



SCIENCE-Fiction Fanzine

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

מועדון הקריאה של חודש יוני: בירושלים יעסוק בספר מלחמת האדם הזקן מאת ג'ון סקאלזי (ינשוף, 2006), ויתקיים ביום שלישי 21/6, ב-20:00 במסעדת נגילה, משיח ברוכף 5, ירושלים. מנחה: יהושע ברנהרט.

ובספר מכונת הזמן המקרית מאת ג'ו הילדמן (יפב, 2011): ביום חמישי 23/6, בשעה 20:00, בקפה גרג, ויצמן 2, תל-אביב. מנחה: יפנה מורש. וכרמיאל: ביום ראשון 26/6 בשעה 19:00 בספרייה העירונית, רח' צה"ל 107. מנחה: סטלה גנגריטביץ.

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

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

#### Readers Write:

We had some good feedback on the Aharon Sheer (z"l) memorial issue from his son Yaron, his sister Lora, his longtime friend David Gaines, and others. Here are some samples:

**From: Gary Roth**

Leybl - Congrats on another amazing issue ! I tend to prefer newer, forward-looking material to read (like Sheer Science - a total gem!), yet I'm really enjoying the historical ride that you are providing -- thank you very much! My favorite paragraph was the one about how Aharon named the publication; how ironic to call it something that persuades against one's will, and at the same time get away with the moniker by not asking the club membership's/readership's opinion! Of course, the opening lines of his guest-of-honor speech were a great attention-getter, and I wish that I could have been there to hear his entertaining wit in person (especially considering that he didn't think of himself as a sparkling speaker).

I appreciate the appearance of the letters-to-the-editor, and in particular find the color highlighting to be visually quite helpful.

Gary

ALSO:

Your readers might be interested to know that the Rehovot Science Fiction Club acted as a movie theater at times -- I remember watching a Timescape-type movie featuring Kris Kristopherson with a respectable number of people once (I don't recall who hosted the event), and one time a movie was shown at my apartment on a Friday long before Shabbat with only Aharon, myself and one other gentleman in attendance.

I'd also like to point out that, while most of the material in CyberCozen has been in English, there was a period of time that a considerable amount of Hebrew appeared in its pages. Further, at least one of the Club's members was a native Hebrew speaker. I joined the group circa 1996.

Gary

**From: Devra Kunin**

Liber Leybl,

Much enjoyed the tribute issue! Re silicon-based life, if glass people count, I vote for Elinor Wylie's charming fantasy *The Venetian Glass Nephew* (1925).

Zay gezunt,

Devra

LB: Looks fascinating. See: <http://www.enotes.com/topics/venetian-glass-nephew> and also

<http://www.goodreads.com/book/show/3320199-the-venetian-glass-nephew>

#### More AI in the news:

### Google's Parsey McParseface (Yep) Will Help AI Understand English

Developers will be able to fiddle with the underlying technology powering Google's powerful natural language software.

**Boaty McBoatface** was so last week; this week it's Parsey McParseface, courtesy of Google.

The search giant this week open-sourced its neural network framework, **SyntaxNet**, which includes English parser Parsey McParseface, a tool developers can use to analyze English text. Translation: developers will be able to fiddle with the underlying technology powering Google's powerful natural language software so that apps and voice assistants and robots can better understand what English-speaking users want.

"One of the main problems that makes parsing so challenging is that human languages show remarkable levels of ambiguity," Google says in a **blog post**. "It is not uncommon for moderate length sentences—say 20 or 30 words in length—to have hundreds, thousands, or even tens of thousands of possible syntactic structures. A natural language parser must somehow search through all of these alternatives, and find the most plausible structure given the context."

...Read more here:

<http://www.pcmag.com/news/344436/googles-parsey-mcparseface-yep-will-help-ai-understand-en>

### More Robotics in the News:

#### **How an 'Ingestible Origami Robot' Could Help You Avoid Surgery**

The robot could be used to retrieve swallowed objects without the need for surgery.

Researchers from three universities have developed what they call an "ingestible origami robot" that can heal you from the inside.

The tiny robot, developed by researchers at Massachusetts Institute of Technology, University of Sheffield in England, and the Tokyo Institute of Technology, can "unfold itself from a swallowed capsule and, steered by external magnetic fields, crawl across the stomach wall to remove a swallowed button battery or patch a wound," according to a **news release**.

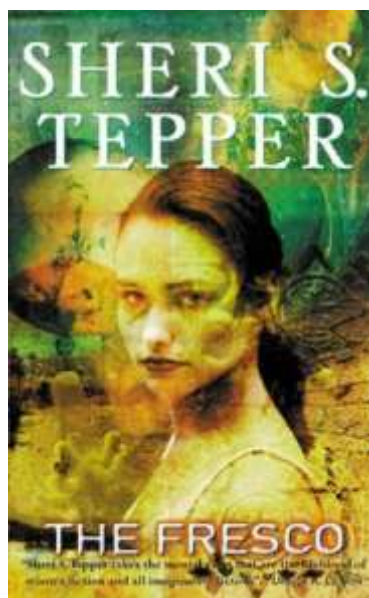
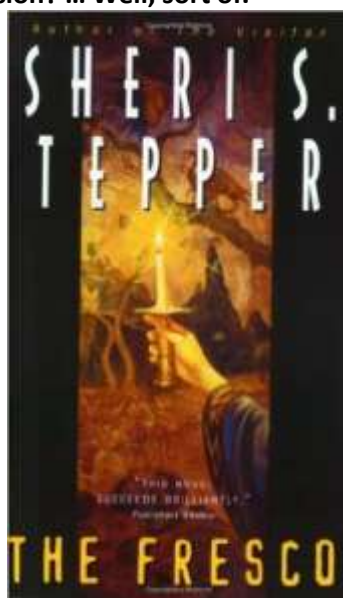
It can also deliver medicine to designated areas of the body.

...Read more here:

<http://www.pcmag.com/news/344459/how-an-ingestible-origami-robot-could-help-you-avoid-surge>

## **Book Review: The Fresco – by Sheri S. Tepper**

Another Alien Invasion? ... Well, sort of.



Publisher: Harper Voyager (2002)

**406 pages**

This is my first introduction to Sheri S. Tepper. There were many parts of the book I didn't like, and at the same time, there were many parts that I did. Normally, if I find that a book's content or style does not reach out to me, then I'll start skimming through it, with the hope that I'll land on some part that will catch my interest. In this case, there were many 'hopeful' parts that I had hoped would be expanded on. Some were done very well, and others left me wanting a better conclusion. There were also parts I just skipped over. The book has many complex things happening in parallel, some of which are relevant, and some – in my humble opinion – not. I felt that Tepper wanted to squeeze in as much as she could into one novel, without developing some parts, and also adding – what I thought – were irrelevant issues (**including the title of the book itself**), or at least might have been taken over into a sequel, or spread the story out into two books.

### **Let's first analyze some of the key characters:**

The main hero throughout the book is the very likeable Benita Alvarez-Shipton. She is a housewife whose husband, Bert, is a (mostly) unemployed good-for-nothing and often drunk painter who abuses her and exploits her good heart. She has two children off at University: the boy, Carlos, taking after the father and the girl, Angelica, more like the mother.

I wonder, if the names that Tepper selected may seem to say something about them: Benita = good, Angelica=angel. Bert= ... according to most Internet sources I looked at, is supposed to mean "...sophisticated, extremely intelligent and exceedingly well-endowed". At the same time, it is one of those names that is actually either the beginning part, or the tail-end of a more complete name: Albert, Bertram, Herbert, Hubert, etc. In short, he is a person with potential, but does not use it, preferring to blame others for his dysfunctionality or exploit them to his advantage – whichever works best for him (not to mention, do almost anything for drinking money...).

The son's name, Carlos doesn't tell me much – maybe a hint at the terrorist? Benita's Spanish background does come into play a great deal throughout the story. Oh, and there is also Sasquatch – Benita's faithful dog.

Benita's job in a book shop and distributor "The Written Word" keeps the family afloat, and has also enabled her to accumulate a vast array of knowledge and handy

information over the years – she reads a lot and has taken Internet courses and watched a lot of Public Broadcasting educational shows to expand her knowledge. She's smart and she's sharp, but very insecure.

Bert on the other hand, besides not appreciating her, is currently under house arrest for drunken driving when he ran over two people, killing one and injuring the other – and is now awaiting trial. The legal system where they live, has let him stay at home, pending trial, regardless of the fact that he is a danger to himself and to society, because the judge considers him to be a "working man" (he sometimes shows up for work at her father's junkyard). This is Tepper at her best, taking down norms and criticizing useless (i.e. bad) laws and their corrupt caretakers.

So, this is the family background, and since the title of the book "Fresco" deals with Art, I'll take advantage of this theme, to say that Benita and her family are the main colours of the palette that Tepper works with in painting the story. The canvas is our planet (mostly in the USA), and then there are other colours that Tepper will mix and match to create the full Science Fiction picture (plotline), as we are about to see.

### **And now onto the plot:**

Somewhere, far, far away in Outer Space (I think the astronomic coordinates are given, but for the sake of this write-up, they're irrelevant), a federation of planets, led by the Pistach aliens, is interested in having Earth join them.

However, in order to do this, there are certain criteria that the intelligent population

must meet. At the same time, there is a 'catch' in the process. Until now, Earth was off the beaten track, and none of the federation planets was aware of its existence. Now that the process has started, Earth has become a potential target for some of the federation species/planets that would be more than happy to hunt and/or harvest humans. In other words, **until** Earth is accepted into the Federation of planets, Earth can be exploited freely, and those aggressive species/planets – though they are restrained from harming any other federation member – are free to do what they will with Earth (until, if and when, it joins up).

In a kind of 'take-me-to-your-leader' scenario, two alien Pistach (federation representatives) select Benita to be their go-between to set up a meeting with the US president (the US was chosen as the starting shot for communicating with Humanity). Benita, as mentioned, is a very insecure beaten housewife. In fact she was just contemplating and planning to leave her husband – but couldn't quite make up her mind about this.

The aliens, in addition to giving her the important job of going to Washington with a special communications package for the US president (as a message of peace and an introduction to the federation) – give Benita 2 gifts: a wad of several tens of thousands of real US dollars (which she tells no one about), and they somehow manipulate her mind and/or heart to become more sure of herself. They give her the gift of self-confidence (or more probably enhance her own potential).

From here on, Tepper takes us through a complex series of events: 1) Benita dumps her husband and secretly takes up residence in Washington in a new job, and also continues to be the liaison between the aliens and the US government; 2) The 'bad' federation aliens begin sampling the humans: hunting and eating them. In fact there are 3 different species of these 'bad' aliens. The 'bad' aliens also make contact with a corrupt US Senator and his strong-arm men

and begin a conspiratorial plot to overthrow the US government so that they can foil the 'good' federation aliens. If they can get away with this, they will make Earth a pure hunting grounds, offering the bad aliens harvesting rights to cull the population [in making contact with the US government a 'good guy' FBI agent works with Benita to foil this plan]; 3) The 'good' federation aliens – the Pistach – in order to speed up the process of Earth being accepted into the federation (and now, also because of the 'bad' aliens' nefarious plot, making it even more urgent), initiate a series of events to "upgrade" Earth. i.e. unlike in Star Trek they actually intervene in Earth politics, society, etc.

For example, the federation could never tolerate the exploitation of women such as under Islam – so they do the following: They make the women who are being exploited uglier and smellier in the eyes of their men. The more the husband/male exploits, etc. his womenfolk, the more repugnant they become to his senses. The women, on the other hand all seem normal to each other. In order that the males not harm the 'ugly' women, any hand lifted against them boomerangs. I.e. if a man tries to beat his wife with a stick, the arm holding the stick will swing back and hit him in the face and not the woman.... Interesting solution.

**[BEGINNING WARNING FOR THE FAINT OF HEART/BRAIN. HERE I AM "POLITICIZING" – READ AT YOUR DISCRETION]:**

*In another case, because the aliens (actually Tepper) consider Jerusalem to be the center of one of the world's biggest problems, the aliens make the entire Old City disappear (sort of a black hole). All the residents are first transported a few kilometers outside of the city. The transported section is being held somewhere (maybe in another dimension / pocket universe?) until things can be settled between the conflicting sides...*

*Again, interesting – but unlike the 'solution' for the battered/exploited women under Islam, this is a rather childish and useless*

*solution, thought up by Tepper, since it wouldn't change anything:*

*The Arab/Islamic nations for the most part, are continuously inciting their people to kill Jews and/or replace the only Jewish state in the world with a purely Islamic one (or a "bi-national" one, where the Jews – and Christians – would in the 'best' case scenario again become Dhimmis as they were for hundreds of years under Islam).*

*It's not an issue of who 'owns' Jerusalem, it's a question of whether or not Jews have a right to govern their own land. Tepper has, unfortunately, fallen prey to a typical misunderstanding of what the Arabs/Islamists want from the Jews – their destruction or conversion or enslavement.*

*If the Aliens had the kind of power to move an entire city or land mass, a better solution would be, as a first step, to pick up all of Gaza and transport it far out to sea as a nice Mediterranean island off North Africa (e.g. near Algeria). This would become a great tourist center for all those (misled) Europeans who want to visit and 'help' the Gazans. Alternatively, move it onto the Saudi, Iraqi, or Iranian land masses – or off of their coasts.*

*The second step would be to pull out all the main Arab cities in the Judah and Shomron area and join them to that 'island' of Gaza, so they can all live happily ever after, peacefully, together.*

*The ensuing 'holes' could then be filled as fresh water lakes, offering all the remaining Arab and Jewish residents water and fishing places, and possible water resources for neighbouring Jordan as well.*

**[END OF WARNING FOR THE FAINT OF HEART/BRAIN.]**

Just for fun, you might want to read the comments by other readers. An excellent source is the "Goodreads" website. Most were positive, but one person – Michael Battaglia – who is also familiar with other books by Tepper, really tears into the novel, with many of my own criticisms, and even more (NOTE: His family name means "battle" in Italian – which is sort of appropriate for his style of critique ☺). Read here: <http://www.goodreads.com/review/show/1109521671>

### **And now, for the part that I disliked the most in Tepper's novel:**

As all this is going on, one of the Alien Pistach reps is keeping a journal that he plans to one day offer to Benita. This journal ties into the history behind the Fresco that is the main reason that the Pistach created the federation in the first place: In their far, far, history, there is a legend of some divine intervention in their own war-torn planet, when the Pistach finally realized that they must make peace amongst themselves or totally destroy themselves into extinction. (If I'm not mistaken, something similar to this also happened on the Star Trek planet Vulcan, where they were initially/historically very barbaric, almost destroying themselves, until they readapted their lifestyle and way of thinking to stress 'logic' and at the same time, suppress all emotion in order to survive).

Back home on the Pistach planet, many centuries earlier, a great Pistach artist created an enormous Fresco depicting chronologic scenes from the great change that came over their species and the beginning of the 'holy' quest to bring peace and prosperity to the other species and planets across the universe. This seems to me an attempt by Tepper to show up religion and religious beliefs as not always having the 'exact' origins we believe in today.

I thought that the "Fresco" plotline was all extra baggage to what is, otherwise, a rather well thought out plot. If it were up to me, I would have dropped it or made that part into a sequel, or used this as a basis for an entire second book.



# Sheer\* Science: The Dangers of Brainjacking

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

– Prepared by: Doron Calo\*, PhD

(\*our CC Sheer Science editor ☺)

One of the most memorable staples of hardcore **cyberpunk** novels is the physical interface between brain and machine. This was used, for instance, to link the human nervous system – and, by extension, the user's consciousness – into the Net using **neurological implants**, with fascinating results. And although the genre gave a remarkable prediction in respect to the role that the Internet will play in all our lives, the prospect of actually melding man and machine is far from being realized. There are, however, significant advances in **human-machine interface**; and these advances, like all advances in every technological field, can also have a dark side.



Real life neurological implants are **implantable pulse generators (IPGs)** that are placed in various areas of the brain and are used to treat a wide variety of conditions, most of them movement disorders, such as **Parkinson's disease**. Several other uses for IPGs are being investigated today: from treatment of **psychiatric conditions** to **cognitive enhancement** of healthy individuals.

These devices have become pretty sophisticated, and usually include several control units that communicate via specialized radio waves and wireless protocols. And as such, these devices become vulnerable to... **being attacked by hackers!**

Hacker attack on medical devices – it's as cyberpunk as you could get, isn't it? When you think about it, it actually makes some sort of twisted sense, if you pretend for a moment that you're a malicious hacker. One can imagine an aging

billionaire being **blackmailed**, for instance, by attackers that threaten to shut down his **pacemaker** if he doesn't pay up. Or a politician being forced to act in the interest of hackers in parliament, otherwise they'll mess around with his **insulin pump**.

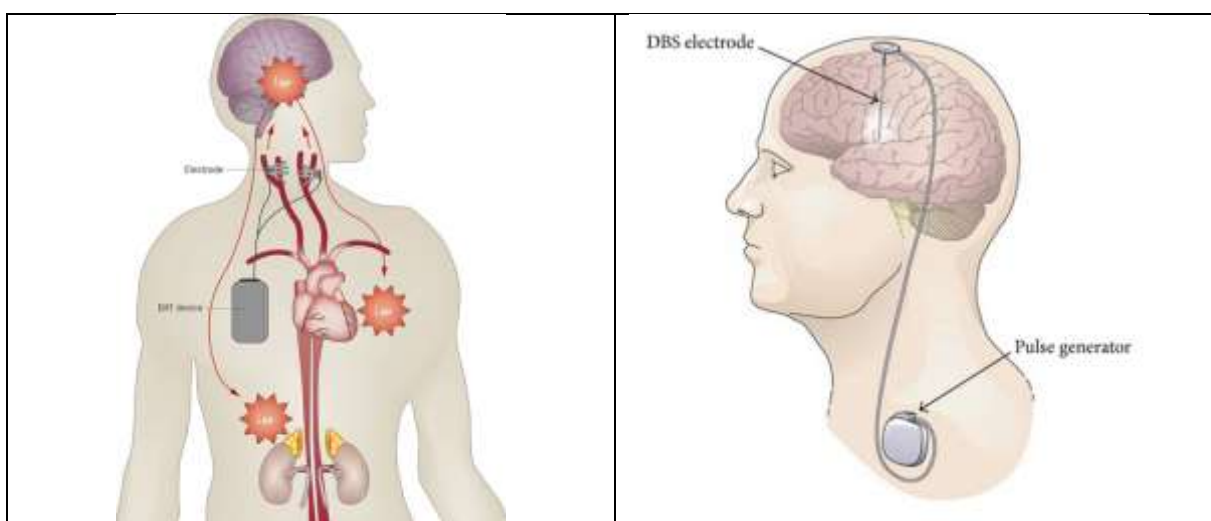
Such attack scenarios were actually demonstrated several years ago to be feasible. So imagine the malicious – even **lethal** – potential of attacks directed at neurological implants. Attacks that could, theoretically at least, have a direct effect on the victim's **psychological, emotional, and cognitive states**. An attack could focus, for example, on **pain centers** or **reward areas** in the brain, and directly manipulate the individual's behavior. The common term for this is brain hijacking, or **brainjacking**.

Once a hacker breaks into the implanted device, the attack on the victim could be executed by shutting down the device, or, more effectively (but probably harder to

accomplish), **manipulating the generated pulse** and refining the attack. The latter kind of attack would require prior, detailed knowledge of the victim's medical condition. Acquiring such information is, unfortunately, the bread and butter of many classic hackers, so it's not implausible that a super-sophisticated attacker (or a group) could pull off such a scheme in the near future.

So it turns out that **security** is a must-have, if such attacks are to be prevented. One possible solution is the use of **"closed-loop" DBS**, where physiological

signals can directly alter the level of neuromodulation. This can make it harder for external (and malicious signals) to penetrate the system. Other solutions focus on information technology and utilize **cryptography** and **validation** methods to thwart potential hackers. Extra security could also be gained by **"cloaking"** the communication between the different components of the device, thus shielding the signals from being hijacked. These solutions also carry their share of drawbacks, of course, that must be overcome.



It's also important to remember, that **too much security** is not necessarily a good thing. If such a device malfunctions, it's likely that the treating physician would need **emergency access** in order to fix the problem, and a locked-down, shielded device may slow down first-aid and endanger the patient. It's a rapidly developing field, and although it carries many unforeseen risks, it also brings much-needed hope to patients, and as such should be nurtured as much as possible.

### Links:

Cory Doctorow's blog entry about brainjacking

<http://boingboing.net/2016/05/14/brainjacking-the-future-of-so.html>

**NEXT MONTH: More Aliens + (maybe) some Pratcher!**

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

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