SCIENCE-Fiction Fanzine **Vol. XXVIII, No. 07; July 2016**

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

מועדון הקריאה של חודש יולי: ** לא התקבל מידע **

"מפגשים מהסוג הרביעי", סדרת התכנסויות במוזיאון פתח תקווה לאמנות

בימים אלה מוצגת במוזיאון פתח תקווה לאמנות התערוכה "מדהים! מהמם! מופלא!". התערוכה מבקשת להגדיר את ביטויו 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 שמשתקף 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 ביוני, 19:30** – עבר...הסופר שמעון אדף על האנלוגיה המפתיעה בין האנושי למלאכותי~~

יום רביעי, 6 ביולי, 19:30 אהד פישוף, במופע פרפורמנס A Lecture on Architecture – אלקטרוניקה חיה, טקסט וצילומי ארכיון הופכים לתמהיל פואטי של סאונד, 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 האניגמטי 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 תקוה 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 לדף האגודה

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

Readers Write (Keep those letters coming):

I kind of liked the mailing without the attachment. Because it wasn't "there", I had to find it in the archives. So, I got to find the site where all those issues are!

…

There were one or two typos, but, all-in-all, an ***excellent*** effort.

Anyway, as usual, I have things to write for future issues and **absolutely** no time to write them.

I have stopped praying for a 40-hour week, and started to pray for a 40-hour DAY!

…

In any case, **really** good effort!! Have a SUPER Shabbat!!!

Warmest and friendliest regards,

-Reuven Frank

Your latest issue on efanzines.com caught my interest and I have a couple things to say about it.

First off, I thought the memorial issue on Aharon Sheer (May 2016) was very nicely done and beautiful, and I thank you for sharing some of the feedback on it.

Sheri S. Tepper is a writer that I have never read before, despite the fact that she has been extremely prolific over the years. After reading the review of *The Fresco*, I may still need to become acquainted with her work. The plot summary makes the novel sound interesting, and I can understand why the solution of turning Jerusalem into a black hole, with the aliens essentially holding the Old City hostage until factions work out their differences, doesn't address the deeply rooted problems that have plagued the Holy Land for millennia. It sounds too easy, a cop-out way to deal with the issues you raise, so this would make me cringe a bit at this novel, too. Even so, Tepper has so many books on the shelves at our local Half-Price Bookstore (maybe I shouldn't say that here, but too late now) that I think I just might pick up a couple of her novels and see what I might be missing.

"Brainjacking" is an interesting concept, one fraught with possibilities both positive and negative. I have never really gotten into the Cyberpunk genre, even though I do own books by William Gibson (*Neuromancer*, of course, and *Pattern Recognition*), and Philip K. Dick wrote many stories that could easily be classified as Cyberpunk (the story "Minority Report", and the classic *Do Androids Dream of Electric Sheep?*, among others). A few years ago I read a novel by Charles Stross, *Halting State*, that was quite interesting and involved a virtual reality bank robbery via a role playing game with dragons and orcs, and I'm wondering if this novel is considered Cyberpunk as well? Hacking into medical devices sounds so Dickian that it's frightening. But I don't know much about this subject; even so, this article is definitely -- wait for it -- food for thought.

See what I did there? … I think I had better stop there before you delete my address from your email listing. Sometimes I just can't resist making a bad pun.

All the best,
John Purcell [Publishes "Askance" fanzine – see http://efanzines.com/Prior/]

More AI in the news:

Hi-Flyin' AI: Artificial intelligence running on $35 off-the-shelf computer bests real humans in aerial combat test | National Post

By Daniel Kaszor
'In terms of emulating human reasoning, I feel this is to unmanned aerial vehicles what the IBM/Deep Blue vs. Kasparov was to chess," Kelly Cohen a University of Cincinnati aerospace professor said in a statement. "In a lot of ways, it's no different than when air combat began in (the First World War). At first, there were a whole bunch of pilots. Those who survived to the end of the war were the aces. Only in this case, we're talking about code."
…Read more here:
http://news.nationalpost.com/news/world/artificial-intelligence-running-on-35-off-the-shelf-computer-bests-real-humans-in-aerial-combat-test

Time travel anyone?

… well sort of. I guess, if you work for these people, you are either in a suspended animation time zone or working for some kind of 'modern' Luddite firm:

10 Organizations That Use Horribly Outdated Tech

10 Organizations That Use Horribly Outdated Tech

We all know how much of a pain it is to upgrade the operating system on your computer. Pair that with the fact that much of the software run by big organizations is purpose-built for them and there's no guarantee that it will even work on a more modern machine. The bigger an organization, the more risk-averse they tend to be as well, and you can't blame them for holding back on upgrades for fear that they might jeopardize business.
The end result is that companies and agencies all around the world are using some ***shockingly obsolete systems*** to handle incredibly important tasks. Come with us as we unearth the ancient machines that run some of the world's biggest organizations.

Read/See more here:
http://www.pcmag.com/slideshow/story/345364/10-organizations-that-use-horribly-outdated-tech

Just as I was closing this issue… just had to add this one:

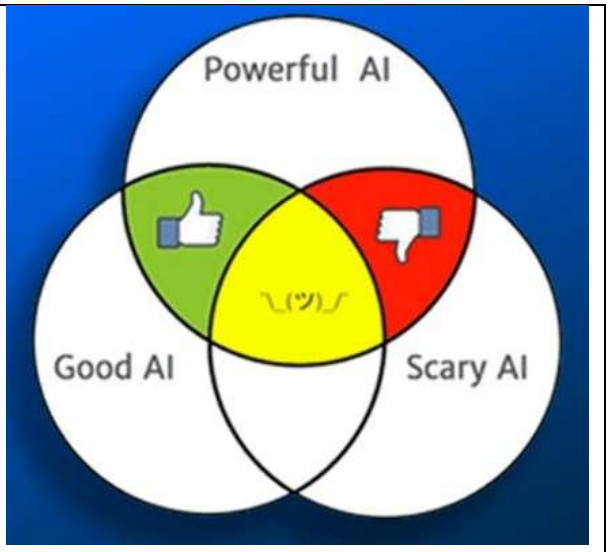
FROM THE EDITOR: I was putting the finishing touches on this issue when I got this last minute article via LinkedIn, that I felt just needed to be presented to our readership. Excellent food for thought. In fact, I'm planning on writing a … well not exactly a rebuttal, but more like calling out the writer and his readers to a greater challenge… but no time for that now. Enjoy this read, and send me your thoughts:

Is AI The Worst Mistake In Human History? (Published on June 29, 2016)

From: **Big Ideas & Innovation**, **Editor's Picks**, **Entrepreneurship**, **Technology**
By: **John Battelle** Founder, EIC, CEO, NewCo

One of the most intriguing public discussions to emerge over the past year is humanity's wrestling match with the threat and promise of artificial intelligence.

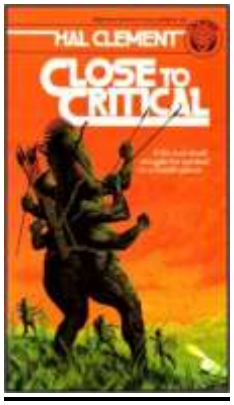
AI has long lurked in our collective consciousness—negatively so, if we're to take Hollywood movie plots as our guide—but its recent and very real advances are driving critical conversations about the future not only of our economy, but of humanity's very existence.



In May 2014, the world received a wakeup call from famed physicist Stephen Hawking. Together with three respected AI researchers, the world's most renowned scientist warned that the commercially-driven creation of intelligent machines could be "potentially our worst mistake in history."
…Read more here: https://www.linkedin.com/pulse/ai-worst-mistake-human-history-john-battelle

*

Book Review: Close to Critical – by Hal Clement



Ballantine books, 1964. 189 pages.

This is a book that would have had great potential, if the story had been (re-)written today, instead of more than a half-century ago.

I had never previously heard of this SF writer, but the back cover of this volume states that Hal Clement is "…the author of the Science Fiction Classic *Mission of Gravity*" (1954) –which I also never heard of, but apparently carried some weight (pun intended) in the world of SF literature.
Here's a quick note about the author:

From: https://en.wikipedia.org/wiki/Hal_Clement
***Harry Clement Stubbs** (May 30, 1922 – October 29, 2003), better known by the pen name **Hal Clement**, was an American science fiction writer and a leader of the hard science fiction subgenre. He also painted astronomically oriented artworks under the name **George Richard**.*

In 1998 Clement was inducted by the Science Fiction and Fantasy Hall of Fame and named the 17th SFWA Grand Master by the Science Fiction and Fantasy Writers of America (presented in 1999).

Having been serialized in 1953's *Astounding Science Fiction* and then published as a hardback in 1954, I can readily understand why I did not enjoy the book. There are some interesting aspects to the plot, but all-in-all, I found it too technical on the one hand, and rather childish on the other. There are also some issues regarding exploitation of aliens by the 'superior' humans – which rather fit in with the 1950's culture, but an author today would not likely get away with this.

Technically speaking, the plot reminds me of my friend Mark's comment about certain types of jokes. He categorized jokes as being either 'naturally funny' or 'engineered'. The engineered ones are those that start off with a punch line, and then a 'story' is built around it. I believe that this may have been the origin of Clement's story: a scientific, problem and how to handle it.

In the quote about the author, above ("…*a leader of the hard science fiction subgenre*…"), this clearly fits in with my feeling about the book: Clement is very technical in most aspects of the content regarding the purely scientific issues.
Here is some insight on the scientific background of the story:

From: http://variety-sf.blogspot.co.il/2008/02/hal-clement-close-to-critical-novel.html
The most curious feature of the world dissected in this book is: the temperature at its surface & extremely dense nearby atmosphere varies in a very, very, narrow band - around the boiling point of water. This almost fixed temperature is about 370ºC, just a little below the 374ºC that is the "critical temperature" of water (the reason for the title). The most interesting aspects of the story are about water/steam transition when temperature varies even slightly, & that density of water here is scarcely more than that of steam.

The consequences include: complete boiling away of oceans in the morning, & getting refilled each evening; frequent earthquakes; evening "raindrops" several tens of feet in diameter with scarcely higher density than water that lazily drift down & can be boiled away while still high in the air by barely increasing their temperature by holding a torch several meters underneath, ...

NOTE: The above blogspot's write-up about the novel covers more than just the science of the book. It covers the entire plot as well – worth looking at if you want to know more than what I'm going to tell you.

The main plot background is a planet "Tenebra" that has an atmosphere that is impossible for humans to adapt to. So, to explore the planet and study the fauna and in particular the sentient life form, the scientists send down a robot. For a period of 20 years, the scientists are monitoring the place, but via the robot, the scientists have actually adopted some of the fauna…

Think about it: You're monitoring baby aliens from across space, via a mechanical object, and then teaching and training them to be somewhat like you (at least culturally). This seems to me to be some form of kidnapping. When/if these adopted sons and daughters meet their own kind, on their own planet (it's not likely they will be taken off-planet) – there will be nothing common culturally, linguistically or emotionally with their progenitors.

Talk about not interfering with the native (intelligent) life. I don't think these scientists would be allowed into the "Star Trek" Federation whose prime directive is not to interfere (or avoid interfering) with the native population.

I'm just thinking of the logistics of keeping track of and educating the aliens 24/7. True, parents do that for their own

kids. Still, this requires some very deep emotional attachment, and maybe some slightly ego-maniacal 'control' compulsion on the part of the scientists (something like Christof [played by Ed Harris] in "*The Truman Show*").

The second aspect of the story I found disconcerting was the sub-plot of two children on the scientists' spaceship entering a shuttle and accidently launching it and crash-landing on the forbidding planet. This seemed like a 'patch on' to the main story line – as if the author needed to come up with a plausible device to sell his story to an audience – preferably a young readership.

In summary, although there are some good concepts in the book, I wouldn't recommend the story for its literary value – maybe just for the Science in it.

*****

And speaking of which …

Sheer* Science: Cubes in Space: the World of CubeSats

(* In memory of Aharon Sheer (ז״ל) – Founding Editor)

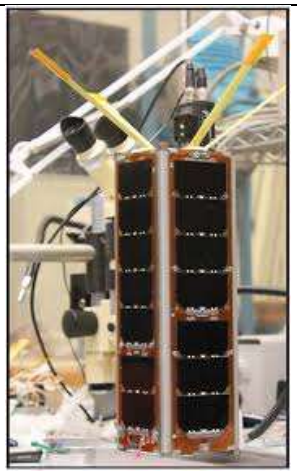
– Prepared by: Doron Calo*, PhD **(*our CC Sheer Science editor ☺)**

In case you didn't know, the late **Arthur C. Clarke** was credited with first dreaming up the concept of **geosynchronous satellites** – meaning spacecraft that are flying in parallel to the ground and enabling long-distance communications. But the common concept of big, clumsy satellites is now giving space (pun intended) to an old-new idea of **mini-satellites** – smaller craft with a wide array of uses, some theoretical, some that are already put into practice today. Specifically, I'm talking about small satellites that are composed of several cubical (**10 x 10 x 10 cm**) units, aptly nicknamed **CubeSats**. A typical CubeSat contains up to 12 such units, and although the concept is not new, it has been gaining quite a momentum in recent years.

The first CubeSats made their appearance in 1999 as an **educational tool**, offering students the opportunity to design and fly relatively simple, cheap satellites. But beyond the first prototypes, CubeSats has developed rapidly due to advances in propulsion, sensors, software and hardware, data storage, optics, compression, and solar power.

Thanks to these advances, CubeSats went beyond education and began to take on full-time space missions, first as **supplements** to major satellite missions (such as additional communication relays), and later as **independent projects** in a wide selection of scientific disciplines. And although their small size and extremely limited payload pose an inherent limitation in comparison to the "big boys", CubeSats can offer a higher degree of **flexibility**, and can make up for their relatively low-power equipment with sheer numbers, that is, by having multiple units operate cooperatively as so-called **"constellations"** of CubeSats.

CubeSats have shown their capability to produce quality results in **solar and space physics**. Craft such as the Radio Aurora Explorer **(RAX)** is a good example of a focused CubeSat mission in which a small satellite augmented an Earth radar to measure irregularities in the **ionosphere**.



Another example is the Colorado Student Space Weather Experiment **(CSSWE)**: this CubeSat works cooperatively with balloons and full-sized satellites to investigate space. A cool future application for CubeSats will utilize many units as a **swarm** acting in a coordinated manner to enhance their sensing capabilities. The planned Magnetospheric Constellation **(MagCon)** mission will consist of **36 CubeSats** that will study the Earth's **magnetosphere**.

Earth science also benefits from the emerging field of CubeSat applications, either as individual units or as constellations. For example, the Temporal Experiment for Storms and Tropical Systems Demonstration **(TEMPEST-D)** is designed to measure cloud precipitation; the Cyclone Global Navigation Satellite System **(CYGNSS)** will assist in the measurement of winds, and will enable greater coverage than any single, full-scale satellite could deliver. CubeSats could also be used for **surface imaging** and for measuring the amount of **solar irradiation** that reaches Earth (a critical climate factor).

These missions could also go beyond Earth: the **LunaH-Map** CubeSat is planned for a low-altitude **lunar orbit** and will measure hydrogen levels; the Japanese **Hayabusa** satellite was a full-sized craft that carried the smaller Minerva hopper (which actually wasn't cube-shaped) that was meant to take pictures of a **near-Earth asteroid**. Although it failed to deploy, the mini-satellite did manage to capture some nice photographs of its mothership.

The list of potential CubeSat applications goes on and on. They can be used to study the behavior of materials in **microgravity**; their small size make them an attractive platform for studying how **plants and microorganisms** grow (or fail to grow) in space, how their **genome** changes in such conditions, with the hope of deducing in larger scale (thus enabling educated guesses regarding the effect of space on the **human body**).

Of course, like normal satellites, CubeSats also pose significant challenges. First and foremost is the issue of **orbital debris** – it may be a relatively small problem now (Earth currently has around **150 CubeSats** in orbit, which is about 1% of all objects in orbit – and all of them are tracked), but as the technology gains momentum, this may become a serious headache.

Another problem is the **ride to space**: the quest for cost-effectiveness has resulted in most CubeSats reaching orbit as **secondary payloads** on bigger spacecraft. This imposes a restriction on the number of available orbits, and in order to solve the problem, smaller rockets are being developed, but their success is yet uncertain.

Will CubeSats become the next fad after drones and unmanned aerial vehicles (UAVs)? I guess we'll just have to wait and see. No matter how you look at it, the potential is there….

Links:
http://www.nap.edu/catalog/23503/achieving-science-with-cubesats-thinking-inside-the-box
http://spacenews.com/op-ed-incredible-shrinking-spacecraft/

*

For lovers of Star Trek and lovers of great visual media, CNET has this great online article about one of the female stars. This woman is a role model for the future of women – watch out ☺!!

BOLDLY GOING WHERE NO ONE HAS GONE BEFORE

Zoe Saldana loves roles set in space. She travels beyond Earth again this summer in her third appearance as communications officer Lt. Nyota Uhura in "Star Trek Beyond."

by CNET's Connie Guglielmo / June 7, 2016

Zoe Saldana has battled Klingons, a genocidal maniac from the Kree Empire and an evil corporation intent on plundering Pandora in the Alpha Centauri star system.

Starring in some of the biggest sci-fi franchises in recent years — as Lt. Nyota Uhura in "Star Trek," the assassin Gamora in "Guardians of the Galaxy" and Neytiri in "Avatar" — wasn't a fluke. Saldana, a dancer who got her start in the 2000 teen drama "Center Stage," says movies set in space offer female actors something that's hard for them to find: strong, meaningful characters.
Read more: http://www.cnet.com/special-reports/zoe-saldana-boldly-going-where-no-one-has-gone-before/ .

NEXT MONTH: Duplicates vs. Clones + (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: **leybl_botwinik@yahoo.com**. Tel: Leybl Botwinik **054-537-7729**
Editor: Leybl Botwinik. Founding Editor: Aharon Sheer (ז"ל). Logo by: Miriam Ben-Loulu (ז"ל).
For **free email delivery** (PDF format) write to **leybl_botwinik@yahoo.com**