

Welcome to the April 26th, 2017 Edition of THE REVENGE HUMP DAY!

All the action around here has been centered on the children and grandchildren. Brandy just got back from JordanCon in Hotlanta and she said she had a great time. Hopefully she will be drafting a report on the convention and I will have it for next week's missive. As for the Grandchildren, Beth, Destroyer of Worlds, spent the weekend in Washington DC on her 8th Grade field trip. SHE WHO MUST BE OBEY, aka The Nana, kept up with Bethie-Boo on Facebook for the past 4 days. From what we can tell, there was damn little that the kids from St. Jude's 9th Grade didn't see. I mean they were hitting 4 or 5 monuments in a day so I can expect a blow by blow description of the trip after Beth wakes up. You see, the bus drove home last night and Beth and company got back early this morning. As soon as she hit Casa Bolgeo, she went to bed and I haven't even talked to her. Oh well, I guess she will tell me about the trip latter in the afternoon.

But Beth did bring me a souvenir. It was a cartoon inspired magnetic bottle opener with the president's picture on it. It was neat and I did get a great laugh from it.

So on that "generous note", why don't y'all sit back and relax because here's the best in gossip, jokes and science for your reading pleasure!

Uncle Timmy

<G>~<O>~<S>~<S>~<I>~<P>~<S>~<T>~<A>~<R>~<T>~<S>~<H>~<E>~<R>~<E>~<I>

MEDICARE SCAM - WE ARE THAT AGE NOW

From: "Chris Cowan" cowanc1028@earthlink.net

This talks about "free" health screenings at churches etc (I've gotten literature on it)./ The patient is asked for a Meidcare number and if he/she gives it, the "free:" clinic bills it to Medicare as an "annual Wellness visit." Patient then goes to doctor for a real wellness visit - and since you only get one, Medicare doesn't pay.

It also talks about medical devices scams.

http://elliott.org/blog/free-health-screening-wasnt-free-now-owes-medical-bill/?utm_source=sendy&utm_medium=email&utm_campaign=elliottsemail

The Steve Elliott emails have some interesting info (the problems presented are kind of like reading Dear Abby) and his website has company contacts. Higher up company contacts! You might find it interesting, and some of it is very pertinent. (Rental cars and the like)

<L>~<I>~~<E>~<R>~<T>~<Y>~<C>~<O>~<N>

RE: The April 19th, 2017 Edition of THE REVENGE HUMP DAY!

From: "Rod McFadden"

TIRED?

**JUST REMEMBER PARD,
THAT MARBLE SLAB
IS DOGGONE HARD!
Burma Shave**

Incidentally, whilst you were publishing about railguns, you MIGHT have pointed out that Robert Heinlein came up with something very similar in "The Moon is a Harsh Mistress."

<T>~<H>~<E>~~~<J>~<O>~<K>~<E>~<S>~~~<S>~<T>~<A>~<R>~<T>~~~<H>~<E>~<R>~<E>

From: "Ray Beloate" beerman@rittermail.com

SPLINTERS IN HER CROTCH.....this is clean/funny!

A woman from Los Angeles, who was a tree hugger, a liberal Democrat, and an anti-hunter, purchased a piece of timberland near Colville, WA. There was a large tree on one of the highest points in the tract. She wanted a good view of the natural splendor of her land, so she started to climb the big tree.

As she neared the top, she encountered a spotted owl that attacked her. In her haste to escape, the woman slid down the tree to the ground and got many splinters in her crotch. In considerable pain, she hurried to a local ER to see a doctor.

She told him she was an environmentalist, a Democrat, an anti-hunter and how she came to get all the splinters. The doctor listened to her story with great patience, and then told her to go wait in the examining room and he would see if he could help her.

She sat and waited three hours before the doctor reappeared. The angry woman demanded, "What took you so long?"

He smiled and then told her, "Well, I had to get permits from the Environmental Protection Agency, the Forest Service, and the Bureau of Land Management before I could remove old-growth timber from a "recreational area" so close to a waste treatment facility. I'm sorry, but due to ObamaCare...they turned you down."

<J>~<O>~<K>~<E>~<S>~~~<of>~<the>~~~<W>~<E>~<E>~<K>

From: "Mike Waldrip" waldripk@gmail.com

GOT YOUR GOAT

Two good ol' boys are out hunting, and as they are walking along they came upon a huge hole in the ground.

They approach it and are amazed at the size of it.

The first hunter says, "Wow, that's some hole; I can't even see the bottom. I wonder how deep it is?"

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The second hunter says, "I don't know. Let's throw somethin' down there, listen and see how long it takes to hit bottom."

The first hunter says, "Hey, there's an old automobile transmission over there. Give me a hand, we'll throw it in and see."

So they pick it up and carry it over and count one, two, three and heave it in the hole. They are standing there listening, looking over the edge, when they hear a rustling behind them. As they turn around, they see a goat come crashing through the underbrush, run up to the hole and, without hesitation, jump in headfirst.

While they are standing there staring at each other in amazement, peering into the hole, trying to figure out what that was all about, an old farmer saunters up. "Say there," says the farmer, "You fellers didn't happen to see my goat around here anywhere, did you?"

The first hunter says, "Funny you should ask, but we were just standing here and a goat came running by at a hunnert miles and hour!

"That's impossible, said the farmer, I had him chained to a transmission."

<J>~<O>~<K>~<E>~<S>

TOP 10 SIGNS YOU'VE JOINED A CHEAP OBAMACARE PLAN

10. Annual breast exam conducted at Hooters.
9. Directions to doctor's office include, "take a left when you enter the trailer park."
8. Tongue depressors taste faintly of Fudgesicle.
7. Only proctologist in the plan is "Gus" from Roto-Rooter.
6. Only item listed under Preventive Care feature of coverage is "an apple a day".
5. Your primary care physician is wearing the pants you gave Goodwill last month.
4. "Patient responsible for 200% of out-of-network charges" is not a typo.
3. The only expense covered 100% is embalming.
2. With your last HMO, your Viagra pills didn't come in different colors with little "M"s on them.
1. You ask for Viagra. You get a popsicle stick and duct tape

<J>~<O>~<K>~<E>~<S>

This Virginia man lost his vanity license plate to bureaucracy, but he's not giving up the fight. You can see that he put some thought into this plate, and they initially said he could have it.



<J>~<O>~<K>~<>~<S>

Be Warned...This is Bad

Once an Italian, a Polish person and Czechoslovakian went camping. While they were sleeping two giant bears came and ate them all.

The rangers came and found the torn up camp site. Then they saw the bears.

They shot the bears and cut open the female. In the bear they found the Italian and the Polish fellow. One ranger said to the other "where's the Czechoslovakian?"

The other ranger said: "The Czech's in the male."

<J>~<O>~<K>~<E>~<S>

NEW PRIEST

The elderly priest, speaking to the younger priest, said, "You had a good idea to replace the first four pews with plush bucket theater seats. It worked like a charm. The front of the church always fills first now."

The young priest nodded, and the old priest continued, "And you told me adding a little more beat to the music would bring young people back to church, so I supported you when you brought in that rock 'n roll gospel choir. Now our services are consistently packed to the balcony."

"Thank you, Father," answered the young priest. "I am pleased that you are open to the new ideas of youth."

"All of these ideas have been well and good," said the elderly priest, "But I'm afraid you've gone too far with the drive-thru confessional."

"But Father," protested the young priest, "my confessions and the donations have nearly doubled since I began that!"

"Yes," replied the elderly priest, "and I appreciate that.... But the flashing neon sign, 'Toot 'n Tell or Go to Hell' cannot stay on the church roof."

<J>~<O>~<K>~<E>~<S>~~<of>~<the>~~<W>~<E>~<E>~<K>

From: "Bob Bolgeo" bbolgeo@aol.com

MONDAY

The mother of a 17-year-old girl was concerned that her daughter was having sex. Worried the girl might become pregnant and adversely impact the family's status, she consulted the family doctor.

The doctor told her that teenagers today were very willful and any attempt to stop the girl would probably result in rebellion. He then told her to arrange for her daughter to be put on birth control and until then, talk to her and give her a box of condoms.

Later that evening, as her daughter was preparing for a date, the mother told her about the situation and handed her a box of condoms.

The girl burst out laughing and reached over to hug her mother, saying, "Oh Mom! You don't have to worry about that! I'm dating Susan!"

TUESDAY

A man went to church one day and afterward he stopped to shake the preacher's hand. He said, "Preacher, I'll tell you, that was a damned fine sermon. Damned good!"

The preacher said, "Thank you sir, but I'd rather you didn't use profanity."

The man said, "I was so damned impressed with that sermon I put five thousand dollars in the offering plate!"

The preacher said, "No shit?"

WEDNESDAY

Brenda and Steve took their six-year-old son to the doctor. With some hesitation, they explained that although their little angel appeared to be in good health, they were concerned about his rather small penis.

After examining the child, the doctor confidently declared, "Just feed him pancakes. That should solve the problem."

The next morning when the boy arrived at breakfast, there was a large stack of warm pancakes in the middle of the table.

"Gee, Mom," he exclaimed, "for me?"

"Just take two," Brenda replied. "The rest are for your father."

THURSDAY

One night, an 87-year-old woman came home from Bingo to find her

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92-year-old husband in bed with another woman. She became violent and ended up pushing him off the balcony of their 20th floor apartment, killing him instantly..

Brought before the court on the charge of murder, she was asked if she had anything to say in her own defense.

"Your Honor," she began coolly, "I figured that at 92, if he could make love,He could fly."

FRIDAY

A Doctor was addressing a large audience in Tampa.

"The material we put into our stomachs is enough to have killed most of us sitting here, years ago.

Red meat is awful. Soft drinks corrode your stomach lining. Chinese food is loaded with MSG.

High fat diets can be disastrous, and none of us realizes the long-term harm caused by the germs in our drinking water. However, there is one thing that's the most dangerous of all and we all have eaten, or will eat it. Can anyone here tell me what food it is that causes the most grief and suffering for years after eating it?"

After several seconds of quiet, a 75-year-old man in the front row raised his hand, and softly said, "Wedding Cake."

SATURDAY

Bob, a 70-year-old, extremely wealthy widower, shows up at the Country Club with a breathtakingly beautiful and very sexy 25-year-old blonde-haired woman who knocks everyone's socks off with her youthful sex appeal and charm and who hangs over Bob's arm and listens intently to his every word.

His buddies at the club are all aghast. At their very first chance, they corner him and ask, "Bob, how'd you get the trophy girlfriend?" Bob replied, "Girlfriend? She's my wife!" They're knocked over, but continue to ask: "So, how'd you persuade her to marry you?" "I lied about my age," Bob replied. "What? Did you tell her you were only 50?"

Bob smiled and said, "No, I told her I was 90."

SUNDAY

Groups of Americans were traveling by tour bus through Switzerland. As they stopped at a cheese farm, a young guide led them through the process of cheese making, explaining that goat's milk was used. She showed the group a lovely hillside where many goats were grazing.

"These," she explained, "are the older goats put out to pasture when they no longer produce" She then asked, "What do you do in America with your old goats?"

A spry old gentleman answered, "They send us on bus tours!"

<J>~<O>~<K>~<E>~<S>~<of>~<the>~<W>~<E>~<E>~<K>

From: "Jerry Tollett" haleja@epbf.com

MOVING TO NEVADA...

A man walks into the bedroom and sees his wife packing a suitcase. He asks, "What are you doing?"

She answers, "I'm moving to Nevada.

I heard that prostitutes there get paid \$400.00 a night for what I'm giving YOU for FREE!"

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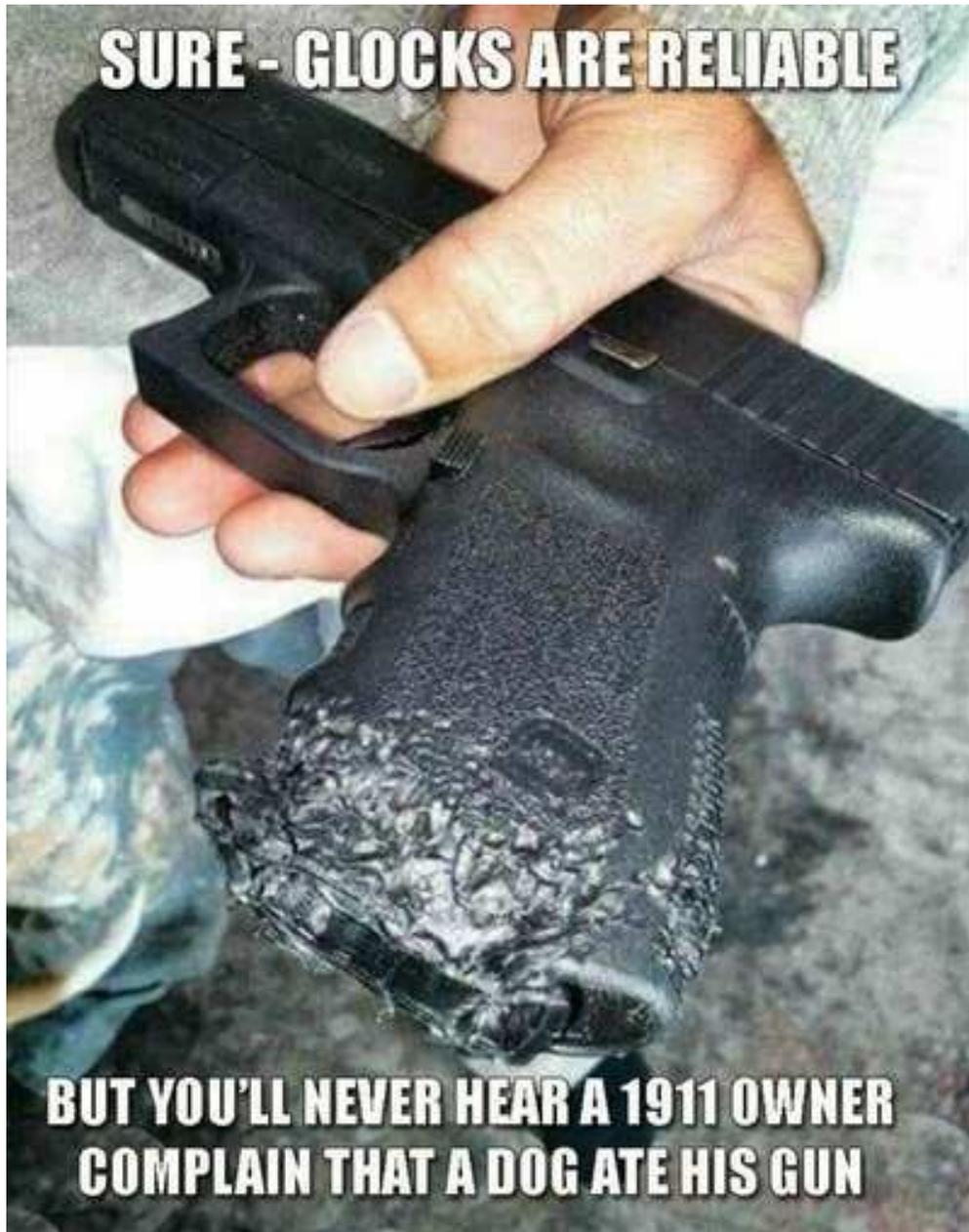
Later that night, on her way out, the wife walks into the bedroom and sees her husband packing his suitcase.

When she asks him where he's going...

He replies, "I'm coming too. I want to see how you live on \$800.00 a year."

<J>~<O>~<K>~<E>~<S>~<of>~<the>~<W>~<E>~<E>~<K>

From: "Jim Woosley" Jimwoosley@aol.com



<YOU>~<>~<JUST>~<>~<CAN'T>~<>~<MAKE>~<>~<THIS>~<>~<STUFF>~<>~<UP!>

YOU JUST CAN'T MAKE THIS STUFF UP!

From: "Tim Bolgeo" tbolgeo@epbfi.com

BILL NYE'S SCARY REBUKE OF CNN FOR ALLOWING OPPOSING CLIMATE CHANGE VIEW SUMS UP THE LEFT IN A NUTSHELL

April 23, 2017 | Tom Tillison

http://www.bizpacreview.com/2017/04/23/bill-nyes-scary-rebuke-cnn-allowing-opposing-climate-change-view-sums-left-nutshell-477917?utm_source=BizPac+Review+Email+Newsletter&utm_campaign=ab125e840a-EMAIL_CAMPAIGN_2017_04_23&utm_medium=email&utm_term=0_fbf9323fb3-ab125e840a-32881293

He may not have realized it, but Bill Nye, aka the "Science Guy," summed up the left in a nutshell during an appearance Saturday on CNN when he slammed the network for allowing an opposing point of view.

Participating in a panel discussion that marked Earth Day, Nye took issue with fellow panelist William Happer, a physicist who doesn't buy into the established narrative on climate change and his solution was to shut down any and all debate that challenges the accepted dogma of the environmental left.

"I will say, much as I love CNN, you're doing a disservice by having one climate change skeptic, and not 97 or 98 scientists or engineers concerned about climate change," Nye said at one point.

Happer, a professor at Princeton, posing a particular challenge to the left as a member of the intelligentsia. He dismisses their tenet that not only is climate change real, but a primary driver is human-induced increases in carbon dioxide.

He argues that "the world is getting greener, and people should stop hyperventilating."

"There's this myth that's developed around carbon dioxide that it's a pollutant," Harper said Saturday. "But you and I both exhale carbon dioxide with every breath. Each of us emits about two pounds of carbon dioxide a day so are we polluting the planet?"

Way too much common sense for the left in that argument, no?

<?>~<YOU JUST CAN'T MAKE THIS STUFF UP!>~<?>

NYE FREAKS OUT AFTER SCIENTIST SCHOOLS HIM ON CLIMATE CHANGE

April 24, 2017 [96 Comments](#)

<http://www.libertyheadlines.com/nye-freaks-scientist-schools-climate-change/?AID=7236>

(Daily Caller News Foundation) Bill Nye accused CNN of doing a "disservice" to its viewers for inviting a well-respected physicist on Earth Day to argue about the legitimacy of man-made global warming.

Nye, who is well known for hosting a children's TV show in the 1990s, [scolded CNN's "New Day Saturday" panel Saturday](#) for pitting his environmentalist pedigree against the climate skepticism of physicist William Happer.

He also suggested the 24-news channel should instead drown out people like Happer with 98 scientists who believe in man-made global warming.

"And I will say, much as I love the CNN, you're doing a disservice by having one climate change skeptic and not 97 or 98 scientists or engineers concerned about climate change," Nye said after the Princeton University academic suggested that it is a "myth" to believe that carbon dioxide is a pollutant causing widespread ecological destruction.

Happer, a science adviser to President Donald Trump, made public his skeptical views on climate change in January. He [told reporters that climate change](#) is "tremendously exaggerated," adding that climate research is important, "but I think it's become sort of a cult movement in the last five years."

"Carbon dioxide is a perfectly natural gas, it's just like water vapor, it's something that plants love. They grow better with more carbon dioxide, and you can see the greening of the earth already from the additional carbon dioxide in the atmosphere," he added.

He went on to say that Nye's views on science are backward. Science is based on observation, Happer said, "[a]nd if you observe what's happening to, for example, the temperature, the temperature is not rising nearly as fast as the alarmist computer models predicted. It's much, much less — factors of two or three less."

Nye, who has a degree in engineering but no professional science background, called Happer's position "completely wrong," and suggested the physicist was "cherry picking a certain model."

Some scientists maintain people like Nye are the ones cherry-picking data.

Climate models predicted Antarctic sea ice would shrink, and that climate change would boost snowfall in the southern hemisphere, yet neither of those predictions have panned out. In fact, scientists now say "natural variability" is overwhelming their models.

Scientists with Columbia University's Earth Institute, for instance, found there's been [almost no change in Antarctica's snowfall](#). They blamed strong "natural variability" for the models' failures.

Scientists have also warned that [Antarctica has been losing 147 gigatons of ice per year](#) for years, mostly from melting on the northern Antarctic Peninsula. A NASA conducted in 2015, meanwhile, found [Antarctica's ice sheet increased in mass from 1992 to 2008](#), which essentially offset ice melting in the western part of the Antarctic.

Nye, for his part, has been one of the most belligerent apostles for the environmental movement. He's even [suggested that throwing](#) global warming skeptics in jail could be a potential solution, during an interview with the conservative Committee for a Constructive Tomorrow.

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<YOU>~<>~<JUST>~<>~<CAN'T>~<>~<MAKE>~<>~<THIS>~<>~<STUFF>~<>~<UP!>

YOU JUST CAN'T MAKE THIS STUFF UP!

From: "Jim Woosley" Jimwoosley@aol.com

SIX INCONVENIENT TRUTHS ABOUT THE U.S. AND SLAVERY

Michael Medved, Posted: Sep 26, 2007 12:14 PM

This is 10 years old, but clearly the MSM/Dems didn't get the message.

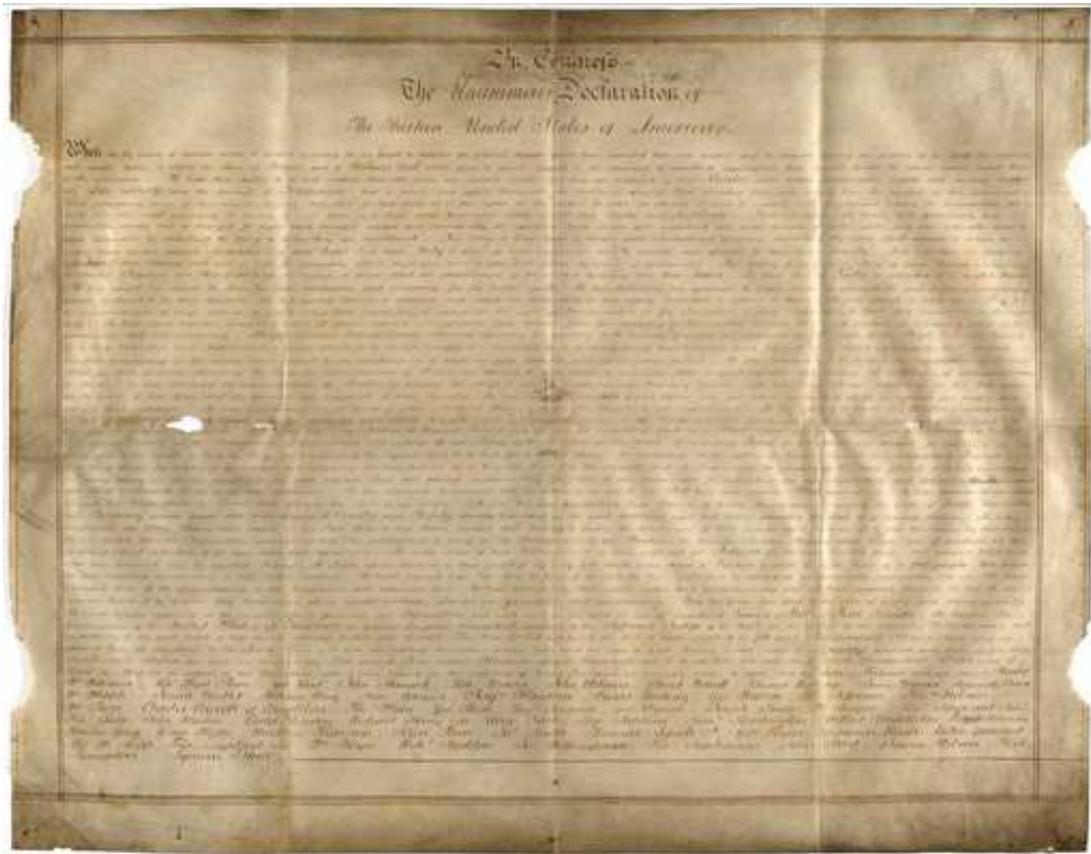
<https://townhall.com/columnists/michaelmedved/2007/09/26/six-inconvenient-truths-about-the-us-and-slavery-n876052>

<?>~<YOU JUST CAN'T MAKE THIS STUFF UP!>~<?>

HARVARD RESEARCHERS FIND COPY OF DECLARATION OF INDEPENDENCE

Saturday, April 22nd 2017

<http://www.waff.com/story/35216409/harvard-researchers-find-copy-of-declaration-of-independenceo>



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(West Sussex Record Office Add Mss 8981 via AP). Undated handout photo of a parchment manuscript of the US Declaration of Independence, believed to date from the 1780s and found in a records office in Chichester, southern England. Harvard University.

BOSTON (AP) - Harvard University researchers say they've discovered a second parchment copy of the Declaration of Independence.

The Boston Globe reported Friday researchers Emily Sneff and Danielle Allen found the copy in a records office in southern England.

The only other parchment copy is maintained by the National Archives in Washington.

The two dated the document to the 1780s. They say it was found in the archives in Chichester, and is believed to have originally belonged to a Duke of Richmond known as the "Radical Duke" for his support of Americans during the Revolutionary War.

The researchers said the signers on the Sussex version are not broken down by state, something that distinguishes it from the copy in the National Archives. The parchment was likely made in New York or Philadelphia.

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From: "Tim Bolgeo" tbolgeo@epbfi.com

WHAT IS THE "MOTHER OF ALL BOMBS" THAT THE U.S. JUST DROPPED ON AFGHANISTAN?

The mushroom cloud from the 22,000-pound air-blast bomb was meant to send a clear message

By Larry Greenemeier on April 13, 2017

Share on Facebook

https://www.scientificamerican.com/article/what-is-the-mother-of-all-bombs-that-the-u-s-just-dropped-on-afghanistan/?WT.mc_id=SA_TECH_20170418



A Massive Ordnance Air Blast—or more commonly known as the "Mother of All Bombs" (MOAB)—weapon is prepared for testing at the Eglin Air Force Armament Center on March 11, 2003. The MOAB is a precision-guided munition weighing 21,500 pounds and will be dropped from a C-130 Hercules aircraft for the test. It will be the largest nonnuclear conventional weapon in existence. The MOAB is an Air Force Research Laboratory

technology project that began in fiscal year 2002 and was scheduled to be completed in 2003. Credit: U.S. Department of Defense Wikimedia

The idea of dropping an air-blast bomb—even if it’s the largest nonnuclear ordnance ever used by the U.S. in combat—to target fighters holed up in tunnels deep underground might at first seem counterintuitive. The GBU-43/B Massive Ordnance Air Blast Bomb, or "Mother of All Bombs" (MOAB), which the Air Force unleashed on ISIS fighters and tunnels Thursday in the Achin District of Afghanistan’s Nangarhar Province, never actually struck the ground. But the massive crunch of air pressure created by the nearly 22,000-pound MOAB would have wiped out anyone in the vicinity, and certainly sent a clear signal that the Trump administration is willing to use unprecedented force.

Unlike a bomb designed to actually penetrate a building or the ground, the MOAB (also called a fuel-air bomb) has a “proximity fuse” on its nose that ignites the warhead when it reaches a certain altitude—which might be anywhere between 50 and 1,000 feet—says Edward Priest, a former Air Force Special Operations combat controller who retired from the military in 2015. “When they blow up, they blast fuel into the air,” Priest explains. “That fuel atomizes. Then there’s a secondary explosion that lights the fuel that’s been atomized.”

An air blast bomb “doesn’t throw out a lot of fragmentation like you’d expect from a normal bomb—it’s all blast overpressure, which can blow down trees and use the trees themselves as the fragmentation,” Priest says. “That type of bomb wouldn’t work well, for example, to destroy tanks, although the overpressure would kill the people in them. You’d overpressure the people hiding in the caves there. You’d never find them—it just blows your lungs out of your mouth. It kind of turns you inside out.”

The use of air-blast bombs in Afghanistan dates back to the beginning of the U.S. military’s arrival following the 9/11 attacks on New York City and Washington, D.C. The Air Force dropped several BLU-82 air-blast bombs—a smaller MOAB predecessor—during the early days of fighting the Taliban and al Qaeda, including the December 2001 Battle of Tora Bora. Use of the BLU-82—aka the "Daisy Cutter"—was phased out in subsequent years. “This is a tough munition to use,” says A. J. Clark, a former military intelligence analyst and president of Thermopylae Sciences Technology, a provider of geospatial intelligence technology. “It might make sense if there’s a concentration of enemy troops but it’s not something you want to use when you have friendlies or civilians in the vicinity. There’s no way to control it.”

The decision to use the MOAB at this time was probably as much political as it was strategic. “More than anything, anytime you drop one of these you want to make an audacious statement, in this case to reinforce our resolve to fight in Afghanistan,” Priest says, adding they produce a large mushroom cloud that can be seen for miles.

Clark agrees. “These types of bombs were developed as much for their psychological impact as anything else,” he says. The military uses “bunker buster” bombs to penetrate the ground in certain situations, but the caves they were targeting are likely too deep for something like that to have any effect, Clark adds. After reaching an impasse in Afghanistan for the past five years, he thinks the Nangarhar bombing says “we’re taking things to a new level in Afghanistan.”

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BATTERIES HAVE GOTTEN BETTER, BUT THERE'S STILL ROOM FOR IMPROVEMENT

They've been getting better for decades—but we've been demanding more of them

By David Pogue | Scientific American May 2017 Issue

https://www.scientificamerican.com/article/batteries-have-gotten-better-but-theres-still-room-for-improvement/?WT.mc_id=SA_TECH_20170418



Credit: Jay Bendt

“Every technology has improved over the years except batteries! Why can't someone invent a better battery?” Man, if I had a nickel for every time I've heard someone say that—well, I'd have about \$17.50.

In fact, though, the average gadget fan is missing three huge points about batteries. (In February, PBS aired a NOVA special called “Search for the Super Battery,” of which I was the host. After a year of visiting laboratories and interviewing scientists, I can admit that batteries are on my mind these days.)

First point: The batteries you probably think about most are the ones in your phone or laptop. But you could argue—and many scientists do—that batteries are the keys to tackling much, much bigger problems, like energy, transportation and climate change.

For example, today electric cars represent only about 1 percent of U.S. new car sales. One reason is they cost more than gas-powered cars. Another is range anxiety—consumers'

fear they'll run out of charge far from home. The cheaper, higher-capacity batteries now under development aim to solve both those problems.

Then there's the grid. Electricity isn't like water, waiting in the pipe until you turn on the faucet. When you turn on a lamp, that power must be generated right now, in real time. As a result, electric utilities spend their days coping with gargantuan swings in energy demand. There's almost no demand at night, when everyone's asleep, and then tremendous spikes at 5 P.M., when people get home from work. Utilities actually maintain expensive, inefficient, sporadically used backup power plants ("peaker plants") just to handle demand surges, as occur during heat waves.

Batteries connected to the grid could even out those absurd swings. Maybe even more important, grid batteries could capture solar power while the sun's shining—and wind power when it's blowing—for use when we really need it. Thus far we haven't been able to make the sun and wind respect our lifestyle schedules.

The second point people miss: Our complaints tend to be about our batteries' capacity: how long our gadgets run between charges. But in fact, capacity (energy density) is only one item on the industry's wish list. We also want batteries to be cheap, environmentally benign after they're used up, long-lived (that is, able to be recharged thousands of times), compact, light (especially for electric cars) and safe. An exploding phone can ruin your whole day, as Samsung could attest.

In general, you can't have it all in a single battery. Then again, you don't always need it all. Grid batteries, for example, don't have to be portable or compact. So the door is open for the dawn of, say, flow batteries, in which chemicals, stored in huge tanks, flow past one another inside a reaction chamber. Or flywheel batteries, in which disks made of material such as steel and weighing thousands of pounds spin thousands of times per minute in a friction-free chamber (suspended by a magnet in a vacuum) at night, when the energy to keep them spinning is cheaper, so that engineers can reclaim the kinetic energy as power during the day.

The third important point: Batteries have been getting better over the decades. The reason we don't notice is that our devices have been getting faster, more powerful and more power-hungry at the same time. Heck, if you could put a modern iPhone battery into a 1995 phone, it'd probably go a year on a single charge.

Other great things are on the way. Materials scientist Mike Zimmerman has succeeded in replacing the highly flammable liquid electrolyte (through which ions swim when you charge or discharge your battery) with a single piece of special plastic film. Presto: a battery incapable of igniting or exploding. And because it's unblowupable, Zimmerman can use lithium metal instead of lithium-ion chemistry, which has a much higher energy density but is considered too dangerous to use with today's liquid-electrolyte batteries. Presto: longer life.

So if you do want to complain about your batteries, get it out now. It won't be long before they have a much better reputation.

This article was originally published with the title "Building a Better Battery"

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PODCAST: DECODING THE F-15 RETIREMENT PROPOSAL

Jen DiMascio, Lara Seligman and James Drew

With a limited budget and a strategic need for airpower, the U.S. Air Force is weighing its future fighter fleet options. Our editors discuss the idea of retiring National Guard F-15s in favor of upgrading F-16s.

<http://aviationweek.com/defense/podcast-decoding-f-15-retirement-proposal>

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THIN-FILM SOLAR CELLS CHEAPER & 100 TIMES THINNER

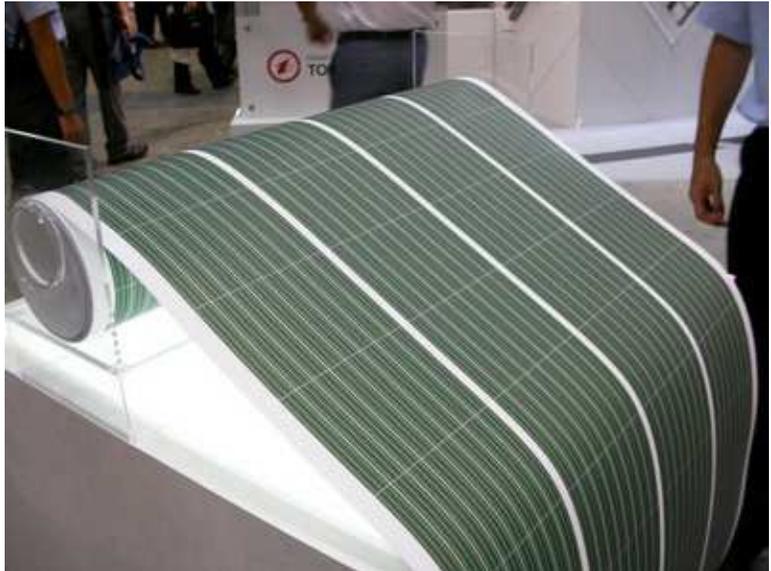
By: David Russell Schilling | April 18th, 2017

http://www.industrytap.com/thin-film-solar-cells-cheaper-100-times-thinner/41995?utm_source=Industry+Tap&utm_campaign=ce897c474c-Industry+Tap+Volume+4094+20+2017&utm_medium=email&utm_term=0_05d6224fe0-ce897c474c-44103165

Solar Thin Film (Image Courtesy Flickr)

<https://goo.gl/images/q7BlzO>

When we normally think of solar cells, they are usually installed on a flat glass surface and backed by a panel which is at least several inches thick. But new materials breakthroughs are allowing significant advancements in thin-film solar cells. These solar cells look closer to 2D rather than a 3D technology.



According to solar industry watchers, current thin-film solar cells provide an average efficiency of 7%-13% with the efficiency expected to climb as the technology improves. The thin-film materials contain laser-edged electrodes that significantly boost the storage capacity of solar cells by up to 300%. A recent report from Nature Energy highlighted a Japanese company, Kaneka Corporation, that has developed a solar cell with a record-taking 26% efficiency using thin-film heterojunction (HJ) silicon layering.

According to 3DSun, traditional photovoltaic solar cells are made using monocrystalline (15%-20% efficiency) and polycrystalline (13%-16% efficiency) while thin-film solar cells are made from materials including “amorphous silicon, cadmium telluride, and copper indium gallium selenide.”

There is a lot of innovation occurring in the thin-film solar cell market where a US patent was recently awarded to Ecoark Holdings for its thin-film lightweight high-efficiency solar cell technologies that are created using flexible substrates.

According to research reports, the global market for CIGS (copper, indium, gallium, selenide) used in thin-film solar cells to convert the sun into electrical energy is expected to reach \$10 billion by 2020.

The video AT THE END OF THE ARTICLE AT THE WEBSITE explains the future of solar cells and the current state of the development of thin-film solar cells.

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HOW RECYCLED GLASS BOTTLES CAN BECOME BETTER BATTERIES

Michael Irving April 21, 2017

<http://newatlas.com/glass-bottle-recycled-batteries/49148/>



Researchers at UCR have found a way to make better batteries using discarded glass bottles(Credit: edfoto/Depositphotos)

Ask a regular smartphone user how they'd like to see the devices improved, and it's a safe bet that longer battery life would be close to the top of the list. Batteries made with silicon anodes could help boost that, and now a team at the University of California Riverside (UCR) has shown that these batteries can be environmentally friendly too, by being sourced from glass bottles headed for the scrap heap.

Lithium-ion batteries power everything from smartphones to electric vehicles, and conventionally they're made with a lithium cathode and a graphite anode. But as useful as this setup has been over the years, the ceiling on their efficiency has all but been reached, prompting researchers to look to our old friend silicon as an alternative anode.

While they have the potential to store up to 10 times more energy than graphite, silicon anodes aren't quite as durable, with the expansion and contraction that comes with regular use cracking the material and wearing them down much faster. Past work has found that crushing the silicon first helped to overcome that problem.



With durability addressed, the UCR team's research has now found a new source of silicon for producing batteries: discarded glass bottles. The researchers aren't strangers to using unusual materials as anodes: in the past, they've dabbled in recipes using sand and mushrooms. Now they've shown that silicon dioxide can be wrung out of glass bottles, saving them from the fate of clogging up landfills.

First, the bottles are crushed and ground down into a fine, white powder. Next, the silicon dioxide is reduced down into nanostructured silicon with the help of hot magnesium, and finally, those nanoparticles are coated in carbon, which makes them more stable and improves their energy storage capacity.

When tested in coin cell batteries over 400 cycles, the bottle-based silicon anodes demonstrated a capacity of about 1,420 mAh/g (milliamp hours per gram), a huge

improvement over the storage capabilities of graphite anodes, which typically manage about 350 mAh/g.

"We started with a waste product that was headed for the landfill and created batteries that stored more energy, charged faster, and were more stable than commercial coin cell batteries," says Changling Li, lead author on the study. "Hence, we have very promising candidates for next-generation lithium-ion batteries."

The researchers say that the process is viable, thanks to the low-cost chemical reaction and the fact that each glass bottle can create enough nanosilicon to make hundreds of coin cell batteries. The team has filed a patent to commercialize the process and products.

The study was published in the journal Scientific Reports, and the process is outlined in the video below.

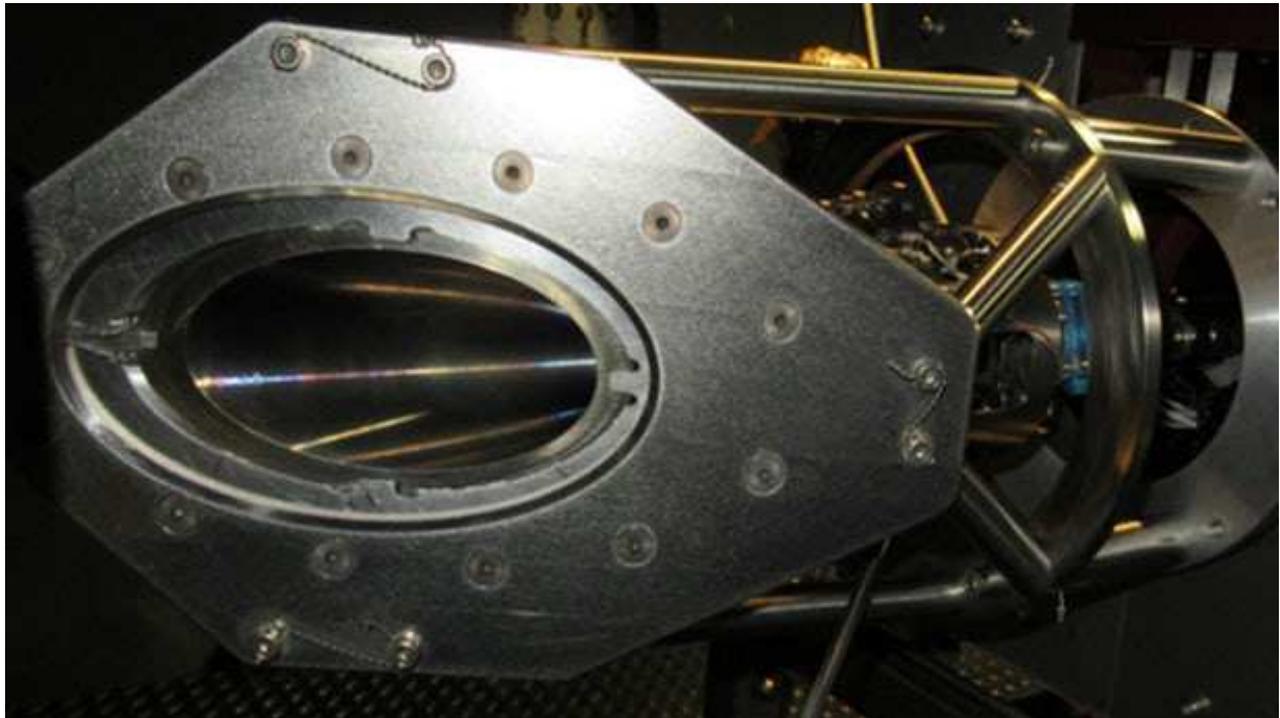
Source: University of California, Riverside

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AEROJET ROCKETDYNE COMPLETES TESTS FOR HUMAN-RATED REUSABLE ROCKET ENGINE

David Szondy April 22, 2017

<http://newatlas.com/aerojet-rocketdyne-test-human-rated-rocket/49162/>



Aerojet Rocketdyne's MR-104J Hydrazine Monopropellant Engine (Credit: Aerojet Rocketdyne)

Aerojet Rocketdyne has successfully completed hot-fire qualification tests of its MR-104J liquid-fueled rocket engine. When Boeing's Crew Space Transportation (CST)-100 Starliner crew module makes its first manned flight in August 2018, 12 of these human-rated reusable engines will be installed in the capsule to provide thruster maneuverability during re-entry into the Earth's atmosphere.

Conducted at Aerojet Rocketdyne's facilities in Redmond, Washington, the tests of the hydrazine monopropellant engine were designed to demonstrate its ability to fulfill the reusability requirements for Boeing's propulsion system under the company's Commercial Crew Transportation Capability subcontract. The equipment can now be sent on to Boeing for installation in the Starliner spacecraft at its Commercial Crew and Cargo Processing Facility at NASA's Kennedy Space Center in Florida.

Intended to ferry astronauts and cargo to and from the International Space Station, the Starliner's primary propulsion system is housed in its Service Module, but the MR-104J rockets are needed after the module is jettisoned prior to reentry. The new engine shares many features with other reaction control systems, but is designed for better redundancy and improved strength to withstand the shocks of multiple firings over several missions.

In addition to the MR-104J, Aerojet Rocketdyne also builds the Starliner's Launch Abort Engines, Orbital Maneuvering and Attitude Control thrusters, and Service Module Reaction Control System thrusters.

"Our engineers have incorporated a unique design that will allow the MR-104 engine to be used on multiple missions, providing the reliability, cost-efficiency and reusability our customer needs to be competitive in the current commercial space environment," says Aerojet Rocketdyne CEO and President Eileen Drake. "We look forward to delivering the engines for the crew module and continuing our proud heritage of enabling astronauts to fly to the International Space Station from US soil."

Source: Aerojet Rocketdyne

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ENGINEERS DEVELOP PROSTHETIC ARM THAT ALLOWS GIRL TO PLAY VIOLIN

by [LUCAS NOLAN](#) 24 Apr 2017 117

<http://www.breitbart.com/tech/2017/04/24/engineers-develop-prosthesis-that-allows-girl-to-play-violin/>

Bioengineering students at George Mason University created a prosthetic arm that allows a young girl to play the violin.

The New York Post [reports](#) that ten-year-old Isabella Nicola Cabrera was born with no left hand, but thanks to a specialized prosthesis created by a team of bioengineering students at the George Mason University, Cabrera can once again play the violin.

Cabrera's music teacher and her school had previously built a rudimentary prosthesis that she used successfully for years, but [ABC News reports](#) "the prosthetic was heavy." The instructor contacted the bioengineering students at the George Mason University, where he

had graduated from, to see if they could develop something more advanced for the young musician.

AP Photo/Steve Helber

Bioengineering students Abdul Gouda, Mona Elkholy, Ella Novoselsky, Racha Salha, and Yasser Alhindi decided to take on designing the prosthetic as a project required of them for their senior year. "It's sort of a lot of pressure," Gouda told ABC News. "You've got this young girl who's counting on you and you're expected to deliver."



At a test fitting on Thursday, the team of bioengineers also surprised Cabrera with a secondary attachment for the prosthesis which would allow her to ride a bicycle.

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MAKE MARS LIVABLE WITH ASTEROIDS: RESEARCHERS PROPOSE TERRAFORMING PLAN

By Leonard David, Space.com's Space Insider Columnist | April 25, 2017 06:00am ET
<http://www.space.com/36563-terraform-mars-asteroid-strike-lake-matthew.html>



Mars as it would look with a big body of liquid water on its surface. Credit: Michael Carroll via Chris McKay

A research team has devised a plan to make a portion of Mars more Earth-like by slamming an asteroid into it.

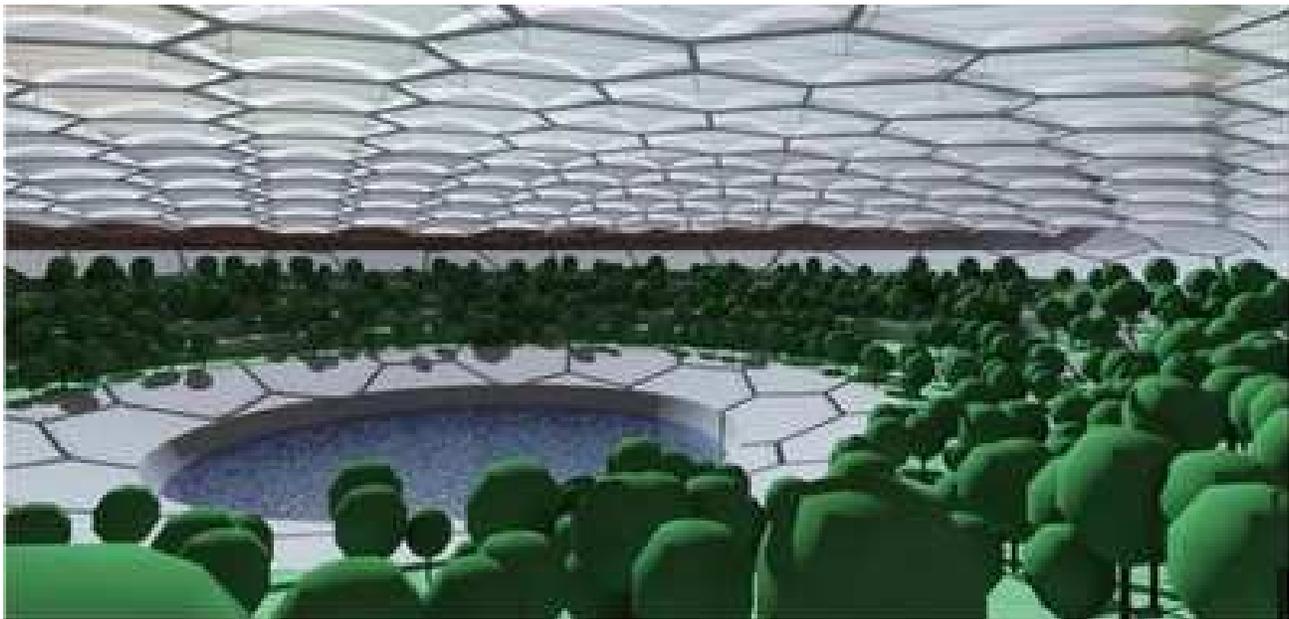
This Mars Terraformer Transfer (MATT) concept would create a persistent lake on the Red Planet's surface in 2036, potentially accelerating [Mars exploration](#), settlement and commercial development, the team said.

"Terraformation need not engineer an entire planetary surface. A city-region is adequate for inhabitation. MATT hits this mark," the Lake

Matthew Team, the group behind the idea, [wrote in a press release](#) last month.

Key to the plan is a "Shepherd" satellite, which would steer an asteroid or other small celestial body into the Red Planet. That impactor would inject heat into the Martian bedrock, producing meltwater for a lake that would persist for thousands of years within the warmed impact zone, Lake Matthew Team members wrote.

"Whereas prior designs of habitation structures (habs) were limited to thousands of cubic meters, MATT habs can scale to millions of cubic meters — stadium scale, or greater," team members wrote in the press release. Furthermore, the impact site's treated lake water would be sufficient to cover and protect subaqueous domes, the team added.



Mars' Omaha Crater site has abundant ground ice to fill and refill the crater's Lake Matthew. Credit: Lake Matthew Team

"With scaling, the first Mars habs transition quickly into settlements, with capacity for self-sufficiency, even provisioning of expeditions worldwide," the press release said. "This cuts the Earth-shipped cargo mass, and the expense, of crewed missions."

"The MATT Shepherd's long mission ends with a small adjustment of the satellite's orbit, placing it into a Mars-resonant orbit that is a bit like an Aldrin cycler orbit," team members told Inside Outer Space. (An Aldrin cycler is a spacecraft, proposed by Apollo 11 astronaut Buzz Aldrin, that cruises repeatedly between Earth and Mars.) "This positions the Shepherd for retrieval by the colonists at a later date, notionally for museum display on [Mars](#)."

For more information on the group and its Mars Terraformer Transfer (MATT) idea, go to: <http://www.lakemathew.com/>.

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VIDEO: ANTARCTICA'S GROWING ICE SHELF CRACK MONITORED FROM SPACE

By Steve Spaleta | April 24, 2017 08:35am ET

<http://www.space.com/36579-antarcticas-growing-ice-shelf-crack-monitored-from-space-video.html>

ESA's Sentinel-1 satellite has been capturing radar data of the massive crack in the Larsen-C ice shelf. When it calves, "it will create one of the largest icebergs ever recorded," according to the European Space Agency.

credit: Copernicus Sentinel data (2017), processed by A. Hogg/CPOM/Priestly Centre, CC BY-SA 3.0 IGO

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From: "Stephanie Osborn"

SO: Ever studied the chemistry of silicon? It's virtually identical to carbon, except for the fact that the angle from the base of the tetrahedron to the apex is different. But, just as organic chemistry is rich in all different kinds of compounds, thus there is much for biochemistry, so too is silicochemistry -- it's why we have all of those lovely crystalline, microcrystalline, cryptocrystalline, and amorphous minerals.

THE POSSIBILITY OF SILICON-BASED LIFE GROWS

By Charles Q. Choi, Space.com Contributor | April 16, 2017 08:00am ET

http://www.space.com/36477-silicon-based-alien-life-possible.html?utm_source=facebook&utm_medium=social



An artist rendering of organosilicon-based life.

Organosilicon compounds contain carbon-silicon bonds. Recent research from the laboratory of Frances Arnold shows, for the first time, that bacteria can create organosilicon compounds. This does not prove that silicon- or organosilicon-based life is possible, but shows that life could be persuaded to incorporate silicon into its basic components. Credit: Lei Chen and Yan Liang (BeautyOfScience.com) for Caltech

Science fiction has long imagined alien worlds inhabited by silicon-based life, such as the rock-eating Horta from the original Star Trek series. Now, scientists have for the first time shown that nature can evolve to incorporate silicon into carbon-based molecules, the building blocks of life on Earth.

As for the implications these findings might have for alien chemistry on distant worlds, "my feeling is that if a human being can coax life to build bonds between silicon and carbon, nature can do it too," said the study's senior author Frances Arnold, a chemical engineer at the California Institute of Technology in Pasadena. The scientists detailed their findings recently in the journal Science.

Carbon is the backbone of every known biological molecule. Life on Earth is based on carbon, likely because each carbon atom can form bonds with up to four other atoms simultaneously. This quality makes carbon well-suited to form the long chains of molecules that serve as the basis for life as we know it, such as proteins and DNA. [The Search for Life on Mars in Pictures]

Still, researchers have long speculated that alien life could have a completely different chemical basis than life on Earth. For example, instead of relying on water as the solvent in which biological molecules operate, perhaps aliens might depend on ammonia or methane. And instead of relying on carbon to create the molecules of life, perhaps aliens could use silicon.

Carbon and silicon are chemically very similar in that silicon atoms can also each form bonds with up to four other atoms simultaneously. Moreover, silicon is one of the most common elements in the universe. For example, silicon makes up almost 30 percent of the mass of the Earth's crust, and is roughly 150 times more abundant than carbon in the Earth's crust.

Scientists have long known that life on Earth is capable of chemically manipulating silicon. For instance, microscopic particles of silicon dioxide called phytoliths can be found in grasses and other plants, and photosynthetic algae known as diatoms incorporate silicon dioxide into their skeletons. However, there are no known natural instances of life on Earth combining silicon and carbon together into molecules.

Still, chemists have artificially synthesized molecules comprised of both silicon and carbon. These organo-silicon compounds are found in a wide range of products, including pharmaceuticals, sealants, caulks, adhesives, paints, herbicides, fungicides, and computer and television screens. Now, scientists have discovered a way to coax biology to chemically bond carbon and silicon together.

"We wanted to see if we could use what biology already does to expand into whole new areas of chemistry that nature has not yet explored," Arnold said.

The researchers steered microbes into creating molecules never before seen in nature through a strategy known as 'directed evolution,' which Arnold pioneered in the early 1990s. Just as farmers have long modified crops and livestock by breeding generations of organisms for the traits they want to appear, so too have scientists bred microbes to create the molecules they desire. Scientists have used directed evolutionary strategies for years to create household goods such as detergents, and to develop environmentally-friendly ways to make pharmaceuticals, fuels and other industrial products. (Conventional chemical

manufacturing processes can require toxic chemicals; in contrast, directed evolutionary strategies use living organisms to create molecules and generally avoid chemistry that would prove harmful to life.)

Arnold and her team — synthetic organic chemist Jennifer Kan, bioengineer Russell Lewis, and chemist Kai Chen — focused on enzymes, the proteins that catalyze or accelerate chemical reactions. Their aim was to create enzymes that could generate organo-silicon compounds.

"My laboratory uses evolution to design new enzymes," Arnold said. "No one really knows how to design them — they are tremendously complicated. But we are learning how to use evolution to make new ones, just as nature does."

First, the researchers started with enzymes they suspected could, in principle, chemically manipulate silicon. Next, they mutated the DNA blueprints of these proteins in more or less random ways and tested the resulting enzymes for the desired trait. The enzymes that performed best were mutated again, and the process was repeated until the scientists reached the results they wanted.

Arnold and her colleagues started with enzymes known as heme proteins, which all have iron at their hearts and are capable of catalyzing a wide variety of reactions. The most widely recognized heme protein is likely hemoglobin, the red pigment that helps blood carry oxygen.

After testing a variety of heme proteins, the scientists concentrated on one from *Rhodothermus marinus*, a bacterium from hot springs in Iceland. The heme protein in question, known as cytochrome c, normally shuttles electrons to other proteins in the microbe, but Arnold and her colleagues found that it could also generate low levels of organo-silicon compounds.

After analyzing cytochrome c's structure, the researchers suspected that only a few mutations might greatly enhance the enzyme's catalytic activity. Indeed, only three rounds of mutations were enough to turn this protein into a catalyst that could generate carbon-silicon bonds more than 15 times more efficiently than the best synthetic techniques currently available. The mutant enzyme could generate at least 20 different organo-silicon compounds, 19 of which were new to science, Arnold said. It remains unknown what applications people might be able to find for these new compounds.

"The biggest surprise from this work is how easy it was to get new functions out of biology, new functions perhaps never selected for in the natural world that are still useful to human beings," Arnold said. "The biological world always seems poised to innovate."

In addition to showing that the mutant enzyme could self-generate organo-silicon compounds in a test tube, the scientists also showed that *E. coli* bacteria, genetically engineered to produce the mutant enzyme within themselves, could also create organo-silicon compounds. This result raises the possibility that microbes somewhere could have naturally evolved the ability to create these molecules.

"In the universe of possibilities that exist for life, we've shown that it is a very easy possibility for life as we know it to include silicon in organic molecules," Arnold said. "And once you can do it somewhere in the universe, it's probably being done."

It remains an open question why life on Earth is based on carbon when silicon is more prevalent in Earth's crust. Previous research suggests that compared to carbon, silicon can form chemical bonds with fewer kinds of atoms, and it often forms less complex kinds of molecular structures with the atoms that it can interact with. By giving life the ability to create organo-silicon compounds, future research can test why life here or elsewhere may or may not have evolved to incorporate silicon into biological molecules.

In addition to the astrobiology implications, the researchers noted that their work suggests biological processes could generate organo-silicon compounds in ways that are more environmentally friendly and potentially much less expensive than existing methods of synthesizing these molecules. For example, current techniques for creating organo-silicon compounds often require precious metals and toxic solvents.

The mutant enzyme also makes fewer unwanted byproducts. In contrast, existing techniques typically require extra steps to remove undesirable byproducts, adding to the cost of making these molecules.

"I'm talking to several chemical companies right now about potential applications for our work," Arnold said. "These compounds are hard to make synthetically, so a clean biological route to produce these compounds is very attractive."

Future research can explore what advantages and disadvantages the ability to create organo-silicon compounds might have for organisms. "By giving this capability to an organism, we might see if there is, or is not, a reason why we don't stumble across it in the natural world," Arnold said.

The research was funded by the National Science Foundation, the Caltech Innovation Initiative program, and the Jacobs Institute for Molecular Engineering for Medicine at Caltech.

This story was provided by Astrobiology Magazine, a web-based publication sponsored by the NASA astrobiology program. Follow Space.com @Spacedotcom, Facebook and Google+. Story posted on Space.com.

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Message from Les Johnson on Facebook

U.S. LAWMAKER WANTS NASA WORKING ON INTERSTELLAR PROPULSION

by Dan Leone — March 25, 2015

<http://spacenews.com/u-s-lawmaker-wants-nasa-working-on-interstellar-propulsion/#sthash.lq4Da2CV.dpuf>

WASHINGTON — NASA's proposed, and oft-reviled, Asteroid Redirect Mission (ARM) may be worth doing if it helps pave the way for an electric-powered interstellar rocket engine, Rep. John Culberson (R-Texas) said.

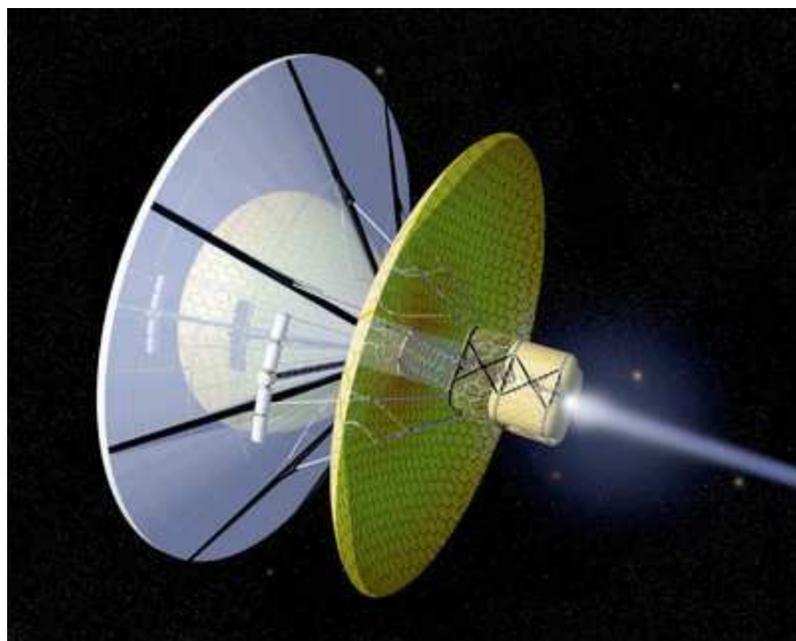
"[T]he great value" of an Asteroid Redirect Mission is "development of the first interstellar rocket propulsion system that would carry us to Alpha Centauri and beyond," Culberson

said during the closing moments of a March 4 hearing of the House Appropriations commerce, justice, science subcommittee.



Rep. John Culberson (R-Texas) with the trinary star system Alpha Centauri in the background. Credit: SpaceNews/NASA

NASA Administrator Charles Bolden was the sole witness at the hearing, a routine step in the annual federal budget cycle that gives the lawmakers in charge of writing spending bills their first chance to register an official reaction to the White House's budget request.



While Rep. John Culberson (R-Texas) is not a fan of NASA's proposed Asteroid Redirect Mission, he said it could be beneficial in helping develop an interstellar propulsion system (NASA's Bussard Interstellar Ramjet engine concept, above). Credit: NASA

Buried within the Obama administration's \$18.5 billion NASA request for 2016 is \$69 million for a solar-electric propulsion system that Culberson, a devoted space buff who has proven as likely to support NASA's Jet Propulsion Laboratory in California as

Johnson Space Center a short drive from his western Houston congressional district, sees

as a crucial technological baby step toward sending humans some four light years from Earth to the solar system's nearest stellar neighbor.

In NASA's notional ARM concept, a robotic probe with an ion-propelled, solar-electric propulsion system would send a small asteroid sample to a stable lunar storage orbit for astronauts to visit some time in the 2020s.

The ARM mission concept would make use of an electric propulsion system in the 25-30-kilowatt range. That is considerably more powerful than electric propulsion systems Earth-orbiting satellites use today for attitude adjustment, but still only about a tenth as powerful as what NASA thinks it needs for the uncrewed cargo tugs that are a notional (and unbudgeted) part of the agency's long-term plans to send astronauts to the surface of Mars.

The White House unveiled ARM in 2013 as a means of folding the Space Launch System and Orion into President Barack Obama's 2010 challenge that NASA send astronauts to an asteroid by 2025.

Culberson, and practically every lawmaker charged with NASA oversight, has not shown much interest in funding ARM. However, the Texas Republican's thinking appears to have changed somewhat following a Jan. 29 visit to the Jet Propulsion Laboratory.

There, Culberson told SpaceNews in a Feb. 3 interview, he "had a very detailed, in depth discussion" about solar-electric propulsion systems, which because of their extreme fuel efficiency can, over long periods of time, slowly accelerate spacecraft to velocities much greater than chemical-propelled rockets can achieve.

Elizabeth Landau, a NASA spokeswoman at JPL, downplayed this meeting in a Feb. 17 email, characterizing it as a "very brief exchange" between the lawmaker, JPL Chief Engineer Brian Muirhead and Marc Rayman, chief engineer and mission director for the electric-powered Dawn spacecraft. Dawn, which launched in 2007, recently arrived in orbit around the Dwarf planet Ceres, thanks to its 10-kilowatt electric propulsion system.

Muirhead and Rayman told Culberson that developing more powerful electric thrusters for ARM should inform efforts to build still beefier systems, such as those needed for Mars cargo tugs, or possibly even the interstellar cruiser Culberson imagines.

The exchange stuck with Culberson who, as he wrapped up his first NASA budget hearing as chairman, used interstellar propulsion as an olive branch to reach across the aisle to ranking subcommittee member Rep. Chaka Fattah (D-Pa.) and Rep. Mike Honda (D-Calif.). The three traded pointed political barbs in the middle of the hearing over the current gap in U.S. crewed launch capability.

"Let us also leave for future generations development of the first interstellar rocket propulsion system that would carry us to Alpha Centauri," Culberson implored his colleagues. "That can be done, it is within the realm of our ability."

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ABSOLUTELY & TOTALLY POLITICALLY INCORRECT & AS FAR TO THE RIGHT AS YOU CAN GO!

From: "Jim Woosley" Jimwoosley@aol.com

Conservative Humor in Cartoons

<https://patriotpost.us/humor/48694>

SOME OF THESE WILL MAKE YOU THINK ABOUT THEM AND ARE REALLY GOOD. SOME ARE REALLY TACKY. UT

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ABSOLUTELY & TOTALLY POLITICALLY INCORRECT & AS FAR TO THE CENTER AS YOU CAN GO!

From: "Douglas Dudash"

REMEMBER THESE MEN?

Fascinating brief stories of these men. I recognized almost every one of them. Hope you read until the last one. And I have some friends who were in the same situation and dedicated years of their lives to the defense of this country. And they know who they are but don't talk about it.

A far cry from Sean Penn et al.

Many here that you have no doubt forgot about, this should bring back some memories. Have any of our current Hollywood elite made similar contributions to the USA as those below?

Hollywood's greatest--

George Gobel comedian taught fighter pilots, I believe it was in Oklahoma. Johnny Carson made a big deal about it once on the Tonight Show, to which George said, "The Japs never got past us!"

Sterling Hayden, US Marines and OSS. Smuggled guns into Yugoslavia and parachuted into Croatia.

James Stewart, US Army Air Corps. Enlisted as a private later attended OCS 2nd Lt. Bomber pilot who rose to the rank of General.

Ernest Borgnine, US Navy. Gunners Mate 1c, destroyer USS Lamberton.

Ed McMahon, US Marines. Fighter Pilot. (Flew OE-1 Bird Dogs over Korea as well.)

Telly Savalas, US Army.

Walter Matthau, US Army Air Corps., B-24 Radioman/Gunner and cryptographer.

Steve Forrest, US Army. Wounded, Battle of the Bulge.

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Jonathan Winters, USMC. Battleship USS Wisconsin and Carrier USS Bon Homme Richard. Anti-aircraft gunner, Battle of Okinawa.

Paul Newman, US Navy Rear seat gunner/radioman, torpedo bombers of USS Bunker Hill.

Kirk Douglas, US Navy. Sub-chaser in the Pacific. Wounded in action and medically discharged.

Robert Mitchum, US Army.

Dale Robertson, US Army. Tank Commander in North Africa under Patton. Wounded twice. Battlefield Commission.

Henry Fonda, US Navy. Destroyer USS Satterlee.

John Carroll, US Army Air Corps. Pilot in North Africa. Broke his back in a crash.

Lee Marvin US Marines. Sniper. Wounded in action on Saipan. Buried in Arlington National Cemetery, Sec. 7A next to Greg Boyington and Joe Louis.

Art Carney, US Army. Wounded on Normandy beach, D-Day. Limped for the rest of his life.

Wayne Morris, US Navy fighter pilot, USS Essex. Downed seven Japanese fighters.

Rod Steiger, US Navy. Was aboard one of the ships that launched the Doolittle Raid.

Tony Curtis, US Navy. Sub tender USS Proteus. In Tokyo Bay for the surrender of Japan.

Larry Storch. US Navy. Sub tender USS Proteus with Tony Curtis.

Forrest Tucker, US Army. Enlisted as a private, rose to Lieutenant.

Robert Montgomery, US Navy.

George Kennedy, US Army. Enlisted after Pearl Harbor, stayed in sixteen years.

Mickey Rooney, US Army under Patton. Bronze Star.

Denver Pyle, US Navy. Wounded in the Battle of Guadalcanal. Medically discharged.

Burgess Meredith, US Army Air Corps.

DeForest Kelley, US Army Air Corps.

Robert Stack, US Navy. Gunnery Officer.

Neville Brand, US Army, Europe. Was awarded the Silver Star and Purple Heart.

Tyrone Power, US Marines. Transport pilot in the Pacific Theater.

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Charlton Heston, US Army Air Corps. Radio operator and aerial gunner on a B-25, Aleutians.

Danny Aiello, US Army. Lied about his age to enlist at 16. Served three years.

James Arness, US Army. As an infantryman, he was severely wounded at Anzio, Italy.

Efram Zimbalist, Jr., US Army. Purple Heart for a severe wound received at Huertgen Forest.

Mickey Spillane, US Army Air Corps, Fighter Pilot and later Instructor Pilot.

Rod Serling. US Army. 11th Airborne Division in the Pacific. He jumped at Tagaytay in the Philippines and was later wounded in Manila.

Gene Autry, US Army Air Corps. Crewman on transports that ferried supplies over "The Hump" in the China-Burma-India Theater.

William Holden, US Army Air Corps.

Alan Hale Jr, US Coast Guard.

Russell Johnson, US Army Air Corps. B-24 crewman who was awarded Purple Heart when his aircraft was shot down by the Japanese in the Philippines

William Conrad, US Army Air Corps. Fighter Pilot.

Jack Klugman, US Army.

Frank Sutton, US Army. Took part in 14 assault landings, including Leyte, Luzon, Bataan and Corregidor.

Jackie Coogan, US Army Air Corps. Volunteered for gliders and flew troops and materials into Burma behind enemy lines.

Tom Bosley, US Navy.

Claude Akins, US Army. Signal Corps., Burma and the Philippines.

Chuck Connors, US Army. Tank-warfare instructor.

Harry Carey Jr., US Navy.

Mel Brooks, US Army. Combat Engineer. Saw action in the Battle of the Bulge.

Robert Altman, US Army Air Corps. B-24 Co-Pilot.

Pat Hingle, US Navy. Destroyer USS Marshall

Fred Gwynne, US Navy. Radioman.

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Karl Malden, US Army Air Corps. 8th Air Force, NCO.

Earl Holliman. US Navy. Lied about his age to enlist. Discharged after a year when they Navy found out.

Rock Hudson, US Navy. Aircraft mechanic, the Philippines.

Harvey Korman, US Navy.

Aldo Ray. US Navy. UDT frogman, Okinawa.

Don Knotts, US Army, Pacific Theater.

Don Rickles, US Navy aboard USS Cyrene.

Harry Dean Stanton, US Navy. Served aboard an LST in the Battle of Okinawa.

Soupy Sales, US Navy. Served on USS Randall in the South Pacific.

Lee Van Cleef, US Navy. Served aboard a sub chaser then a mine sweeper.

Clifton James, US Army, South Pacific. Was awarded the Silver Star, Bronze Star, and Purple Heart.

Ted Knight, US Army, Combat Engineers.

Jack Warden, US Navy, 1938-1942, then US Army, 1942-1945. 101st Airborne Division.

Don Adams. US Marines. Wounded on Guadalcanal, then served as a Drill Instructor.

James Gregory, US Navy and US Marines.

Brian Keith, US Marines. Radioman/Gunner in Dauntless dive-bombers.

Fess Parker, US Navy and US Marines. Booted from pilot training for being too tall, joined Marines as a radio operator.

Charles Durning. US Army. Landed at Normandy on D-Day. Shot multiple times. Awarded the Silver Star and Bronze Star and three Purple Hearts. Survived Malmedy Massacre.

Raymond Burr, US Navy. Shot in the stomach on Okinawa and medically discharged.

Hugh O'Brian, US Marines.

Robert Ryan, US Marines.

Eddie Albert, US Coast Guard. Bronze Star with Combat V for saving several Marines under heavy fire as pilot of a landing craft during the invasion of Tarawa.

Cark Gable, US Army Air Corps. B-17 gunner over Europe.

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Charles Bronson, US Army Air Corps. B-29 gunner, wounded in action.

Peter Graves, US Army Air Corps.

Buddy Hackett, US Army anti-aircraft gunner.

Victor Mature, US Coast Guard.

Jack Palance, US Army Air Corps. Severely injured bailing out of a burning B-24 bomber.

Robert Preston, US Army Air Corps. Intelligence Officer

Cesar Romero, US Coast Guard. Participated in the invasions of Tinian and Saipan on the assault transport USS Cavalier.

Norman Fell, US Army Air Corps, Tail Gunner, Pacific Theater.

Jason Robards, US Navy. was aboard heavy cruiser USS Northampton when it was sunk off Guadalcanal. Also served on the USS Nashville during the invasion of the Philippines, surviving a kamikaze hit that caused 223 casualties.

Steve Reeves, US Army, Philippines.

Dennis Weaver, US Navy. Pilot.

Robert Taylor, US Navy. Instructor Pilot.

Randolph Scott. Tried to enlist in the Marines but was rejected due to injuries sustained in US Army, World War 1.

Ronald Reagan. US Army. Was a 2nd Lt. in the Cavalry Reserves before the war. His poor eyesight kept him from being sent overseas with his unit when war came so he transferred to the Army Air Corps Public Relations Unit where he served for the duration.

John Wayne. Declared "4F medically unfit" due to pre-existing injuries, he nonetheless attempted to volunteer three times (Army, Navy and Film Corps.) so he gets honorable mention.

And of course we have Audie Murphy, America's most-decorated soldier, who became a Hollywood star as a result of his US Army service that included his being awarded the Medal of Honor.

Would someone please remind me again how many of today's Hollywood elite put their careers on hold to enlist in Iraq or Afghanistan? The only one who even comes close was Pat Tillman, who turned down a contract offer of \$3.6 million over three years from the Arizona Cardinals to enlist in the US Army after September 11, 2001, and serve as a Ranger in Afghanistan, where he died in 2004. But rather than being lauded for his choice and his decision to put his country before his career, he was mocked and derided by many of his peers.

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Ladies and Gentlemen, I submit to you that this is not the America today that it was seventy years ago. And I, for one, am saddened.

My generation grew up watching, being entertained by and laughing with so many of these fine people, never really knowing what they contributed to the war effort. Like millions of Americans during the WWII, there was a job that needed doing they didn't question, they went and did it, those that came home returned to their now new normal life and carried on, very few ever saying what they did or saw.

They took it as their "responsibility", their "duty" to Country, to protect and preserve our freedoms and way of life, not just for themselves but for all future generations to come.

As a member of a Later Generation, I'm forever humbly in their debt.

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