star Trek (see the note about the upcoming Leonard Nimoy/SPOCK documentary) and any interesting AI stuff (looking forward to the new TV series "Westworld...").

And on the backburner... a promised Terry Pratchett write-up and completion of the Zombie series in a special all-encompassing issue... I know you're all just dying to see it, but don't hold your breath .. just enjoy the following...

And don't forget the 20<sup>th</sup> Anniversary celebration of the Israeli Society for Science Fiction and Fantasy.

- Your editor, Leybl Botwinik

## The More, the Merrier (Part I) – Duplicates / Clones/ Twins /... etc.

Look-alikes abound in general literature and have multiplied tremendously and in many variations in recent years, thanks to the fun/fantastic potential that Sci-Fi empowers the mind to explore, fantasize, and extrapolate.



We find the classic look-alikes (who meet for the first time) in stories like (I'm sure there are plenty of others):

- **"The Prince and the Pauper"** by Mark Twain – A poor boy and a prince exchange roles
- **"Shver tsu zayn a yid"** [Hard to be a Jew] by Sholem Aleichem – Yiddish play about two young men, a Jew and a Gentile, who switch roles in Czarist Russia.
- **"The Mad King"** by Edgar Rice Burroughs – In a tiny kingdom, the king's cousin (neither knowing the other existed – his mother, the king's aunt, having eloped to America) who is an almost exact match, takes over the throne
- **"Double Star"** by Robert A. Heinlein – An unemployed actor is hired to assume the role of an dying high-level political figure during a period of interplanetary unrest.

And there are the stories of identical twins, but who have different characters or who were brought up in different places under different circumstances switching roles:

- **"Vicomte of Bragelonne: Ten Years Later"** by Dumas – Final installment of his classic D'Artagnan saga: about a prisoner who is French King Louis XIV's identical twin and forced to wear an iron mask
- **"Tsvey Kuni Lemel"** by Abraham Goldfaden – Yiddish musical comedy of two brothers switching roles
- **"Double Impact"** movie with Jean Claude Van Damme who plays twins who were separated after birth

Or stories about twins who were brought up together and have a special affinity one for the other, such as:

- **"Time for the Stars"** by Robert A. Heinlein – One stays on Earth, the other goes on a far ranging space mission. They can communicate telepathically, only the one on Earth ages normally, while the one in space hardly ages and outlives several generations of his brother's children.

Now Sci-Fi has introduced several new elements: robot/android look-alikes, alien or mutant shapeshifters, multiple universes, time-travellers meeting themselves, and (of course) clones:

- In the movies, the liquid metal **"Terminator II"** shape shifting robotic assassin
- In the comics genre we have Marvel's **"Mystique"** – A mutant human shape shifter (even her outer garments reproduce). The **Skrulls** – an Alien spacefaring empire of evil shape shifters. There is also X-Men's **Madrox the Multiple man** – Hit him and he duplicates (like cutting off the Hydra's head). **LMD** (Life Model Decoy) android duplicates of VIPs, created by Tony Stark to throw off assassins.
- DC comics has multiple android **OMACs** as well as **Triplicate Girl** (later **Duo Damsel** when she lost one body) a member of the futuristic **"Legion of Super Heroes"**. Also alternate universe superheroes (several Superman, Batman, etc.) – not to mention Superman robots who sometimes stand in for him. And we shouldn't forget shape-shifter **Martian Manhunter** – last survivor of his Martian species.
- In one of the movies of the **"Resident Evil"** series, based on a video game, the hero discovers that there are multiple clones of her, each sent through a rigorous test that the earlier clones did not survive. She later finds an entire room of dormant clones that she activates. Of course, this means she herself is a clone...
- **NOTE1:** **"The Monster Men"** (1913) by Edgar Rice Burroughs, tells the tale of a scientist who is trying to create artificial life – creating 12 incomplete/failed soulless 'monsters', and seemingly successful with number **"13"** (the original name of the novel was "Thirteen").
- **NOTE2:** We shouldn't forget the wonders of plastic surgery – offering dictators like Saddam Hussein and others to create duplicates of themselves. We find this in the opening scenes of the James Bond movie **"Diamonds are Forever"** where Bond kills several "Blofelds" (head of SPECTRE) undergoing surgery to become decoys, but doesn't get the final copy until later in the movie (or did he...???)

Talking about movies... there is yet another kind of 'duplicate' (recently screened) – but we'll discuss that and offer up the related movie review next month... So stay tuned...

**[\* In the meantime, feel free to write us about your favorite book, or comic, or movie duplicate(s)/clone(s), etc., and also take a look at this, to find your own look-alike:  
<http://www.ilooklikeyou.com/> \*]**

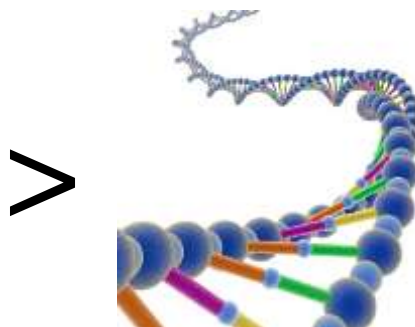
*Memory weather report: Cloudy, but getting clearer a few bits at a time ...*

## Sheer\* Science: The (Weird) Future of Data Storage

(\* In memory of Aharon Sheer (נ"ט) – Founding Editor)

– Prepared by: Doron Calo\*, PhD

(\*our CC Sheer Science editor ☺)



It seems that these days everyone is talking about working in the “**cloud**” – which is basically a buzzword for storing your data in a remote server. To do this efficiently you need lots of computer power, but also lots of **storage capability**. Today, we’re able to store data very efficiently and using a relatively little amount of space: The hard drives of my childhood could store a meager 50Mb, while a similar-sized modern hard disk can store **500 times more data**, and you can also take it around with you! But some other things haven’t changed much, such as **storage reliability**. A hard drive or USB stick can go bonkers anytime and leave you hanging. So obviously there’s still a ways to go until we make the ideal data storage gadget.

This is where *weird science* enters the picture. Today we can **manipulate single atoms** to create nanoscale transistors and magnetometers, so why not use single atoms to store data? A collaboration of scientists from Spain, Portugal, and the Netherlands managed to create such a device by creating a layer of **chlorine atoms** on a copper surface and manipulating them using a method with the sci-fi-sounding name of “**scanning tunneling microscopy**” (STM).

This assembly is only 100 nanometers wide, and can store up to 8K of data. This may not sound like much, but in comparison to current storage capabilities, this atomic memory is more powerful by **3 orders of magnitude**. It could potentially store the entire content of the Library of Congress in a cube only **0.1 mm wide**.

This kind of memory is, however, still in its technical infancy. **Readout speed** is relatively slow, and there’s also the minor problem of **temperature** (the atomic

memory device must be cooled to **-196°C** in order to function).

Fortunately, another groovy technology is much more realistic: **using DNA molecules**. After all, DNA is super stable – we know of bits of DNA that are **20,000 years old** and can still be successfully sequenced – so it can be used for long-term storage. A group at the **European Bioinformatics Institute** (these Euro-scientists are really into data storage!) successfully stored **all of Shakespeare’s sonnets** into a strand of DNA half the length of a typical bacterial genome. Recall the Library of Congress I mentioned earlier? Take its entire content, multiply by 200, and you’ll be able to store it in **1 gram of DNA**.

The interesting thing about DNA-based data storage is that it’s grounded on **encryption** (of 20 individual amino acids), in contrast to atomic memory, which is based on bits that can be either **0 or 1**.

Another cool thing is that you can make as many copies of the DNA as you like, for extra backup, but you'll only need **one**

**strand** to recover all of your data, so even it gets scattered or **contaminated**, the data is still recoverable.

The actual **reading** of the DNA is quite straightforward these days (and cheap!). The big disadvantage lies in the **recording** of the data. Even state-of-the-art facilities can take **weeks** to synthesize DNA, and the price is pretty steep – about **\$5000** to assemble a 3000-amino-acid-long DNA sequence. But I can see how people may think it's worth the money: Imagine encoding a secret message and storing it **in a bacterium**, and then burying it in a time capsule or blasting it to outer space for our friendly alien neighbors to read. How's that for a cool opening for a science fiction story?

#### Links:

##### DNA-based encrypted storage

<http://www.darkreading.com/vulnerabilities---threats/sandia-labs-researchers-build-dna-based-encrypted-storage-/d/d-id/1326267>

##### 1-kilobyte atomic hard drive

<https://techcrunch.com/2016/07/18/with-one-atom-per-bit-this-1-kilobyte-hard-drive-is-only-100-nanometers-wide/>

##### History of Data Storage – to 2008:

<http://royal.pingdom.com/2008/04/08/the-history-of-computer-data-storage-in-pictures/>

##### – to cloud:



<http://www.zetta.net/about/blog/history-data-storage-technology>

\*

For lovers of Star Trek and Spock (June 2016), here's a poll containing pics and quotes from Spock' wisdom: Sampling presented here. See the rest at: [http://www.imdb.com/poll/skm0ySIXPws/?ref=po\\_re/](http://www.imdb.com/poll/skm0ySIXPws/?ref=po_re/)

## Poll: Spock Wisdom

A poll by Rafael M: Which of these quotes from Spock, the iconic Star Trek (1966) character brilliantly portrayed by the late Leonard Nimoy is your favorite?

	<p>Leonard Nimoy in "Star Trek" 1966 NBC</p> <p>Change is essential to the process of all existence</p>
	<p>Leonard Nimoy in "Star Trek II": The Wrath of Khan (1982)</p> <p>Logic is the beginning of wisdom, not the end</p>



Leonard Nimoy in "Star Trek" 1966 NBC

Computers make excellent and efficient servants, but I have no wish to serve under them.

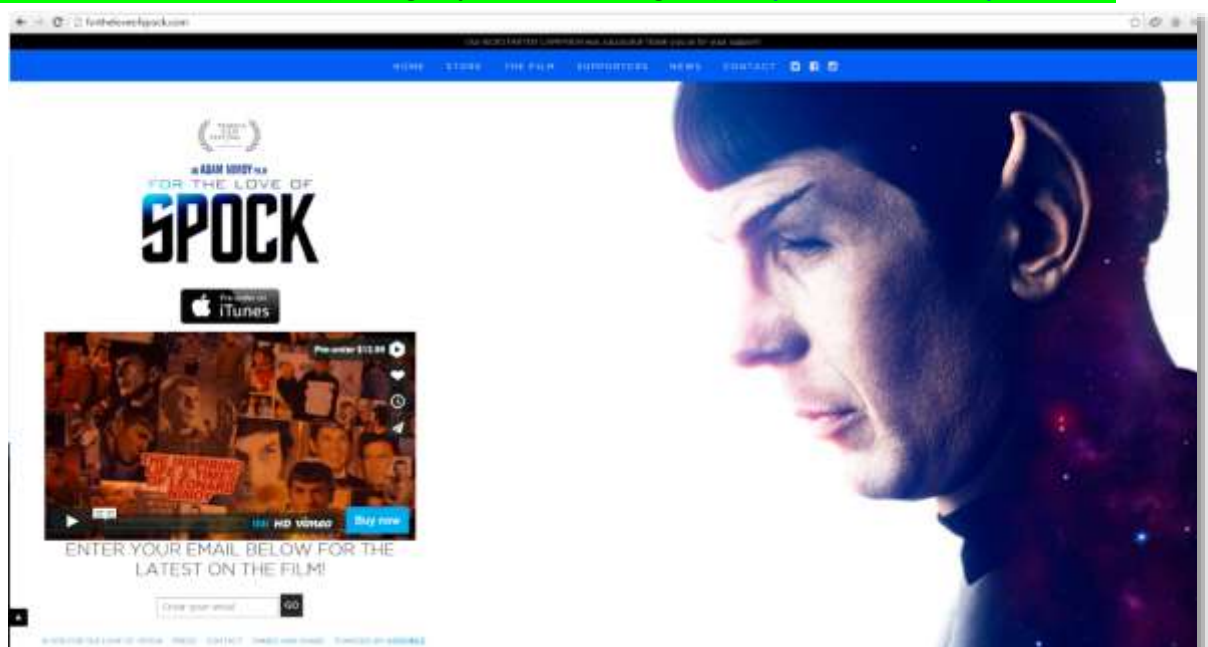


Leonard Nimoy in "Star Trek" 1968 NBC

May I say that I have not thoroughly enjoyed serving with Humans? I find their illogic and foolish emotions a constant irritant.



And... coming up September 9<sup>th</sup>, a documentary entitled "*For the Love of Spock*". Check out the trailers on IMDb: [http://www.imdb.com/title/tt4572820/?ref=vi\\_tt\\_t\\_hm\\_hp](http://www.imdb.com/title/tt4572820/?ref=vi_tt_t_hm_hp)  
Or see the official website (and sign up to their mailing-list): <http://fortheloveofspock.com/>



### More SPACE stuff:

Toni Smith has put up an impressive array of space-related pictures on "pinterest" (See: [https://www.pinterest.com/colormagicgirl/out-of-this-world/?utm\\_campaign=bprecs&e\\_t=98f4df45de25429e8feb5cb5885e4fee&utm\\_content=64106063384909741&utm\\_source=31&utm\\_term=4&utm\\_medium=2004](https://www.pinterest.com/colormagicgirl/out-of-this-world/?utm_campaign=bprecs&e_t=98f4df45de25429e8feb5cb5885e4fee&utm_content=64106063384909741&utm_source=31&utm_term=4&utm_medium=2004))

Here are just a few examples of the many colourful and informative images:



SPACE.com

ABOVE: THE INTERNATIONAL SPACE STATION

## Inflatable Space Stations

Bigelow Aerospace will provide a plug-in module to expand living space on the International Space Station. Larger expandable modules could someday become free-flying space stations themselves.

**BEAM**

The Bigelow Expandable Activity Module will be carried into orbit by SpaceX's Falcon 9 rocket, stowed in the cargo trunk of a Dragon capsule.

WEIGHT: 3,000 pounds (1,360 kilograms)  
LENGTH: 33 feet (4 meters)  
DIAMETER: 20.5 feet (3.2 meters)

SPACE X DRAGON CAPSULE

UNPRESSURIZED CARGO SECTION

WALSH TUNNEL

## The Future: Alpha Station

BA 330 modules are being developed for use as a stand-alone space station. Larger than ISS's existing Destiny habitation module, each BA 330 can house up to six astronauts. Bigelow plans a two-module outpost called Alpha Station.

BA 330 EXPANDABLE MODULE

INTERNAL VOLUME: 11,854 cubic feet (330 cubic meters)  
LENGTH: 45 feet (13.7 meters)  
DIAMETER: 22 feet (6.7 meters)

VISITING CREW SPACECRAFT

ISS DESTINY MODULE IN SCALE

## Moonbase Bigelow

Further in the future, inflatable modules could enhance the living volumes of deep-space stations, lunar bases or even Mars expeditions. (PHOTO: BIGELOW AEROSPACE)

ROVER

PRESSURIZED LIVING AREA

PRESSURIZED ROVER

SUNAR LANDING MODULES

SOURCE: BIGELOW AEROSPACE, NASA

KARL TATE / © SPACE.com

NASA'S PLAN TO PUT THOUSANDS OF PEOPLE IN SPACE COLONIES

AN OLD IDEA

O'NEILL CYLINDER "ISLAND THREE"

STANFORD TORUS

BERNAL SPHERE "ISLAND ONE"

paycom

## THE COST OF LIVING ON MARS

SPACE TRAVEL IS EXPENSIVE

THE COST OF TRAVELLING

THE COST OF A MILE

THE COST OF SUSTENANCE

PHONE HOME

TOTAL COST

paycom

## And just in case you thought it's all SF... here's the Mars plan:

### SPACE Anyone?

[NASA searching for teachers and farmers - for positions on Mars](#)

#### NASA searching for teachers and farmers - for positions on Mars

By Becca Noy

US space agency NASA has started a new recruitment campaign, in search of those who would like to see themselves...



\*

## Free SF e-books available from *Isaac Hooke* and *Ethan Jones*:

To my thriller readers:

First of all I wanted to let you all know that I released the audiobook version of *Clandestine* last week on Audible, and *audiobookboom* is giving away some review copies, so if you're interested you can apply here: <http://audiobookboom.com/clandestine>

In other news, I've been looking for another thriller author to help fill the long waits between successive Ethan Galaal installments, and I believe I've found someone! His name is Ethan Jones and he writes about Canadian operatives who take on undercover missions in the Middle East, usually Iraq and Syria. The main character Justin Hall is basically the Canadian version of Ethan Galaal, and Carrie O'Conner is his Bretta Storm.

I talked to Ethan Jones and asked if he could arrange a special discount on his books for you guys. Well, he went beyond a discount... he's offering his two latest novels for free, exclusively to members of my list. To get them, all you have to do is sign up to his reader group here:

<http://eepurl.com/b391PP>

You can also join his advance review team on that same form by writing yes in the second field.

I'm linking to the two standalone books on Amazon so you can read the descriptions and see if they catch your interest:

Saudi Strategy - Justin Hall - <http://www.amazon.com/dp/B017E0ZFX0>

Priority Target - Carrie O'Conner - <https://www.amazon.com/dp/B00RC6JVDC>

Happy reading!

- Isaac [follow on Twitter](#) | [friend on Facebook](#)

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## NEXT MONTH: Duplicates, Clones, and more + (maybe... eventually...) some Pratcher!

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

For Comments: E-mail: [levbl\\_botwinik@yahoo.com](mailto:levbl_botwinik@yahoo.com). Tel: Leybl Botwinik 054-537-7729

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And <http://cfanzines.com/CyberCozen/index.htm>

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