SCIENCE-Fiction Fanzine Vol. XXVIII, No. 03; March 2016

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

כנס דורות בחיפה למדע בדיוני ופנטזיה לכל המשפחה שייערך השנה לראשונה בחיפה, במהלך חג הפורים. הכנס יארח הרצאות, סדנאות, משחקי תפקידים, זירה, משחקי קופסה והפתעות. בואו מחופשים! במתחם מכללת תילתן בעיר התחתית (צמוד לתחנת הרכבת חיפה מרכז - השמונה), ביום ג', 24.3.2016, מהשעה 11:00 בבוקר. אתם מוזמים לאתר הכנס, ("http://dorot.sf-f.org.il/") שם תוכלו לצפות בתכנייה המלאה של הכנס ולרכוש כרטיסים (במחיר מוזל מיוחד עד 12 במרץ).

"חלומות באספמיה" כתב עת למדע בדיוני ופנטזיה מחדש ימיו כקדם, כגיליון אלקטרוני באתר מנדלי וב Get Books- ב35 ש"ח. גם כעותק מודפס בחנות של יניב הוצאה לאור. חברי האגודה זכאים להנחה נוספת של 10% עם קוד ההנחה.

הטבות בחנות "הממלכה" בחנקין 10, הוד השרון. טלפון: 09-8946404 – עם עשרות עולמות דמיון וכיף ללא הפסקה. בחנות תמצאו מבחר של משחקי לוח, קלפים, מיניאטורות, קומיקס, ציוד ונשקי לארפים, פיגורינות, לבוש, תכשיטים ומבצעים מדהימים.

מועדון הקריאה של חודש מרץ יעסוק בספר "מרשעת" מאת גרגורי מגוויר (הד ארצי, 1999, אוקיינוס, 2015).

- **המועדון בכרמיאל** יתקיים ביום ראשון, 20/3, בשעה 19:00, בספרייה העירונית, רח' צה"ל 107. מנחה: סטלה גנגרינוביץ.
- **המועדון בת"א** יתקיים ב-31/3, ב-19:30, ב"קפה גרג", ויצמן 2.בהנחיית דפנה קירש וגלי אחיטוב.
- **ובירושלים** יתקיים באפריל 7/4, ב-19:30, בבית הקפה "תמול שלשום", רחוב יואל משה סלומון 5. מנחה: גלי אחיטוב.

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 .

In this issue:

– Leybl Botwinik (CyberCozen editor)

A few words from the office of the editor – in lieu of an editorial:

Some Star-Trekian Thoughts

- by Leybl Botwinik

SO, where to begin…
The main reason that this issue is out late, is that my body was attacked and invaded by Tiny Alien Creatures (also known as CC – no, not "CyberCozen", but the "COMMON COLD"). Well, after a long and drawn out battle, I managed to raise the flag on Mount Health, and am back on my feet. It was a bloody battle though, believe you me….

And then I had a thought – a "Star-Trekian" thought that could revolutionize health care (of course, when we get the technology up-and running) – If and when we will have transporter-technology, would it be possible to:

1) pinpoint bugs, viruses, and even cancerous cells and 'transport' them out of a body?
2) transport an unhealthy (source) body into a healthy (target) body?
3) as a lark, transport someone fully clothed, out of his/her clothes, and possibly into a different set of clothes (of course, of the right tailored size)?

In our first case, this sounds both practical and logical – for what we 'know' that the transporter does: grab something/someone and move it/him/her somewhere else. So why not pinpoint foreign objects in a body (e.g. a bullet) or harmful viruses/bacteria and excise them via transporter technology?

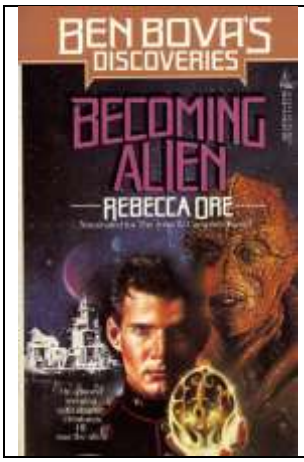
In our second case, we need to understand what exactly happens in the transporter. If it takes a structure, breaks it down and rebuilds it again, then why not rebuild it with 'fixed' parts? If we can map a person in his/her normal and healthy state, store it in the transporter data banks and during a transport rebuild the molecular/cellular structure of, say a person who recently lost their leg, or has a malfunctioning kidney – into a 'complete and healthy' body according to stored metadata. That could save lives.

And just for fun – cause it's the month of Adar, how about we transport someone out of their current clothes into a totally new set of clothes? Actually, that might work well in a case where you're going to party, and forgot your costume, so you call up your private home transporter to 'dress you' with a suitable get-up.

- Just thinking out loud… and that it's also time to finally put out the Leonard Nimoy/Star-Trek special issue. In fact, I just checked, and his date of passing was one year ago, on the 27th of February, 2015. According to the Jewish date – due to this year being a leap-year, his yortsayt (the annual date of remembrance) will be the 8th of Adar B' on the 18th of March, about a week before Purim.
  So people, get your pencils sharpened up and please send in your Leonard Nimoy- and/or Star-Trek-related stuff. I'd like to get that out either for next month (April) or the month after that (May).

Aliens – Part II: Becoming Alien (book review)

By Leybl Botwinik



Writer: Rebecca Ore
Year: 1988
Pages: 313
Publisher: TOR books (Tom Doherty Associates)
Comments:
First book of the "Saga of Tom Red-Clay" trilogy.
Sequels are "Being Human" and "Human to Human".
Finalist for the 1989 Philip K. Dick Award. Nominated for the John W. Campbell Award. Nominated for the 1988 Locus Awards.
Sample reviews:
http://www.goodreads.com/book/show/302486.Becoming_Alien

"Becoming Alien" is a very interesting story.
Right off the bat, I must admit that I did not enjoy it as an 'entertaining' read, but rather as an intellectual read. That is, it's not a book I would pick up again for the joy of reading it. If I was to open the pages again, it would be to use as a handbook for pointing out what could be a very plausible alien-human confrontation.

The book was selected for publishing in a special series of books by veteran SF writer Ben Bova called "Discoveries", where he would introduce a new SF writer to the public. The main thrust of

the book, is how a young Earthman becomes recruited as a cadet into the space-faring community of planets as they explore other worlds. The power of the book can be encapsulated in the following quote by SF writer Spider Robinson on the back cover of the book: "… I don't know if Ms. Ore is familiar with the late John W. Campbell's classic challenge to sf writers – 'write me a creature that thinks *as well* as a human, but not *like* a human' – but she has pulled off that near-impossible trick many times here…".

Tom is a 16-year-old orphan living with his older brother, Warren, on an isolated farm not too far from Atlanta. Warren is involved in producing illicit drugs in their basement. Tom is hooked into helping his brother.

One day, Tom is driving by a field and a burning space ship suddenly pops up out of nowhere. He manages to save one of the aliens of the 3-person crew and takes him home to care for him. He goes back with a truck and hauls the small crashed ship into his barn and locks the barn door. When Warren arrives, he is accepting of Tom's good deed and they care for the newly named alien "Alpha" and then recruit him into their drug-business. Alpha does not know English, but can communicate a little with Tom via drawings.

Young Tom is not happy with his older brother's lifestyle and feels exploited (as does Alpha) and they plan to run away. Warren stops them, but Alpha was holding a shotgun and Warren fatally wounds him. They hide the body and soon the police arrive to arrest Warren for his drug activity.

Tom is allowed back to the farm and two years later a group of strange-looking people appear at his house – friends of Alpha. They are aliens of several different species who have been surgically body-reformed to look pretty much like humans, and they know English.

One of the last drawings that Alpha had made for Tom, is a kind of request for Tom to join the space-cadets. The aliens give Tom a choice – join them, or be mind-wiped. Tom has nothing to live for on Earth and sees this as an opportunity to make amends for Alpha's death – he joins them, even though some of the aliens resent him as both a human and for having been involved in Alpha's death.

This is where the REAL story begins. All of the above happens in the first 68 pages of the book and most is – in my opinion – irrelevant, and any number of other scenarios could have taken Tom to be recruited into the space academy. In any case, here is where Tom confronts himself and learns what it feels like to be the Alien among others.

The society he is brought into is made up of several space-faring life forms. One – Alpha's people – is a marsupial but scaled bat-like creature called Gwyng. They are akin to a more intellectual kind of alien. Another life-form is a large furry bear-like creature – the Barcon – that are mostly used for their bulk and ferocity – though they actually mostly act nicer to Tom than the Gwyng. The head of the Academy is a big bird-like creature with feathers who is very fatherly towards Tom.

The planet, Karst, where the academy itself is, contains some other species, but they are not part of Tom's new life. He does, however find out that about 500 years earlier, human beings were brought from Earth but eventually sent into the wilds of the planet because they could not adapt to an extra-spatial society made of mixed alien-types – they were and remain xenophobes. Tom is, in fact, the first Human that they have high hopes for.

Tom is constantly trying to keep up and learn the rules and history and several common languages of the academy – all the while learning that he is the Alien here, and not the species around him. This is not an easy lesson to learn.

Halfway through the book, however, an academy exploratory ship with Tom on it gets captured while exploring a new inhabited world. The Yauntra are very earth-like, yet very different in many ways. Physically they look pretty much like humans but there are many structural differences. They look at Tom as being a dangerous Alien. Of course, as much as he wants to feel that there are others like him – the Yauntra – he understands that he has nothing in common with them. In fact, he feels much closer to his academy buddies, even though they are – physically – even more distant from him. The rest of the book deals with Tom's coming to terms with himself and his new life.

Rebecca Ore has brought out several interesting alien issues: 1) the part about a young Earthman becoming the 'Alien' by leaving his planet and joining a society of different planet-faring creatures; 2) The confrontation with a planet that so much reminds us of Earth – Yauntra – and at the same time brings out all the ugliness of our planet and people in their confrontation with the space cadets who have actually come in peace; 3) Tom's acceptance of himself as an 'Alien' and of the 'Aliens' he now joins in the academy – as well as the 'Aliens' he and his buddies face in the Yauntra.

As I mentioned at the beginning, I didn't really have fun with the story (nor did I particularly appreciate the first part of the book of Tom's life on Earth). I do, however highly recommend this as a good read from the point of view of an intellectual study of xenophobia, 'alien'-ness, etc. If there is a list somewhere on recommended reading for preparation to deal with/live with space creatures not of Earth – this would and should make the top-5 list as a kind of handbook or guide to 'becoming alien'.

NEXT MONTH: More on Aliens.

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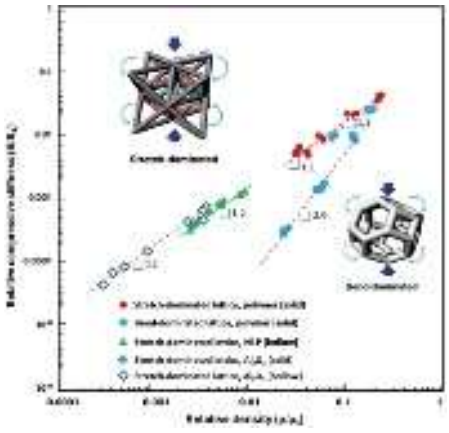
Sheer* Science: Get ready for the MetaMaterials!

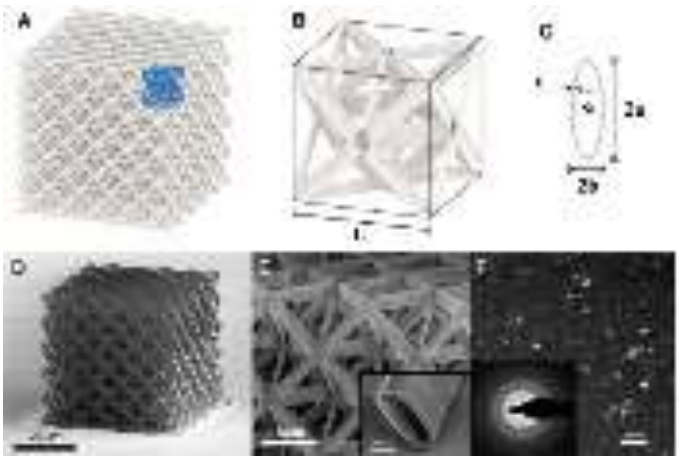
(* In memory of Aharon Sheer (ז״ל) – Founding Editor)

Meet the MetaMaterials

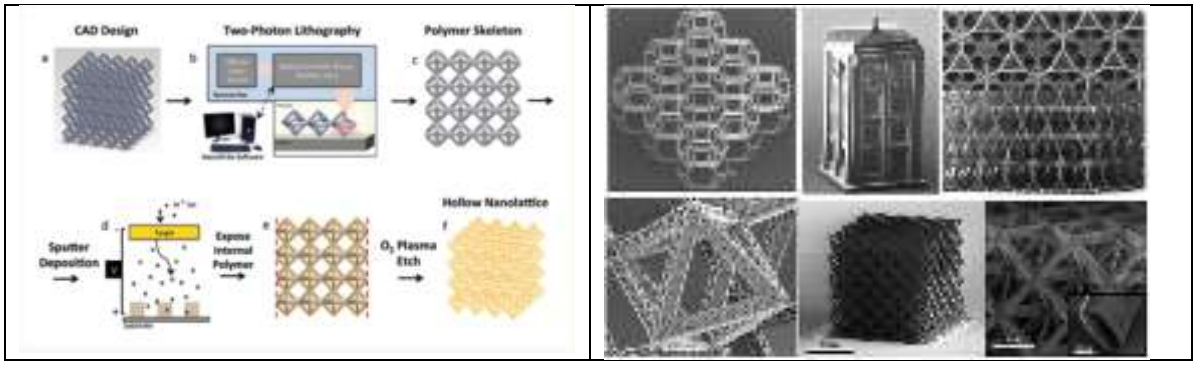
- Prepared by: Doron Calo*, PhD **(*our CC Sheer Science editor ☺)**

Material science has recently become a lot more interesting than ever before. As science and engineering expand outward, the mechanical and physical requirements of materials become more demanding: civic and aerospace engineering, for instance, can always find uses for lighter and stronger materials; energy production and storage requires high-efficiency conductors and capacitators; and high-resolution imaging can be enabled by the use of dynamic materials with enhanced sensitivity. This is where **metamaterials** come in: the advanced artificial materials of the future whose properties could be manipulated at will. The sheer variety of new-fangled metamaterials is amazing – let's have a look at the major types and some of their uses, it's an interesting trip.





Although metamaterials cannot be found in nature and need to be fabricated, their structure is sometimes inspired by **naturally occurring structures** such as shells, beaks, and wings, executed in the nanometer scale (even to the level of individual atoms!) using cool, super-accurate techniques such as **laser writing**. These **cellular solids** (composed of a specialized type of glass) are based on a lattice-like unit which is repeated many times in 3D. The resulting metamaterial is lightweight and extremely robust, and could be used for a variety of applications, from spaceship hulls to exoskeletons. These metamaterials are not quite ready for everyday use, the main hurdle being the problem of **scalability** – that is, the transition from small-scale, lab bench fabrication to large-scale, industrial production. But never worry, the field of material engineering is coming up with possible solutions.



Metamaterials could also be used to engineer some very interesting devices. One cool example is **cloaking** (still very far from Star Trek-level, unfortunately). A more realistic application could be **"cloaked antennas"** that can transmit and receive signals with significantly reduced scattering, thus greatly improving their performance. Some metamaterials enable significant advancements in optical technologies by acting as **plasmonic structures** – materials that can manipulate the behavior of light in the nanoscale **(nanophotonics).** It was found that certain metallic metamaterials can use light to cause excitation of clouds of free surface electrons called **plasmons.**

These plasmons can "squeeze" light into volumes significantly smaller than its wavelength, and can be harnessed to develop high-resolution optical microscopy, advanced methods for data and energy storage, and sensors powerful enough to detect **single molecules**. These sensors could be fabricated to withstand extremely harsh environments, and effectively replace electronic sensors in the oil and gas industries. Metamaterial plasmonic structures can also benefit medicine. When shaped into nanoparticles, these materials can be used to concentrate light and generate heat in precise, ultra-small volumes such as those occupied by **microtumors**, which are notoriously hard to reach using conventional methods.

To conclude – the metamaterial future isn't exactly here yet, but it's getting near… and although it's advancing in steps that are measured in nanometers, it will be here in no time at all and will change our lives profoundly and dramatically.

LINKS:
Report from the "Frontiers of Engineering" 2015 symposium:
http://www.nap.edu/read/21825/chapter/14

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

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